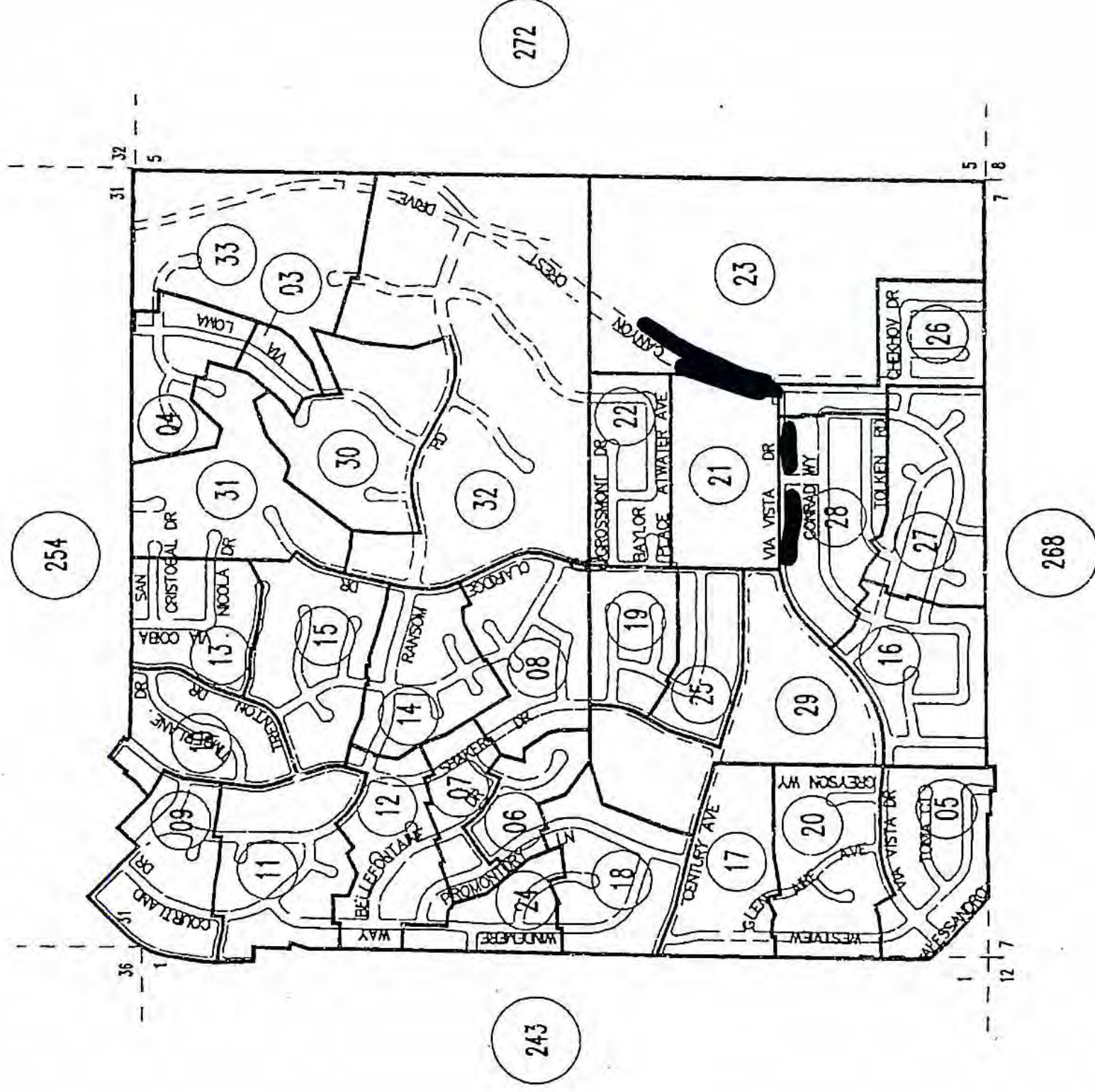
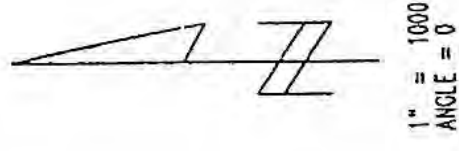


**DOCKETED**

|                         |                                                                                                                 |
|-------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Docket Number:</b>   | 06-AFC-02                                                                                                       |
| <b>Project Title:</b>   | High Grove Power Project AES 300 Megawatt Simple Cycle Power Plant, City of Grand Terrace San Bernardino County |
| <b>TN #:</b>            | 233647-11                                                                                                       |
| <b>Document Title:</b>  | Application for Certification AES Highgrove PT 13                                                               |
| <b>Description:</b>     | Document was on proceeding webpage and is now moved over to the docket log.                                     |
| <b>Filer:</b>           | Raquel Rodriguez                                                                                                |
| <b>Organization:</b>    | California Energy Commission                                                                                    |
| <b>Submitter Role:</b>  | Commission Staff                                                                                                |
| <b>Submission Date:</b> | 6/25/2020 11:41:58 AM                                                                                           |
| <b>Docketed Date:</b>   | 6/25/2020                                                                                                       |

SEC. 6 T. 3S., R. 4W  
CITY OF RIVERSIDE



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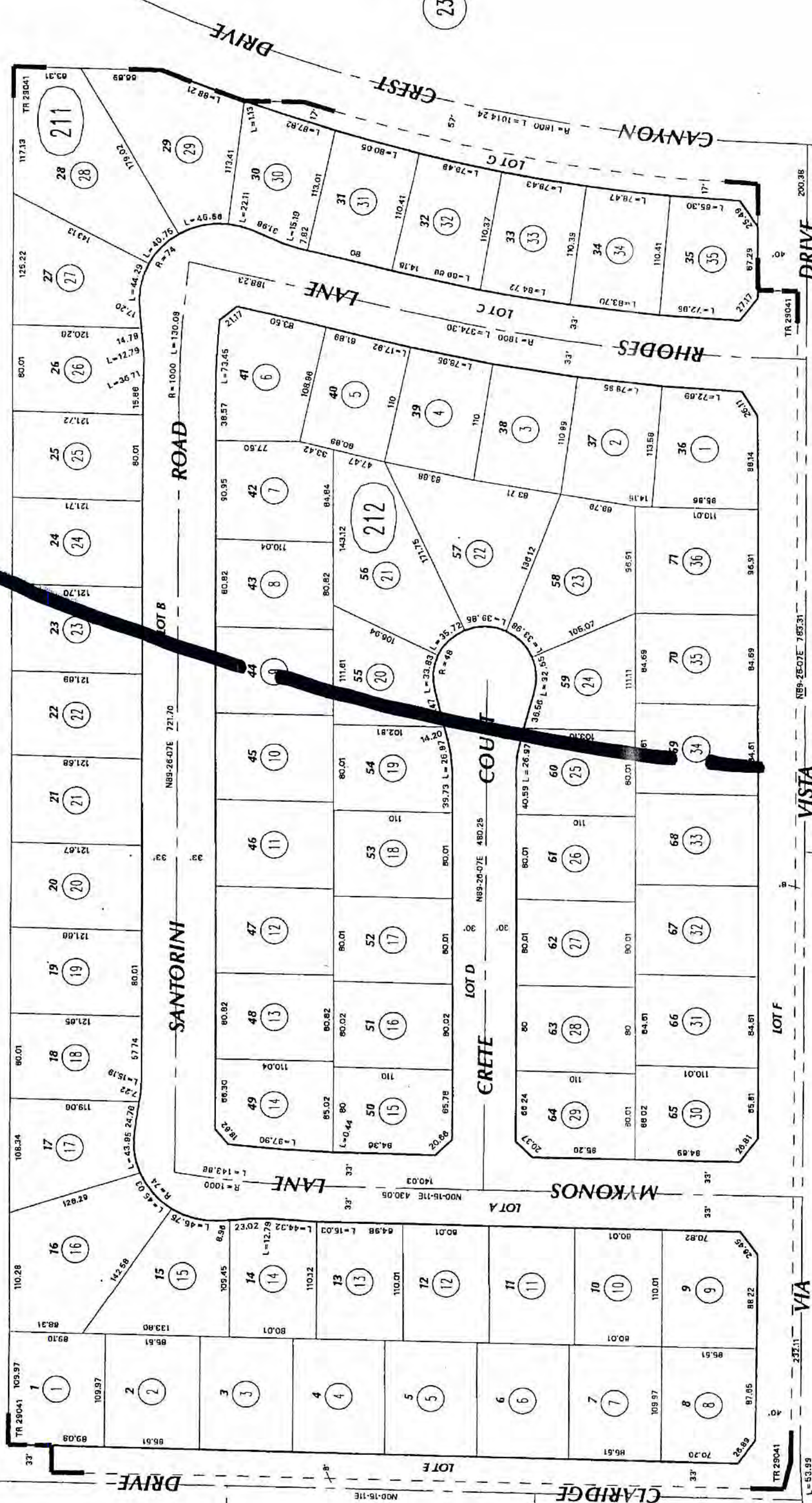
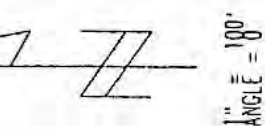
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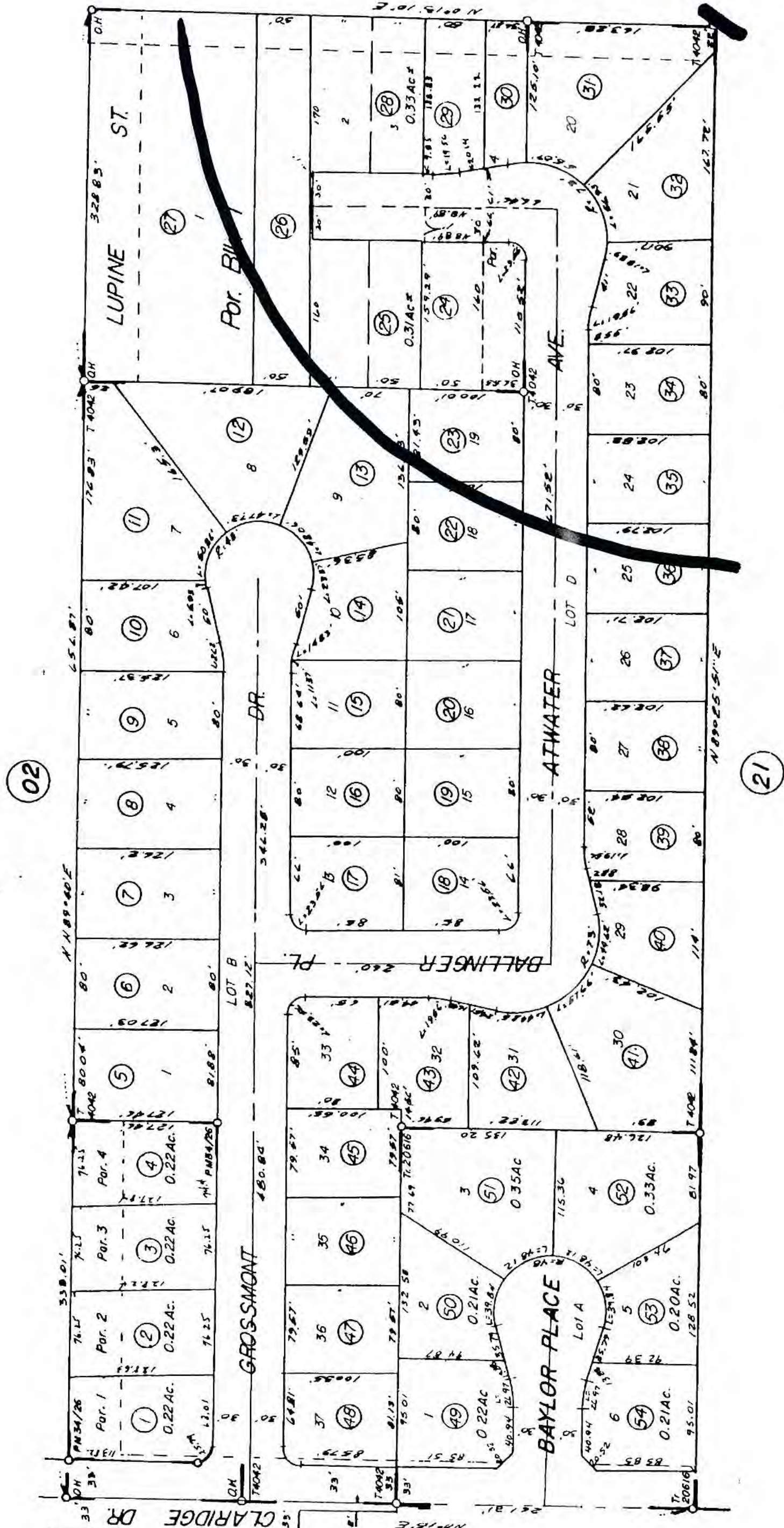
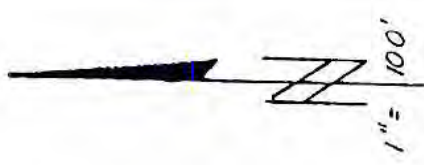
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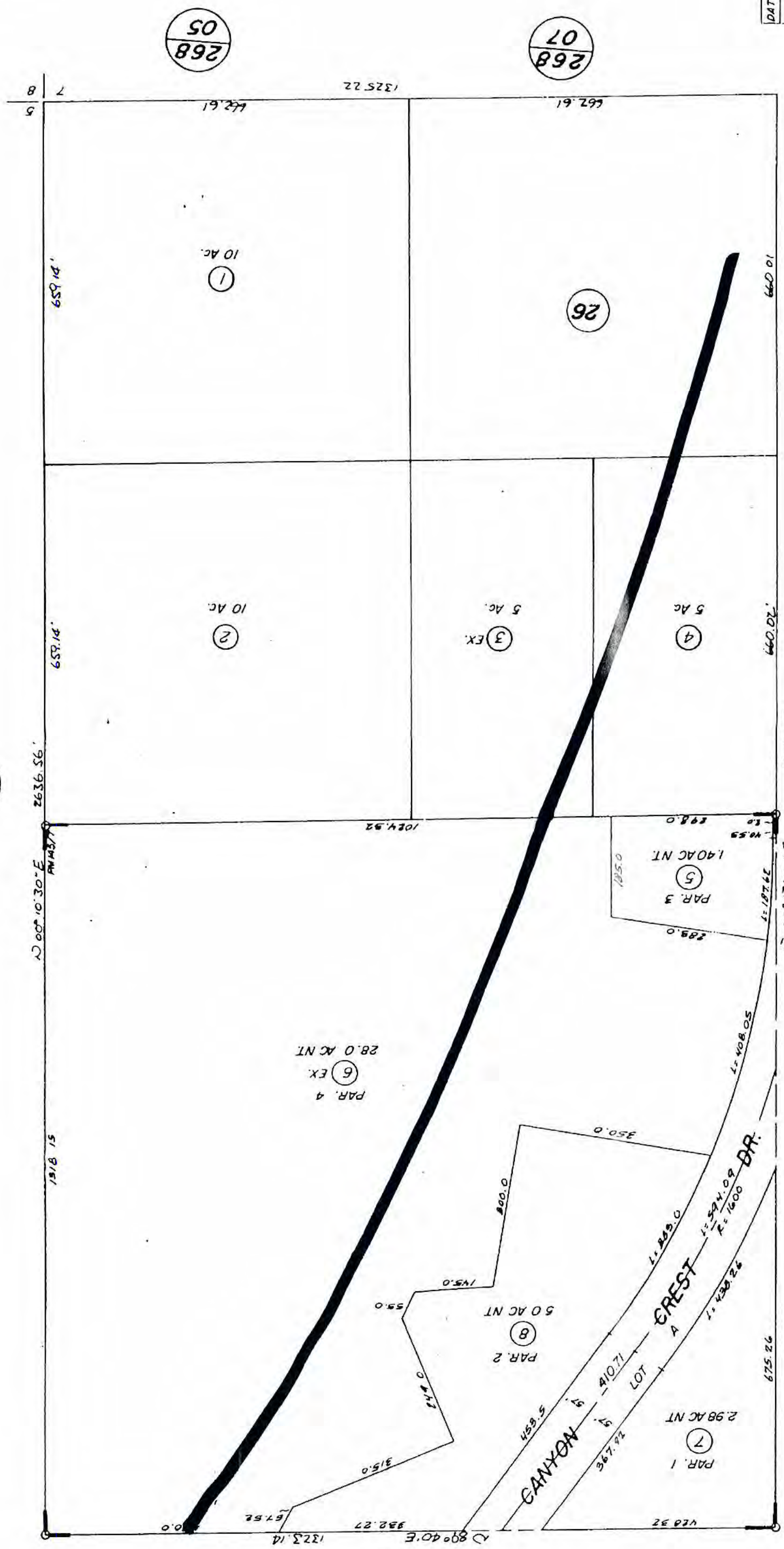
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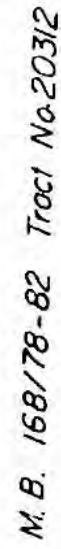
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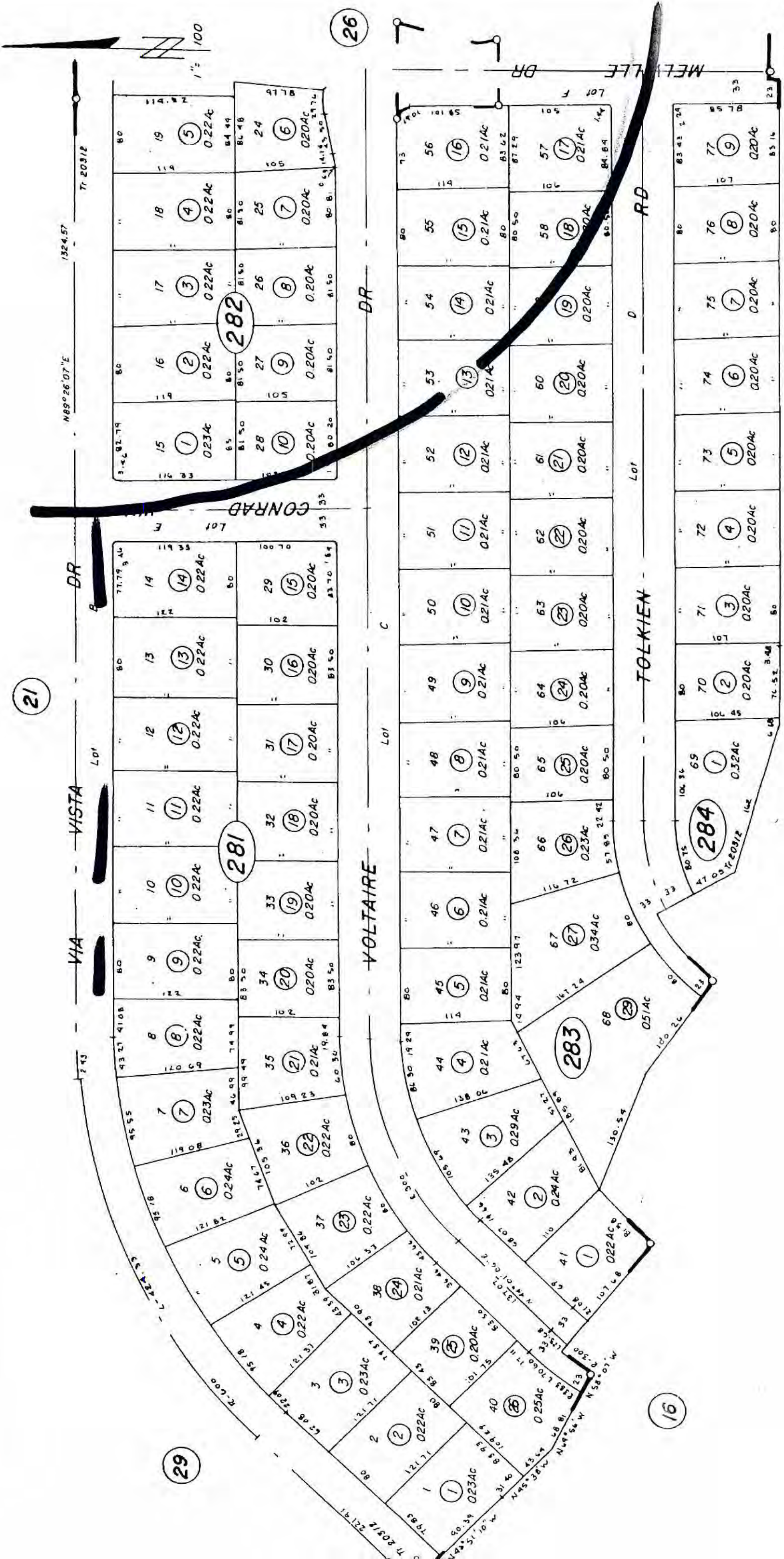
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CITY OF RIVERSIDE

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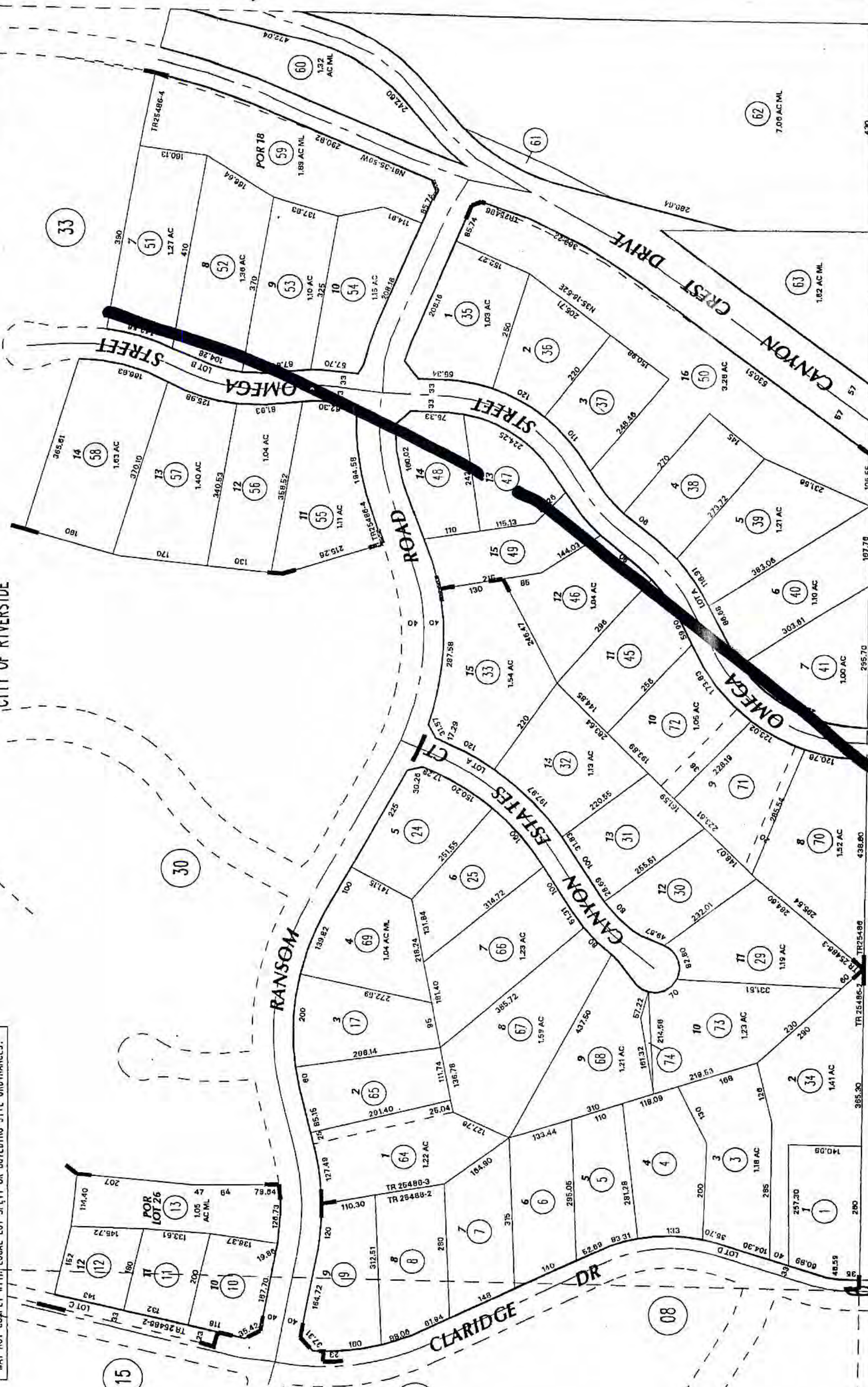
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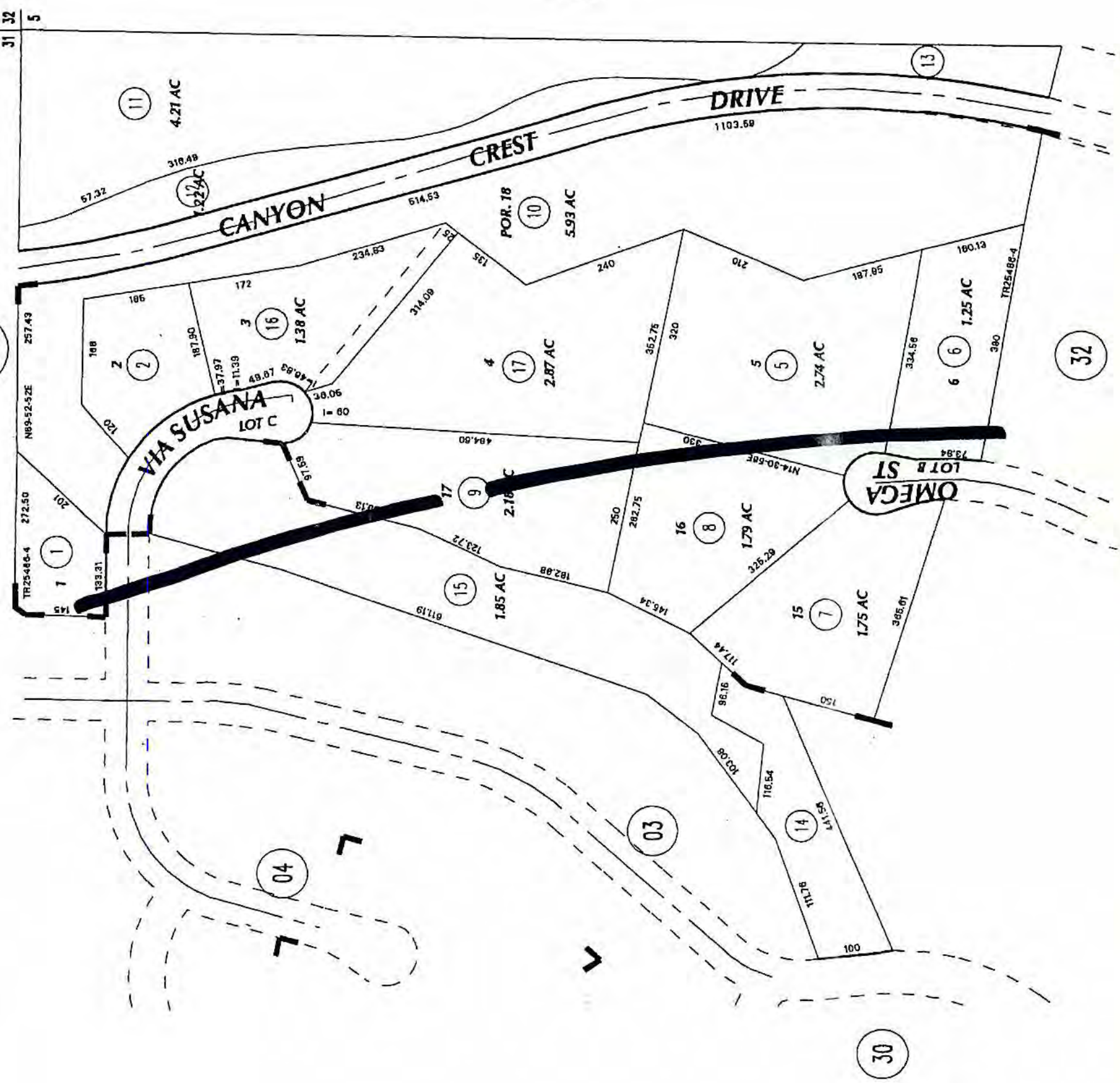
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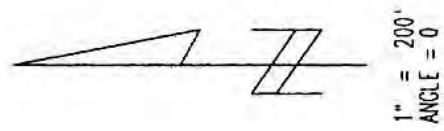
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CITY OF RIVERSIDE

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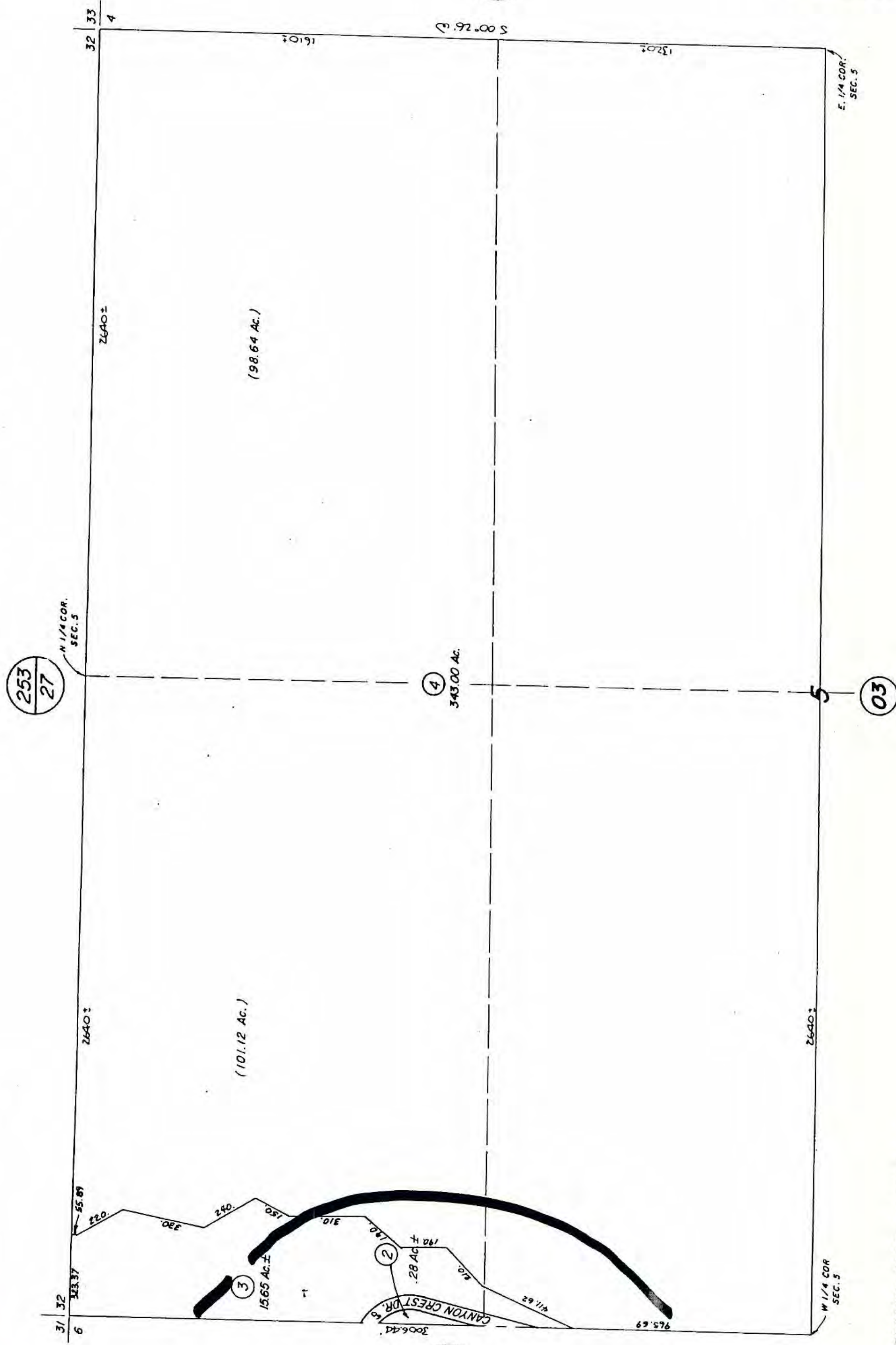
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ASSESSMENT PURPOSES ONLY

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APPENDIX 1D

## **Persons Who Prepared the AFC**

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# Persons Who Prepared the AFC

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| Section | Title                          | Preparer                   | Company                     |
|---------|--------------------------------|----------------------------|-----------------------------|
|         | Project Director               | Julie Way                  | AES Highgrove               |
|         | CH2M HILL Project Manager      | John Carrier               | CH2M HILL                   |
| 1.0     | Executive Summary              | John Carrier               | CH2M HILL                   |
| 2.0     | Project Description            | Julie Way, John Carrier    | AES Highgrove/<br>CH2M HILL |
| 3.0     | Demand Conformance             | John Carrier               | CH2M HILL                   |
| 4.0     | Facility Closure               | John Carrier               | CH2M HILL                   |
| 5.0     | Electric Transmission          | Julie Way                  | AES Highgrove               |
| 6.0     | Natural Gas Supply             | John Carrier               | CH2M HILL                   |
| 7.0     | Water Supply                   | Matt Franck                | CH2M HILL                   |
| 8.0     | Environmental Information      |                            |                             |
| 8.1     | Air Quality                    | Jerry Salamy/Bill Dennison | CH2M HILL                   |
| 8.2     | Biological Resources           | Linda Anton/Debra Crowe    | CH2M HILL                   |
| 8.3     | Cultural Resources             | Clint Helton/Doug Davy     | CH2M HILL                   |
| 8.4     | Land Use                       | Wendy Haydon               | CH2M HILL                   |
| 8.5     | Noise                          | Mark Bastasch              | CH2M HILL                   |
| 8.6     | Public Health                  | John Chiladakis            | CH2M HILL                   |
| 8.7     | Worker Safety                  | Sarah Madams               | CH2M HILL                   |
| 8.8     | Socioeconomics                 | Fatuma Yusuf               | CH2M HILL                   |
| 8.9     | Agriculture and Soils          | Steve Long                 | CH2M HILL                   |
| 8.10    | Traffic and Transportation     | Loren Bloomberg            | CH2M HILL                   |
| 8.11    | Visual Resources               | Brenda Eells/Tom Priestley | CH2M HILL                   |
| 8.12    | Hazardous Material Handling    | Karen Parker               | CH2M HILL                   |
| 8.13    | Waste Management               | Karen Parker               | CH2M HILL                   |
| 8.14    | Water Resources                | Matt Franck                | CH2M HILL                   |
| 8.15    | Geologic Hazards and Resources | Tom Lae                    | CH2M HILL                   |
| 8.16    | Paleontological Resources      | Geof Spaulding             | CH2M HILL                   |
| 9.0     | Alternatives                   | John Carrier               | CH2M HILL                   |
| 10.0    | Engineering                    | Les Mathine                | CH2M HILL                   |

APPENDIX 5A

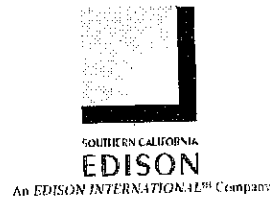
## **System Impact Study**

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AES Pacific, Inc.  
AES HIGHGROVE PROJECT

***SYSTEM IMPACT STUDY***

*April 18, 2005*



*Prepared by:*

*Brian Stonerock*

*Approved by:*

*Russ Neal*  
\_\_\_\_\_  
Russ Neal

***SOUTHERN CALIFORNIA EDISON COMPANY***

## EXECUTIVE SUMMARY

AES Pacific, Inc. ("AES") applied to Southern California Edison ("SCE") for distribution service under the terms of SCE's Wholesale Distribution Access Tariff ("WDAT"). AES will own and operate a 300 MW generating facility ("AES Highgrove") to be interconnected at SCE's Highgrove Substation. Distribution service pursuant to the WDAT is proposed to be from SCE's 115 kV Highgrove Substation to the California Independent System Operator ("ISO") grid at SCE's 230 kV Vista Substation. The proposed in-service date of AES's Highgrove Plant is May 2007.

The AES Highgrove Plant is a generation system consisting of three (3) 100 MW Brush Electrical Machines Ltd. Gas Turbine Generators, with a net generation export of 300 MW. As requested by AES, SCE performed a System Impact Study to identify the general electrical system impacts of the AES Highgrove Plant and possible mitigation measures to maintain conformance with SCE, ISO, or other applicable reliability planning criteria.

The study consisted of a power flow analysis and a short circuit duty analysis (Phase I study scope) to determine whether the energy associated with AES's Highgrove Plant can be transmitted through SCE's distribution system to the ISO grid at Vista Substation, without creating the need for modifications to SCE's distribution system and/or the ISO grid. The study showed that, with the AES Highgrove Plant on-line:

- Thermal loadings on the SCE facilities used to provide the requested distribution service are all within criteria limits.
- Three-phase short-circuit duties increase by 0.1 kA or more at ten (10) 115 kV buses, eighteen (18) 230 kV buses, and five (5) 500 kV buses that have duty levels above 60% of their nameplate three-phase ratings.
- Single line-to-ground short-circuit duties increase by 0.1 kA or more at five (5) 115 kV bus that have duty levels above 60% of their nameplate single line-to-ground ratings. The evaluation of the single line-to-ground duty increases for the 230 kV and 500 kV buses will be conducted as part of the Facilities Study.

Based on these results, SCE concludes that a Facilities Study will be required to evaluate the need for circuit breaker replacements at the 115 kV, 230 kV, and 500 kV levels as a result of the AE Highgrove Plant. The Facilities Study should include the following scope:

- Evaluate the need for circuit breaker replacement and develop detailed costs for any identified breaker replacement at the following ten (10) 115 kV buses, eighteen (18) 230 kV buses, and five (5) 500 kV buses where the AES Highgrove Plant increases three-phase short-circuit duties by 0.1 kA or more and where duty levels are above 60% of three-phase ratings:
  - Devers 500 kV
  - Lugo 500 kV
  - Miraloma 500 kV
  - Serrano 500 kV

- Stagecoach 500 kV
  - Barre 230 kV
  - Chino 230 kV
  - Del Amo 230 kV
  - Devers 230 kV
  - Etiwanda 230 kV
  - Huntington Beach B 230 kV
  - La Fresa 230 kV
  - Lugo 230 kV
  - Mira Loma E 230 kV
  - Mira Loma W 230 kV
  - Olinda 230 kV
  - Padua 230 kV
  - San Onofre 230 kV
  - San Bernardino 230 kV
  - Serrano 230 kV
  - Stagecoach 230 kV
  - Villa Park 230 kV
  - Vista 230 kV
  - Altwind 115 kV
  - Callectric 115 kV
  - Highgrove 115 kV
  - Homart 115 kV
  - Pepper 115 kV
  - Shandin 115 kV
  - Vista 115 kV
  - Devil Canyon 115 kV
  - Mojave Siphon (Cdwr) 115 kV
  - San Bernardino 115 kV
- Evaluate the need for circuit breaker replacement and develop detailed costs for any identified breaker replacement at the following five (5) 115 kV substations where the AES Highgrove Plant increases single line-to-ground short-circuit duties by 0.1 kA or more and where duty levels are above 60% of single line-to-ground ratings:
    - Callectric 115 kV
    - Highgrove 115 kV
    - Shandin 115 kV
    - San Bernardino 115 kV
    - Vista 115 kV
- The evaluation of the single line-to-ground duty increases for the 230 kV and 500 kV buses will be conducted as part of the Facilities Study.

Preliminary cost estimates to replace all of the circuit breakers at the identified substations are included in Table 1 and Table 2 of this System Impact Study. Detailed costs will be developed in the Facilities Study.

Phase II of this System Impact Study (i.e., stability study and post-transient voltage study) will not be required unless requested by a third party.

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| 2. STUDY CONDITIONS AND METHODOLOGY | 1           |
| 2.A Planning Criteria               | 1           |
| 2.B System Load Conditions          | 2           |
| 2.C Power Flow Study                | 2           |
| 2.D Short-Circuit Duty Study        | 2           |
| 3. DISCUSSION OF STUDY RESULTS      | 2           |
| 3.A Power Flow Study                | 2           |
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| 4. CONCLUSIONS                      | 4           |

### TABLES

1. Three Phase Short-Circuit Duty Summary
2. Single Line-to-Ground Short-Circuit Duty Summary

### APPENDIX

- A. Transmission System Impact Study

# CALIFORNIA PORTLAND CEMENT COMPANY SYSTEM IMPACT STUDY

March 31, 2005

## 1. INTRODUCTION

AES Pacific, Inc. ("AES") applied to Southern California Edison ("SCE") for distribution service under the terms of SCE's Wholesale Distribution Access Tariff ("WDAT"). AES will own and operate a 300 MW generating facility ("AES Highgrove") to be interconnected at SCE's Highgrove Substation. Distribution service pursuant to the WDAT is proposed to be from SCE's 115 kV Highgrove Substation to the California Independent System Operator ("ISO") grid at SCE's 230 kV Vista Substation. The proposed in-service date of AES's Highgrove Plant is May 2007.

The AES Highgrove Plant is a generation system consisting of three (3) 100 MW Brush Electrical Machines Ltd. Gas Turbine Generators, with a net generation export of 300 MW. As requested by AES, SCE performed a System Impact Study to identify the general electrical system impacts of the AES Highgrove Plant and possible mitigation measures to maintain conformance with SCE, ISO, or other applicable reliability planning criteria.

The study consisted of a power flow analysis and a short circuit duty analysis (Phase I study scope) to determine whether the energy associated with the AES Highgrove Plant can be transmitted through SCE's distribution system to the ISO grid at Vista Substation, without creating the need for modifications to SCE's distribution system and/or the ISO grid. This report describes the study conditions and assumptions and presents the results of the power flow and short circuit duty analyses. Based on these results, the report concludes that a Facilities Study will be required to evaluate the need for circuit breaker replacements at the 115 kV and 230 kV levels as a result of the AES Highgrove Plant. Phase II of this System Impact Study (i.e., stability study and post-transient voltage study) will not be required unless requested by a third party.

## 2. STUDY CONDITIONS AND METHODOLOGY

### A. Planning Criteria

The study was conducted by applying SCE's planning criteria to the SCE facilities used to provide the requested distribution service. Specifically, the main criteria applicable to this study are as follows:

#### Power Flow Criteria

Line loading should not exceed 100% of a conductor's thermal rating with all facilities in service (base case).

Line loading should not exceed 135% of a conductor's thermal rating with one line out of service (N-1).

### Short-Circuit Duty Criteria

Short-circuit duty should not exceed a circuit breaker's interrupting capability with maximum area generation on-line.

### **B. System Load Conditions**

The study considered three system load conditions: peak loads, light loads, and very light load or evening loads. The peak load forecast was based on SCE's 2005-2014 Distribution Substation Plan. The light load forecast was assumed to be 50% of the peak load forecast and the very light load was assumed to be 35% of the peak load forecast. Two scenarios were considered for each load condition, the first scenario was the 2007 Vista system configuration and the second scenario was the 2009 Vista system configuration.

### **C. Power Flow Study**

This study evaluated AES Highgrove Plant's impact on line loadings for base case and N-1 conditions. Line loadings were monitored both with and without the AES Highgrove Plant to determine if the addition of the Highgrove Plant causes any violations of SCE's thermal loading criteria.

### **D. Short-Circuit Duty Study**

This study evaluated the AES Highgrove Plant's impact on short-circuit duties seen by substation circuit breakers at the 115 kV, 230 kV, and 500kV levels. Symmetrical three-phase fault currents and single line-to-ground fault currents were calculated both with and without the AES Highgrove Plant to determine if the addition of the AES Highgrove Plant causes any violations of SCE's short-circuit duty criteria.

The dataset used for the short-circuit study represented all existing generation and all projects in the queue (up to and including the AES Highgrove Plant) as on-line. Substations where the AES Highgrove Plant increases three-phase short-circuit duties by 0.1 kA or more and where duty levels are above 60% of circuit breaker nameplate three-phase ratings were identified for a more detailed review of asymmetrical duties in the Facilities Study. Similarly, substations where the AES Highgrove Plant increases single line-to-ground short-circuit duties by 0.1 kA or more and where duty levels are above 60% of circuit breaker nameplate single line-to-ground ratings were identified for a more detailed review of asymmetrical duties in the Facilities Study.

## **3. DISCUSSION OF STUDY RESULTS**

### **A. Power Flow Study**

For peak load, light load and very light load conditions for both the 2007 and 2009 Vista system configurations, the addition of the AES Highgrove Plant causes no violations of SCE's thermal loading criteria to the Vista 115kV system.

The AES Highgrove Plant has the largest incremental impact on thermal loading of SCE's two Vista-Highgrove 115 kV lines. These two 115 kV lines along with four others are used to provide subtransmission service to the Highgrove facility. For peak load, light load and very light load conditions for the 2007 scenario, the addition of the Project decreases thermal loading on these lines by about 20-25 MW each, due to power being exported from Highgrove once the AES Highgrove

plant is on-line rather than being imported. Thermal loading on the remaining lines in the Vista 115 kV system are relatively unchanged with the addition of the AES Highgrove Plant for the 2007 scenarios.

For the 2009 Vista system configuration scenario the AES Highgrove Plant has the largest incremental impact on thermal loading of SCE's two Vista-Highgrove 115 kV lines. For peak load condition for the 2009 scenario, the addition of the Project *decreases* thermal loading on these lines by about 30 MW each, due to power being exported from Highgrove once the AES Highgrove plant is on-line rather than being imported. For the light load and very light load conditions for the 2009 scenario, the addition of the Project *increases* thermal loading on these lines by about 45-70 MW each, due to power being exported from Highgrove once the AES Highgrove plant is on-line rather than being imported. Thermal loading on the remaining lines in the Vista 115 kV system are relatively unchanged with the addition of the AES Highgrove Plant for the 2009 scenarios.

### **B. Short-Circuit Duty Study**

Table 1 summarizes the impact of the Highgrove Plant on symmetrical three-phase short-circuit duties and X/R ratios at various 115 kV and 230 kV buses on the SCE system. Ten (10) 115 kV buses, eighteen (18) 230 kV buses, and five (5) 500 kV buses were identified for which the Project increases three-phase duties by 0.1 kA or more and where duty levels are above 60% of nameplate three-phase ratings:

- o Devers 500 kV
- o Lugo 500 kV
- o Miraloma 500 kV
- o Serrano 500 kV
- o Stagecoach 500 kV
- o Barre 230 kV
- o Chino 230 kV
- o Del Amo 230 kV
- o Devers 230 kV
- o Etiwanda 230 kV
- o Huntington Beach B 230 kV
- o La Fresa 230 kV
- o Lugo 230 kV
- o Mira Loma E 230 kV
- o Mira Loma W 230 kV
- o Olinda 230 kV
- o Padua 230 kV
- o San Onofre 230 kV
- o San Bernardino 230 kV
- o Serrano 230 kV
- o Stagecoach 230 kV
- o Villa Park 230 kV
- o Vista 230 kV
- o Altwind 115 kV
- o Callectric 115 kV
- o Highgrove 115 kV
- o Homart 115 kV
- o Pepper 115 kV
- o Shandin 115 kV
- o Vista 115 kV

- Devil Canyon 115 kV
- Mojave Siphon (Cdwr) 115 kV
- San Bernardino 115 kV

Table 2 summarizes the impact of the Highgrove Plant on symmetrical single line-to-ground short-circuit duties and X/R ratios at various 115 kV buses on the SCE system. Four (4) 115 kV substations were identified for which the Project increases three-phase duties by 0.1 kA or more and where duty levels are above 60% of nameplate single line-to-ground ratings:

- Calelectric 115 kV
- Highgrove 115 kV
- Shandin 115 kV
- San Bernardino 115 kV

The evaluation of the single line-to-ground duty increases for the 230 kV and 500 kV buses will be conducted as part of the Facilities Study.

A more detailed review of asymmetrical duties and circuit breaker interrupting capabilities at these substations will be required in the Facilities Study to evaluate the need for circuit breaker replacements as a result of the AES Highgrove Plant.

#### 4. CONCLUSIONS

The results of this System Impact Study showed that, with the Highgrove Plant on-line:

- Thermal loadings on the SCE facilities used to provide the requested distribution service are all within criteria limits.
- Three-phase short-circuit duties increase by 0.1 kA or more at ten (10) 115 kV buses, eighteen (18) 230 kV buses, and five (5) 500 kV buses that have duty levels above 60% of their nameplate three-phase ratings.
- Single line-to-ground short-circuit duties increase by 0.1 kA or more at five (5) 115 kV bus that have duty levels above 60% of their nameplate single line-to-ground ratings. The evaluation of the single line-to-ground duty increases for the 230 kV and 500 kV buses will be conducted as part of the Facilities Study.

Based on these results, SCE concludes that a Facilities Study will be required to evaluate the need for circuit breaker replacements at the 115 kV, 230 kV, and 500 kV levels as a result of the AES Highgrove Plant. The Facilities Study should include the following scope:

- Evaluate the need for circuit breaker replacement and develop detailed costs for any identified breaker replacement at the following ten (10) 115 kV buses, eighteen (18) 230 kV buses, and five (5) 500 kV buses where the AES Highgrove Plant increases three-phase short-circuit duties by 0.1 kA or more and where duty levels are above 60% of three-phase ratings:
  - Devers 500 kV
  - Lugo 500 kV
  - Miraloma 500 kV
  - Serrano 500 kV
  - Stagecoach 500 kV
  - Barre 230 kV

- Chino 230 kV
  - Del Amo 230 kV
  - Devers 230 kV
  - Etiwanda 230 kV
  - Huntington Beach B 230 kV
  - La Fresa 230 kV
  - Lugo 230 kV
  - Mira Loma E 230 kV
  - Mira Loma W 230 kV
  - Olinda 230 kV
  - Padua 230 kV
  - San Onofre 230 kV
  - San Bernardino 230 kV
  - Serrano 230 kV
  - Stagecoach 230 kV
  - Villa Park 230 kV
  - Vista 230 kV
  - Altwind 115 kV
  - Calectric 115 kV
  - Highgrove 115 kV
  - Homart 115 kV
  - Pepper 115 kV
  - Shandin 115 kV
  - Vista 115 kV
  - Devil Canyon 115 kV
  - Mojave Siphon (Cdwr) 115 kV
  - San Bernardino 115 kV
- Evaluate the need for circuit breaker replacement and develop detailed costs for any identified breaker replacement at the following five (5) 115 kV substations where the AES Highgrove Plant increases single line-to-ground short-circuit duties by 0.1 kA or more and where duty levels are above 60% of single line-to-ground ratings:
    - Calectric 115 kV
    - Highgrove 115 kV
    - Shandin 115 kV
    - San Bernardino 115 kV
    - Vista 115 kV

Preliminary cost estimates to replace all of the circuit breakers at the identified substations are included in Table 1 and Table 2 of this System Impact Study. Detailed costs will be developed in the Facilities Study.

Phase II of this System Impact Study (i.e., stability study and post-transient voltage study) will not be required unless requested by a third party.

**TABLE 1  
THREE-PHASE SHORT-CIRCUIT DUTY SUMMARY**

| Substation Bus              | Minimum CB<br>Rating (kA) | Before AES Highgrove Project |           | After AES Highgrove Project |           | Delta<br>kA | # of Breakers<br>at Substation | Estimated Cost<br>Per Breaker (\$M) | Estimated<br>Cost (\$M) |
|-----------------------------|---------------------------|------------------------------|-----------|-----------------------------|-----------|-------------|--------------------------------|-------------------------------------|-------------------------|
|                             |                           | Three-Phase Duty (kA)        | X/R Ratio | Three-Phase Duty (kA)       | X/R Ratio |             |                                |                                     |                         |
| Devers 500 kV               | 40.0                      | 24.0                         | 16.5      | 24.1                        | 16.6      | 0.1         | 3                              | \$2.20                              | \$6.60                  |
| Lugo 500 kV                 | 37.8                      | 43.9*                        | 21.7      | 44.1                        | 21.7      | 0.2         | 12                             | \$2.20                              | \$26.40                 |
| Miraloma 500 kV             | 38.4                      | 33.4                         | 24.4      | 33.6                        | 24.6      | 0.2         | 10                             | \$2.20                              | \$22.00                 |
| Serrano 500 kV              | 40.0                      | 29.9                         | 24.3      | 30.0                        | 24.3      | 0.1         | 9                              | \$2.20                              | \$19.80                 |
| Stagecoach 500 kV           | N/A                       | 26.1                         | 27.9      | 26.2                        | 28.0      | 0.1         | 8                              | \$2.20                              | \$17.60                 |
| Barre 230 kV                | 45.6                      | 49.3*                        | 18.7      | 49.4                        | 18.7      | 0.1         | 16                             | \$0.45                              | \$7.20                  |
| Chino 230 kV                | 50.0                      | 47.9                         | 17.1      | 48.2                        | 17.0      | 0.3         | 9                              | \$0.45                              | \$4.05                  |
| Del Amo 230 kV              | 50.0                      | 41.1                         | 15.0      | 41.2                        | 16.0      | 0.1         | 10                             | \$0.45                              | \$4.50                  |
| Devers 230 kV               | 33.0                      | 44.9*                        | 21.2      | 45.1                        | 21.1      | 0.2         | 13                             | \$0.45                              | \$5.85                  |
| Etiwanda 230 kV             | 34.0                      | 57.1*                        | 25.6      | 57.7                        | 25.9      | 0.6         | 14                             | \$0.45                              | \$6.30                  |
| Huntington Beach B 230 kV   | 37.7                      | 30.1                         | 14.8      | 30.2                        | 14.7      | 0.1         | 4                              | \$0.45                              | \$1.80                  |
| La Fresa 230 kV             | 45.6                      | 46.3*                        | 26.5      | 46.4                        | 28.5      | 0.1         | 20                             | \$0.45                              | \$9.00                  |
| Lugo 230 kV                 | 50.0                      | 36.7                         | 30.8      | 36.8                        | 30.9      | 0.1         | 12                             | \$0.45                              | \$5.40                  |
| Mira Loma E 230 kV          | 63.0                      | 59.4                         | 23.2      | 60.0                        | 23.2      | 0.6         | 17                             | \$0.45                              | \$7.65                  |
| Mira Loma W 230 kV          | 63.0                      | 50.2                         | 20.3      | 50.6                        | 20.3      | 0.4         | 12                             | \$0.45                              | \$5.40                  |
| Olinda 230 kV               | 37.7                      | 27.1                         | 13.9      | 27.2                        | 13.9      | 0.1         | 9                              | \$0.45                              | \$4.05                  |
| Padua 230 kV                | 25.1                      | 20.6                         | 15.3      | 20.7                        | 15.3      | 0.1         | 5                              | \$0.45                              | \$2.25                  |
| San Onofre 230 kV           | 50.0                      | 48.8                         | 26.2      | 48.9                        | 26.2      | 0.1         | 26                             | \$0.45                              | \$11.70                 |
| San Bernardino 230 kV       | 50.0                      | 39.6                         | 21.0      | 40.1                        | 21.0      | 0.5         | 11                             | \$0.45                              | \$4.95                  |
| Serrano 230 kV              | 63.0                      | 52.7                         | 24.4      | 52.9                        | 24.4      | 0.2         | 14                             | \$0.45                              | \$6.30                  |
| Stagecoach 230 kV           | N/A                       | 57.2                         | 26.1      | 57.8                        | 26.1      | 0.6         | 12                             | \$0.45                              | \$5.40                  |
| Villa Park 230 kV           | 50.0                      | 46.2                         | 21.8      | 46.3                        | 21.9      | 0.1         | 9                              | \$0.45                              | \$4.05                  |
| Vista 230 kV                | 40.0                      | 48.0*                        | 19.1      | 50.0                        | 19.9      | 2.0         | 22                             | \$0.45                              | \$9.90                  |
| Altwind 115 kV              | N/A                       | 12.9                         | 10.6      | 13.0                        | 10.6      | 0.1         | 1                              | \$0.30                              | \$0.30                  |
| Callectic 115 kV            | 25.1                      | 16.4                         | 7.4       | 21.8                        | 7.3       | 5.5         | 14                             | \$0.30                              | \$4.20                  |
| Highgrove 115 kV            | 17.6                      | 17.0                         | 9.1       | 26.3                        | 14.1      | 9.3         | 12                             | \$0.30                              | \$3.60                  |
| Homart 115 kV               | 25.1                      | 12.6                         | 6.1       | 15.7                        | 5.8       | 3.0         | 3                              | \$0.30                              | \$0.90                  |
| Pepper 115 kV               | 25.1                      | 12.3                         | 5.4       | 15.6                        | 5.1       | 3.2         | 3                              | \$0.30                              | \$0.90                  |
| Shandin 115 kV              | 25.1                      | 14.3                         | 6.2       | 17.2                        | 5.4       | 3.0         | 5                              | \$0.30                              | \$1.50                  |
| Vista 115 kV                | 25.1                      | 19.3                         | 11.7      | 27.4                        | 16.1      | 8.1         | 10                             | \$0.30                              | \$3.00                  |
| Devil Canyon 115 kV         | N/A                       | 12.8                         | 7.0       | 15.1                        | 6.3       | 2.2         | 4                              | \$0.30                              | \$1.20                  |
| Mojave Siphon (Cdwr) 115 kV | N/A                       | 5.7                          | 3.3       | 6.9                         | 3.1       | 0.2         | 2                              | \$0.30                              | \$0.60                  |
| San Bernardino 115 kV       | 25.1                      | 12.3                         | 6.0       | 15.2                        | 5.7       | 2.9         | 11                             | \$0.30                              | \$3.30                  |

\* Pre-project criteria violation due to prior generation projects in the queue.

**TABLE 2**  
**SINGLE LINE-TO-GROUND (SLG) SHORT-CIRCUIT DUTY SUMMARY**

| Substation Bus        | Minimum CB<br>Rating (kA) | Before AES Highgrove Project |           | After AES Highgrove Project |           | Delta<br>kA | # of Breakers<br>at Substation | Estimated Cost<br>Per Breaker (\$M) | Estimated<br>Cost (\$M) |
|-----------------------|---------------------------|------------------------------|-----------|-----------------------------|-----------|-------------|--------------------------------|-------------------------------------|-------------------------|
|                       |                           | SLG Duty (kA)                | X/R Ratio | SLG Duty (kA)               | X/R Ratio |             |                                |                                     |                         |
| Callectric 115 kV     | 25.1                      | 18.1                         | 7.4       | 22.1                        | 7.3       | 4.0         | 14                             | \$0.3                               | \$4.2                   |
| Highgrove 115 kV      | 17.6                      | 21.0                         | 9.1       | 29.3                        | 14.1      | 8.3         | 12                             | \$0.3                               | \$3.6                   |
| Shandin 115 kV        | 25.1                      | 15.2                         | 6.2       | 17.2                        | 5.4       | 2.0         | 5                              | \$0.3                               | \$1.5                   |
| Vista 115 kV          | 25.1                      | 22.3                         | 12.6      | 28.6                        | 12.6      | 6.3         | 10                             | \$0.3                               | \$3.0                   |
| San Bernardino 115 kV | 25.1                      | 13.4                         | 6.0       | 15.4                        | 5.7       | 2.0         | 11                             | \$0.3                               | \$3.3                   |

\* Pre-project criteria violation due to prior generation projects in the queue.

AES HIGHGROVE PROJECT  
GENERATION INTERCONNECTION

SYSTEM IMPACT STUDY  
TRANSMISSION ASSESSMENT

April 7, 2005



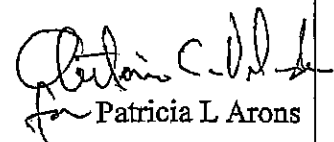
SOUTHERN CALIFORNIA  
**EDISON**<sup>®</sup>  
AN AMERICAN ELECTRIC COMPANY

Prepared by

Sheridan Mascarenhas

Southern California Edison Company

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for Patricia L. Arons

# **AES HIGHGROVE PROJECT SYSTEM IMPACT STUDY - TRANSMISSION ASSESSMENT**

## **EXECUTIVE SUMMARY**

The AES Corporation applied to the California Independent System Operator (CAISO) for Interconnection. The AES Corporation proposed to interconnect three gas turbine generators, each with a maximum operating rating at 108.19 MW. The generator auxiliary load is 1 MW and net capacity of the project is rated at 323.57 MW. The AES Corporation proposed to interconnect the project ("AES Highgrove Project") to the 115-kV bus at SCE's Highgrove Substation. The in-service date proposed by AES is January 1, 2007.

Southern California Edison's (SCE's) Transmission and Interconnection Planning (TIP) department has performed a System Impact Study to determine the adequacy of SCE's transmission system to accommodate the AES Highgrove Project. The study indicates that the system is not adequate to accommodate the 323.57 MW of generation without modifications. A Facilities Study will be required for the AES Highgrove Project.

The results of the System Impact Study will be used as the basis to determine project cost allocation for facility upgrades in the Facilities Study. *The study accuracy and the results for the assessment of the system adequacy are contingent on the accuracy of the technical data provided by the AES Corporation.* Any changes from the attached data could void the study results.

SCE's Field Engineering department has performed a System Impact Study on the SCE affected distribution network.

## **POWER FLOW STUDY RESULTS**

The power flow study results show that overloading problems are found on several transmission lines for base-case, single and double contingencies. Specifically:

### **Base case**

Under spring conditions, the project increased prior base case overloads from 113% to 114% on the Devers - Valley 500 kV line causing a net 1% increase.

Under summer conditions there were no base case overloads

### **Single Contingency**

Single contingency overload problems are found on a total of six transmission lines. Under spring conditions, the Etiwanda - Vista 230 kV line was overloaded from 90% - 97% to 103% - 107% of the nominal rating. Prior overloads on the other lines were increased from 104% - 135% to 100% - 140% of the nominal ratings of the lines.

Under summer conditions, the project increased prior overloads on the Devers – Valley 500 kV line ranging from 100 – 102% to 102% - 104 %.

### **Double Contingency**

Double contingency overload problems are found on a total of five transmission lines. Under spring conditions, the project overloaded the Serrano – Valley 500 kV line from 90% to 101% of its nominal rating for one double contingency. Also, the project overloaded the Etiwanda – Vista 230 kV line from 96% - 135% to 110% - 150% of its nominal rating. The project increased prior overloads on the rest of the lines from 105% - 163% to 110% - 175%. In particular, the project increased a prior overload on the San Bernardino – Vista 230 kV line from 163% to 175% - which is in excess of the line's N-2 conductor rating..

Under summer conditions, the Devers – Valley 500 kV line was overloaded from 103% - 106% to 105% - 108% of its nominal rating.

Most overloads were due to the existing wave trap limitations and other limitations on the GIS line terminals located at Valley Substation. The exception is the San Bernardino – Vista 230 kV line, where overloads exceeded the N-2 emergency limit on the line conductor.

## **TRANSIENT STABILITY STUDY RESULTS**

No transient stability voltage violations were found with the addition of the AES Highgrove Project.

## **SHORT CIRCUIT DUTY STUDY**

The data provided by the AES Corporation has been used to study the Short Circuit Duty contribution. The addition of the Project has impacted 17 substations with increases in the short circuit duty. These impacts require further study to determine the need for circuit breaker upgrades.

## **SCOPE OF WORK**

The scope of upgrades to accommodate the generation interconnection on the SCE network is listed below. This study has not assumed overload mitigation requirements for projects ahead of the queue.

- Upgrades of the 3000A wave traps and line terminals at Valley Substation 4000A on the Devers – Valley 500 kV line.
- Upgrades of line terminals at Serrano & Valley substations on the Serrano - Valley 500 kV line.
- Upgrades of line terminals at Vista and San Bernardino substations on the Vista – San Bernardino 230 kV line from 2300A to 3000A (or greater) line terminals.

- Upgrades of line terminals at Vista Substation on the Etiwanda and Mira Loma #1 230 kV lines
- Upgrade of line terminals at Barre & Lewis Substations on the Barre – Lewis 230 kV line.
- Upgrade the wave traps at Etiwanda Substation on the Vista 230 kV line.
- Upgrade the wave traps at Walnut Substation on the Mira Loma 230 kV line.
- Replacement of transmission line conductors on the San Bernardino – Vista 230 kV line.
  - Note: The San Bernardino – Vista 230 kV line conductors are overloaded over its N-2 rating.

The following items 1 – 4 also need to be evaluated for replacement or upgrade in the Facilities Study.

1. Breakers & Disconnects at Devers Substation on the Valley 500 kV line.
2. Breakers & Disconnects at Etiwanda Substation on the Vista 230 kV line.
3. Breakers at Mira Loma & Vista Substations on the Mira Loma - Vista 230 kV line.
4. Breakers & Disconnects at Walnut Substation on the Mira Loma 230 kV line.

**Note:**

Study results may change due to changes in other projects ahead of the queue in the area. A re-study may be required if there are changes in the project queue or the scope of projects ahead in the queue.

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**THE AES CORPORATION**  
**GENERATION INTERCONNECTION**  
**SYSTEM IMPACT STUDY**  
**TRANSMISSION ASSESSMENT**

**INTRODUCTION**

The AES Corporation applied to the California Independent System Operator (CAISO) for Interconnection. The AES Corporation proposed to interconnect three gas turbine generators, each with a maximum operating rating at 108.19 MW. The generator auxiliary load is 1 MW and net capacity of the project is rated at 323.57 MW. The AES Corporation proposed to interconnect the project ("AES Highgrove Project") to the 115-kV bus at SCE's Highgrove Substation. The in-service date proposed by AES is January 1, 2007.

Southern California Edison's (SCE's) Transmission and Interconnection Planning (TIP) department has performed a System Impact Study to determine the adequacy of SCE's transmission system to accommodate the AES Highgrove Project. The study indicates that the system is not adequate to accommodate the 323.57 MW of generation without modifications. A Facilities Study will be required for the AES Highgrove Project.

The results of the System Impact Study will be used as the basis to determine project cost allocation for facility upgrades in the Facilities Study. *The study accuracy and the results for the assessment of the system adequacy are contingent on the accuracy of the technical data provided by the AES Corporation.* Any changes from the attached data could void the study results.

SCE's Field Engineering department has performed a System Impact Study on the SCE affected distribution network.

The study was performed for two system conditions: (a) 2007 heavy summer load conditions (once in-ten-year heat wave assumption) with maximum eastern area generation, and (b) 2007 spring load conditions (65% of 2007 heavy summer peak load) for the total transmission system. These conditions reflected the most critical expected loading condition for the transmission system in SCE's eastern area.

## STUDY CONDITIONS AND ASSUMPTIONS

### A. Planning Criteria

The study was conducted by applying the California Independent System Operator (CAISO) Reliability Criteria. More specifically, the main criteria applicable to this study are as follows:

#### Power Flow Assessment

The following contingencies are considered for transmission or sub-transmission lines and 500/230 kV transformer banks ("AA-Bank"):

Assuming both San Onofre Units 2 and 3 in service and then:

- Single Contingencies (N-1 Line or N-1 AA-Bank)
- Double Contingencies (N-2 Two Lines, N-1 Line and N-1 AA-Bank)  
(Outages of two AA-Banks are beyond the Planning Criteria)

The following criteria are used:

|                                 |                   |                                       |
|---------------------------------|-------------------|---------------------------------------|
| Transmission Lines              | Base Case         | Limiting Component Normal Rating      |
|                                 | N-1               | Limiting Component A-Rating           |
|                                 | N-2               | Limiting Component B-Rating           |
| 500-230 kV<br>Transformer Banks | Base Case         | Normal Loading Rating                 |
|                                 | Long & Short Term | As Defined by SCE Operating Bulletins |

Table 2.1

System upgrades or Special Protection Systems for transmission lines are generally recommended only for base case overloads, single contingency overloads in excess of the A-Rating, and common mode failure double contingencies in excess of the B-Rating.

#### Congestion Assessment

The following principles, outlined below, were used for interconnecting generation into the SCE transmission system, which fall under CAISO jurisdiction (these principles may be subject to change for future interconnection projects).

- Congestion management, as a means to mitigate base case overloads, can be used if it is determined to be manageable and the CAISO concurs with the implementation.
- Facility upgrades will be required if it is determined that the use of congestion management is unmanageable as defined in the congestion management section that follows.
- Special protection schemes (SPS), in lieu of facility upgrades, will be recommended if the scheme is effective, does not jeopardize system integrity,

does not exceed the current CAISO single and double contingency tripping limitations, does not adversely effect existing or proposed special protection schemes in the area, and can be readily implemented.

- Facility upgrades will be required if use of protection schemes is determined to be ineffective, the amount of tripping exceeds the current CAISO single and double contingency tripping limitations, adverse impacts are identified on existing or currently proposed special protection schemes, or the scheme cannot be readily implemented.
- Congestion management in preparation for the next contingency will be required, with CAISO concurrence, if no facility upgrades or special protection schemes are implemented.

*The following study method was implemented to assess the extent of possible congestion:*

- a) Under Base Case with all transmission facilities in service, the system was evaluated with all existing interconnected generation and all generation requests in the area that have a queue position ahead of this request (pre-project).
- b) Under Base Case with all transmission facilities in service, the system was reevaluated with the inclusion of the AES Highgrove Project (post-project).

If the normal loading limits of facilities are exceeded in (a), the overload is identified as an existing overload that was triggered by a project in queue ahead of the AES Highgrove Project. If the normal loading limits of facilities are exceeded in (b) and were not exceeded in (a), the overload is identified as triggered by the addition of the AES Highgrove Project. The AES Highgrove Project, assuming it is a market participant, and other market participants in the area may be subjected to congestion management, potential upgrade cost and/or participation of any proposed special protection scheme if the project addition aggravates or triggers the overload. Additionally, the AES Highgrove Project may have to participate in mitigation of overloads triggered by subsequent projects in queue, subject to FERC protocols and policies.

In order for congestion management to be a feasible alternative to system facilities, all of the following factors need to be satisfied:

- Time requirements for necessary coordination and communication between the CAISO operators, scheduling operators and SCE operators.
- Distinct Path/Corridor rating should be well defined so monitoring and detecting congestion and implementing congestion of the contributing generation resources can be performed when limits are exceeded.

- Sufficient amount of market generation in either side of the congested path/corridor should be available to eliminate market power.
- Manageable generation in the affected area is necessary so that operators can implement congestion management if required (i.e. the dispatch schedule is known and controllable).

The results of these studies should identify:

- a. if capacity is available to accommodate the proposed AES Highgrove Project and all projects ahead in queue without the need for congestion management, special protection schemes, or facility upgrades
- b. if overloads exist in the area after the addition of all projects in queue ahead of the AES Highgrove Project and all facilities in service
- c. if congestion exists in the area with the addition of the AES Highgrove Project and all projects ahead in queue under single and double element outage conditions assuming no new special protection schemes are in place
- d. if sufficient capacity is maintained to accommodate all Must-Run and Regulatory Must-Take generation resources with all facilities in service
- e. if sufficient capacity is maintained to accommodate the total output of any one generation resource which is not classified as Must-Run.

#### **B. AES Highgrove Project**

The AES Highgrove Generation Interconnection project is located at 12700 Taylor Street, Grand Terrace, CA – 92313; near Highgrove Substation. The Project is proposed to be connected radially to the Highgrove 115 kV bus. Appendix A displays the proposed AES Highgrove interconnection project in the form of a one line diagram, submitted by the AES Corporation as part of the CAISO Generation Interconnection Application package.

The AES Corporation proposes to add a net total of 323.57 MW of generation interconnected at the Highgrove 115kV bus. A total of three gas turbine generators will produce a rated output put of 108.19 MW each. The generator auxiliary load is specified at 1 MW. The generator and transformer data for the proposed generating turbines, as provided by the AES Corporation, is shown in Appendix C.

#### **C. System Conditions**

To simulate the SCE transmission system for analysis, the study selected the databases that were used to conduct the CAISO Controlled Transmission 2004-2008 Assessment. Load flow studies considered the existing system arrangement without the SDGE proposed Rainbow-Valley 500 kV transmission project and to reflect other transmission projects.

For example:

- Palo Verde – Devers 500 kV Line #2 was in service.
- All four West of Devers 230 kV Lines have been upgraded.
- The Etiwanda – San Bernardino 230 kV line #1 rating will be increased to 2480 Amps / 988 MVA after the current wave trap removal project is completed.

The bulk power study considered scenarios that evaluated maximum EOR/WOR imports and maximum generation from Qualified Facilities in the eastern area. These conditions were evaluated to identify worst case scenarios that would stress the SCE 500-kV transmission system network in the eastern area. In addition, the study considered two system load conditions: 2007 heavy summer and light spring. The summer peak load forecast was based on SCE's 2004 Transmission Substation Transformer Capacity Assessment, and reflects a one-in-ten-year heat wave assumption. The 2004 – 2008 heavy summer load forecast is shown in Table 2.2. The 2004 - 2008 spring forecast assumed 65% of summer load forecast.

#### **D. Power Flow Study**

Power flow studies were conducted under 2007 heavy summer and 2007 spring load conditions with and without the AES Highgrove Project for a total of 4 base cases. Further descriptions of the base case assumptions are as follows:

- 2007 Heavy Summer: Case 1 **without** the AES Highgrove Project and Case 2 **with** maximum generation in SCE's eastern area electrical system and maximum EOR/WOR power flow. Generation included: all market and all regulatory must-take units. Generation patterns were maximized in the eastern area to fully stress the system in order to identify extent of potential congestion on the bulk power system with the addition of the AES Highgrove Project.
- 2007 Spring: Case 3 **without** the AES Highgrove Project Case 4 **with** 2007 spring load (65% of summer peak for the total system) was used with maximum generation in SCE's eastern area and maximum EOR/WOR power flow. Generation included: all market and all regulatory must-take units. Generation patterns were maximized in the eastern area to fully stress the system in order to identify the extent of potential congestion on the bulk power system with the addition of the AES Highgrove Project.

With the addition of the AES Highgrove Project, SCE's area total generation, imports, loads, and losses for each case are summarized in table below:

| <b>SCE AREA TOTAL GENERATION, IMPORT, LOAD AND LOSSES (MW)</b> |                          |               |                          |               |
|----------------------------------------------------------------|--------------------------|---------------|--------------------------|---------------|
|                                                                | <b>2007 Heavy Summer</b> |               | <b>2007 Light Spring</b> |               |
|                                                                | <b>Case 1</b>            | <b>Case 2</b> | <b>Case 3</b>            | <b>Case 4</b> |
| Generation                                                     | 14983                    | 14983         | 8160                     | 8169          |
| Imports                                                        | 8313                     | 8313          | 6613                     | 6612          |
| Load                                                           | 22690                    | 22690         | 14154                    | 14154         |
| Losses                                                         | 507                      | 512           | 519                      | 529           |

Table 2.2

### Simulations

For each of the four cases, load flow simulations of the bulk power system were conducted for the base case, single contingencies and double contingencies for lines and 500-230 kV transformer banks to determine impacts to the SCE system. A total of 177 single and 136 double contingencies in the SCE system were studied with system performance monitored for criteria violations on the SCE 500-kV and 230-kV systems.

### **E. Short Circuit Duty**

The data provided by the AES Corporation has impacted 17 substations with increases in the short circuit duty. These impacts require further study to determine the need for circuit breaker upgrades.

## **POWER FLOW STUDY RESULTS**

### **A. 2007 Spring Results**

The power flow study identified base case, N-1 and N-2 overloads in the 2007 spring case. All percentages in the following results are expressed as percent loading of nominal value unless stated otherwise.

#### **Base Case**

There was one spring base case overloads triggered by projects ahead in queue. The addition of the AES Highgrove Project caused an insignificant overload. See Appendix B, Table 1 for detailed results.

The addition of the AES Highgrove Project caused the Devers – Valley 500 kV circuit to be overloaded from 113% to 114%; the difference being 1% is therefore deemed insignificant.

#### **Light Spring Single Contingencies (N-1)**

With the addition of the AES Highgrove Project, the power flow study identified seven transmission lines with N-1 overloads during spring conditions. See Appendix B, Table 2 for detailed results.

Two of these overloads (the Etiwanda-Vista 230-kV and Mira Loma-Walnut 230-kV lines) are limited by existing 2000 A wave traps at Vista and Walnut substations. Upgrade of both of these 2000A wave traps to 3000A will be sufficient to mitigate spring N-1 overloads on these lines. The conductor on the terminations at Barre & Lewis substations is the limiting factor on the Barre – Lewis 230 kV line. Upgrading these terminations from 3000A to 4000A will mitigate the N-1 overloads on the Barre – Lewis 230 kV line. The Mira Loma – Vista 230 kV line #1 is also overloaded due to the conductor and terminations at Vista substation. Upgrading these will mitigate the N-1 overloads.

The Devers – Valley 500 kV line is also overloaded to 117% of its nominal rating. The limiting factors are the wave traps at both Devers & Valley Substations and the GIS termination equipment at Valley substation. Upgrading the wave traps & GIS termination equipment from 3000A to 4000A will mitigate the N-1 overloads.

### **Light Spring Double Contingencies (N-2)**

With the addition of the AES Highgrove Project, the power flow study identified five transmission lines with N-2 overloads during spring conditions. See Appendix B, Table 3 for detailed results.

Two of these overloads (the Devers-Valley 500-kV line and Serrano – Valley 500 kV line) will be mitigated by upgrades of the wave traps at both Devers & Valley Substations on the Devers-Valley 500-kV line. Also The GIS termination equipment at Valley substation is required to be upgraded from 3000A to 4000A on the Serrano and Devers positions.

The San Bernardino Vista 230 kV line is overloaded to 175% of its nominal rating. It will need to be re-conducted to mitigate the N-2 overloads.

The Etiwanda – Vista 230 kV line is limited by the wave trap & terminations at Etiwanda Substation. Upgrading these from 2000A to 3000A will mitigate the N-2 contingency overloads.

Also, the Mira Loma – Vista 230 kV line #1 is limited by the line drop at Vista substation. Upgrading the line drop from 2300A to 3000A will mitigate the N-2 overloads on this line.

## **B. 2007 Summer Results**

### **Base Case**

There were no significant changes to the base case with the addition of the AES Highgrove project.

### **Heavy Summer Single Contingencies (N-1)**

With the addition of the AES Highgrove Project, the study identified only one transmission lines with N-1 contingency overloads during summer conditions. See Appendix B, Table 4 for detailed results.

The Devers – Valley 500 kV line is overloaded to 102% of its nominal rating. The limiting factors are the wave traps at both Devers & Valley Substations and the GIS termination equipment at Valley substation. Upgrading the wave traps & GIS termination equipment from 3000A to 4000A will mitigate the N-1 and N-2 overloads. See the Spring Results section above for details

### **Heavy Summer Double Contingencies (N-2)**

With the addition of the AES Highgrove Project, the study identified only one transmission lines with N-2 contingency overloads during summer conditions. See Appendix B, Table 5 for detailed results.

The Devers – Valley 500 kV line is overloaded to 108% of its nominal rating. The limiting factors are the wave traps at both Devers & Valley Substations and the GIS termination equipment at Valley substation. Upgrading the wave traps & GIS termination equipment from 3000A to 4000A will mitigate the N-1 and N-2 overloads. See the Spring Results section above for details

#### **Note:**

Additional overloads were identified on the disconnect switches and circuit breakers. However, these overloads will be addressed through Edison's internal Substation Equipment Replacement Program (SERP)

## **TRANSIENT AND POST TRANSIENT VOLTAGE STUDY RESULTS**

There were no transient stability and post-transient voltage violations found with the addition of the AES Highgrove Project.

## SHORT CURCUIT DUTY STUDY RESULTS

### Short Circuit Duty Study

The results of the maximum symmetrical three-phase short circuit duty at the critical buses in the SCE bulk transmission system are summarized in table 3.6 (the short circuit duty sheet).

The additional 323.57 MW AES Highgrove Project has increased the short circuit duty at the substation facilities listed below for future review. However, study results may change due to other projects ahead of the queue in the area. A new study may be required when those projects are revised.

### Three Phase (3PH) Short Circuit Duty Study Results

Short Circuit Duty Sheet

| Bus Name | Bus KV | PRE CASE |      | POST CASE |      | OVERLOAD |
|----------|--------|----------|------|-----------|------|----------|
|          |        | X/R      | KA   | X/R       | KA   | KA       |
| DEVERS   | 500    | 16.5     | 24   | 16.6      | 24.1 | 0.1      |
| LUGO     | 500    | 21.7     | 43.9 | 21.7      | 44.1 | 0.2      |
| MIRALOMA | 500    | 24.4     | 33.4 | 24.6      | 33.6 | 0.2      |
| SERRANO  | 500    | 24.3     | 29.9 | 24.3      | 30   | 0.1      |
| BARRE    | 230    | 18.7     | 49.3 | 18.7      | 49.4 | 0.1      |
| CHINO    | 230    | 17.1     | 47.9 | 17        | 48.2 | 0.3      |
| DELA MO  | 230    | 16       | 41.1 | 16        | 41.2 | 0.1      |
| DEVERS   | 230    | 21.2     | 44.9 | 21.1      | 45.1 | 0.2      |
| ETIWANDA | 230    | 25.8     | 57.1 | 25.9      | 57.7 | 0.6      |
| HUNTBCHB | 230    | 14.8     | 30.1 | 14.7      | 30.2 | 0.1      |
| LA FRESA | 230    | 26.5     | 46.3 | 26.5      | 46.4 | 0.1      |
| LUGO     | 230    | 30.8     | 36.7 | 30.9      | 36.8 | 0.1      |
| MRLOMA E | 230    | 23.2     | 59.4 | 23.2      | 60   | 0.6      |
| MRLOMA W | 230    | 20.3     | 50.2 | 20.3      | 50.6 | 0.4      |
| OLINDA   | 230    | 13.9     | 27.1 | 13.9      | 27.2 | 0.1      |
| PADUA    | 230    | 15.3     | 20.6 | 15.3      | 20.7 | 0.1      |
| S.ONOFRE | 230    | 26.2     | 48.8 | 26.2      | 48.9 | 0.1      |
| SANBRDNO | 230    | 21       | 39.6 | 21        | 40.1 | 0.5      |
| SERRANO  | 230    | 24.4     | 52.7 | 24.4      | 52.9 | 0.2      |
| VILLA PK | 230    | 21.8     | 46.2 | 21.9      | 46.3 | 0.1      |
| VISTA    | 230    | 19.1     | 48   | 19.9      | 50   | 2        |
| ALTWIND  | 115    | 10.6     | 12.9 | 10.6      | 13   | 0.1      |

Table 3.6

#### Notes:

- No Equivalencing was made of the Vista Sub-transmission system.

## **CONCLUSIONS**

### **A. Power Flow Study Conclusions**

Load flow studies were conducted under 2007 heavy summer and 2007 light spring load conditions with and without the AES Highgrove Project for a total of 4 cases.

Palo Verde – Devers 500 kV Line #2 was assumed to be in service and all four West of Devers 230 kV Lines were assumed had been upgraded.

#### **Base case**

No base case overload problems were found under the light spring and heavy summer conditions with the addition of the AES Highgrove Project.

#### **N-1**

Under spring conditions, the project overloaded the Devers – Valley 500 kV line to 117% and the Etiwanda – Vista 230 kV line to 107%. The Etiwanda – San Bernardino 230 kV, Mira Loma – Walnut 230 kV and Mira Loma – Vista 230 kV lines were overloaded to 140%, 110% and 124% respectively. Also, the Barre – Lewis 230 kV line was overloaded to 124%. Under summer conditions the Devers – Valley 500 kV line was overloaded to 104%.

#### **N-2**

Under spring conditions, the project overloaded the Devers – Valley and Serrano – Valley 500 kV lines to 129% and 101% respectively. The Etiwanda – Vista, Mira Loma – Vista and San Bernardino – Vista 230 kV lines were overloaded to 150%, 137% and 175% respectively. Under heavy summer conditions, the Devers – Valley 500 kV line was overloaded to 108%.

### **B. Transient Stability and Post Transient Voltage Study Conclusions**

There were no transient stability and post-transient voltage violations found with the addition of the AES Highgrove Project.

### **C. Short Circuit Duty Study Conclusions**

The additional 323.57 MW AES Highgrove Project has increased the short circuit duty at the substation facilities listed below for further review. However, study results may change due to other projects ahead of the queue in the area. A new study may be required when those projects are revised.

### Affected Substations:

A total of 17 substations have been affected with increases in short circuit duty. Refer to table 3.6 – Short Circuit Duty Sheet for details.

The Lines & elements overloaded from contingencies and MW required to be tripped / curtailed are listed below.

**Table 4**

### Single Contingencies

| Out of Service Transmission Element     | Overloaded Transmission Element       | Maximum MW Generation to be tripped or manually curtailed |
|-----------------------------------------|---------------------------------------|-----------------------------------------------------------|
| Mira Loma -Vista<br>230 kV ck2          | Etiwanda-Vista<br>230 kV ck1          | 108.19 MW                                                 |
| Mira Loma -Olinda<br>230 kV ck2         | Mira Loma – Walnut<br>230 kV ck1      | 323.57 MW                                                 |
| Etiwanda – San Bernardino<br>230 kV ck1 | Etiwanda-Vista<br>230 kV ck1          | 108.19 MW                                                 |
| Mira Loma -Vista<br>230 kV ck1          | Etiwanda-Vista<br>230 kV ck1          | 108.19 MW                                                 |
|                                         | Devers-Valley<br>500 kV ck1           | 323.57 MW                                                 |
| Barre – Villa Park<br>230 kV ck1        | Barre – Lewis<br>230 kV ck1           | 323.57 MW                                                 |
| Mira Loma – Serrano<br>500 kV ck1       | Devers-Valley<br>500 kV ck1           | 323.57 MW                                                 |
| Serrano – Valley<br>500 kV ck1          | Etiwanda-San Bernardino<br>230 kV ck1 | 323.57 MW                                                 |
|                                         | Mira Loma – Vista<br>230 kV ck1       | 323.57 MW                                                 |
|                                         | Etiwanda-Vista<br>230 kV ck1          | 108.19 MW                                                 |
| Devers – Valley<br>500 kV ck1           | Etiwanda-San Bernardino<br>230 kV ck1 | 323.57 MW                                                 |
|                                         | Mira Loma – Vista<br>230 kV ck1       | 323.57 MW                                                 |
|                                         | Etiwanda-Vista<br>230 kV ck1          | 108.19 MW                                                 |

Table 4 contd.

**Double Contingencies**

| Out of Service Transmission Element                                                | Overloaded Transmission Element      | MW Generation to be tripped or manually curtailed |
|------------------------------------------------------------------------------------|--------------------------------------|---------------------------------------------------|
| Chino - Serrano<br>230 kV ck1 &<br>Mira Loma - Olinda<br>230 kV ck1                | Devers-Valley<br>500 kV ck1          | 323.57 MW                                         |
| Etiwanda - San Bernardino 230 kV<br>ck1 &<br>Mira Loma - Vista 230 kV ck1          | Etiwanda - Vista<br>230 kV ck1       | 323.57 MW                                         |
|                                                                                    | Devers-Valley<br>500 kV ck1          | 323.57 MW                                         |
| Etiwanda - San Bernardino 230 kV<br>ck1 &<br>Mira Loma - Vista 230 kV ck2          | Etiwanda - Vista<br>230 kV ck1       | 323.57 MW                                         |
|                                                                                    | Devers-Valley<br>500 kV ck1          | 323.57 MW                                         |
|                                                                                    | Mira Loma - Vista<br>230 kV ck1      | 323.57 MW                                         |
| Etiwanda - San Bernardino<br>230 kV ck1 &<br>Etiwanda - Vista<br>230 kV ck1        | Devers-Valley<br>500 kV ck1          | 323.57 MW                                         |
|                                                                                    | Mira Loma - Vista<br>230 kV ck1      | 323.57 MW                                         |
| Devers - San Bernardino<br>230 kV ck2 &<br>Etiwanda - San Bernardino<br>230 kV ck1 | Devers-Valley<br>500 kV ck1          | 323.57 MW                                         |
| Devers - Vista<br>230 kV ck2 &<br>Vista - Devers<br>230 kv ck1                     | San Bernardino - Vista<br>230 kV ck2 | 323.57 MW                                         |
|                                                                                    | Serrano - Valley<br>500 kV ck1       | 108.19 MW                                         |
|                                                                                    | Devers-Valley<br>500 kV ck1          | 323.57 MW                                         |
| Etiwanda - San Bernardino 230 kV<br>ck1 &<br>Lugo - Serrano<br>500 kV ck1          | Devers-Valley<br>500 kV ck1          | 323.57 MW                                         |
| Etiwanda - San Bernardino 230 kV<br>ck1 &<br>Lugo - Mira Loma<br>500 kV ck1        | Devers-Valley<br>500 kV ck1          | 323.57 MW                                         |
| Devers-Valley<br>500 kV ck1<br>Devers 500 / 230 kV<br>Bank #1                      | Etiwanda-Vista<br>230 kV ck1         | 108.19 MW                                         |
| Mira Loma - Vista<br>230 kV ck1 &<br>Mira Loma - Vista<br>230 kV ck2               | Devers-Valley<br>500 kV ck1          | 323.57 MW                                         |

## SCOPE OF WORK FOR FACILITIES STUDY

The scope of upgrades to accommodate the generation interconnection on the SCE network is listed below. This study has not assumed overload mitigation requirements for projects ahead of the queue.

- Upgrades of the 3000A wave traps and line terminals at Valley Substation 4000A on the Devers – Valley 500 kV line.
- Upgrades of line terminals at Serrano & Valley substations on the Serrano - Valley 500 kV line.
- Upgrades of line terminals at Vista and San Bernardino substations on the Vista – San Bernardino 230 kV line from 2300A to 3000A (or greater) line terminals.
- Upgrades of line terminals at Vista Substation on the Etiwanda and Mira Loma #1 230 kV lines
- Upgrade of line terminals at Barre & Lewis Substations on the Barre – Lewis 230 kV line.
- Upgrade the wave traps at Etiwanda Substation on the Vista 230 kV line.
- Upgrade the wave traps at Walnut Substation on the Mira Loma 230 kV line.
- Replacement of transmission line conductors on the San Bernardino – Vista 230 kV line.
  - Note: The San Bernardino – Vista 230 kV line conductors are overloaded over its N-2 rating.

The following items 1 – 4 also need to be evaluated for replacement or upgrade in the Facilities Study.

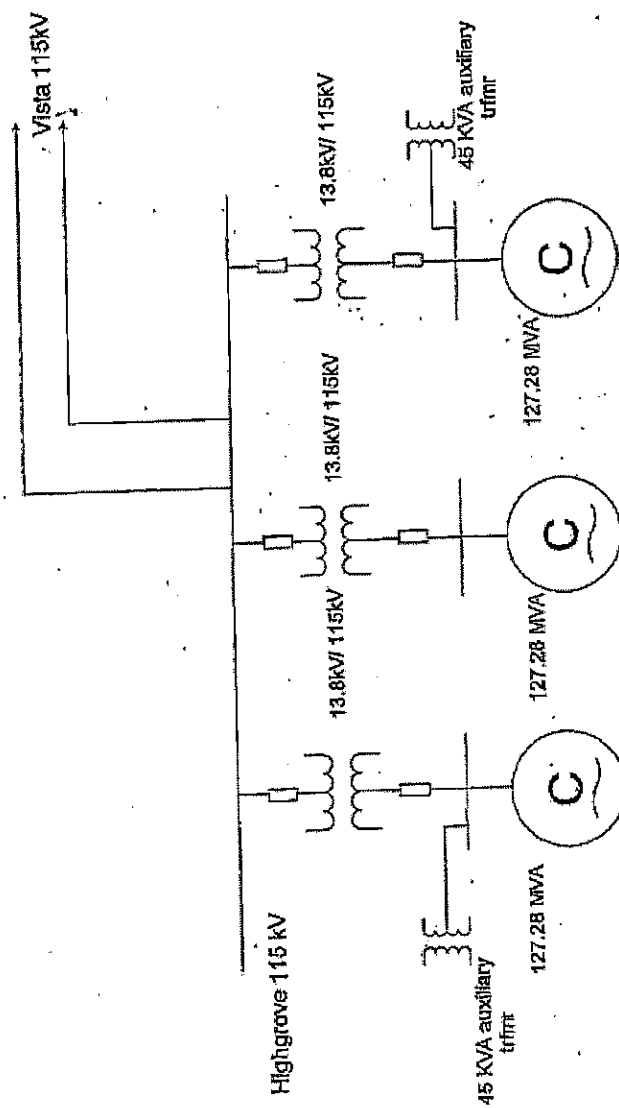
1. Breakers & Disconnects at Devers Substation on the Valley 500 kV line.
2. Breakers & Disconnects at Etiwanda Substation on the Vista 230 kV line.
3. Breakers at Mira Loma & Vista Substations on the Mira Loma - Vista 230 kV line.
4. Breakers & Disconnects at Walnut Substation on the Mira Loma 230 kV line.

**Note:**

Study results may change due to other projects ahead of the queue in the area. A new study may be required if projects ahead of the queue are changed.

# APPENDIX A

## SINGLE LINE DIAGRAM



## APPENDIX B POWER FLOW RESULTS

**TABLE 1**  
*Base Case Overloads – Spring Conditions*

| Overloaded Transmission Element | Rated Capacity<br>Amps | Pre-Project<br>Amps (%) | Post-Project<br>Amps (%) | Impact<br>Amps (%) |
|---------------------------------|------------------------|-------------------------|--------------------------|--------------------|
| Devers – Valley 500kV ck 1      | 3000                   | 3381 (113%)             | 3414 (114%)              | 33 (1%)            |

**TABLE 2**  
*Single Contingency Overloads – Spring Condition*

| Out of Service<br>Transmission Element  | Overloaded<br>Transmission Element    | Rated Capacity<br>Amps | Pre-Project<br>Amps (%) | Post-Project<br>Amps (%) | Impact<br>Amps (%) |
|-----------------------------------------|---------------------------------------|------------------------|-------------------------|--------------------------|--------------------|
| Mira Loma -Vista<br>230 kV ck2          | Etiwanda-Vista<br>230 kV ck1          | 2000                   | 1790 (90%)              | 2056 (103%)              | 266 (13%)          |
|                                         | Devers-Valley<br>500 kV ck1           | 3000                   | 3438 (115%)             | 3480 (116%)              | 42 (1%)            |
| Mira Loma -Olinda<br>230 kV ck2         | Mira Loma – Walnut<br>230 kV ck1      | 2000                   | 2083 (104%)             | 2206 (110%)              | 123 (6%)           |
| Etiwanda – San Bernardino<br>230 kV ck1 | Etiwanda-Vista<br>230 kV ck1          | 2000                   | 1889 (94%)              | 2110 (106%)              | 221 (12%)          |
| Mira Loma -Vista<br>230 kV ck1          | Etiwanda-Vista<br>230 kV ck1          | 2000                   | 1855 (93%)              | 2119 (106%)              | 264 (13%)          |
|                                         | Devers-Valley<br>500 kV ck1           | 3000                   | 3468 (116%)             | 3514 (117%)              | 46 (1%)            |
| Barre – Villa Park<br>230 kV ck1        | Barre – Lewis<br>230 kV ck1           | 3000                   | 3314 (110%)             | 3706 (124%)              | 392 (11%)          |
| Serrano – Valley<br>500 kV ck1          | Etiwanda-San Bernardino<br>230 kV ck1 | 1800                   | 2421 (135%)             | 2511 (140%)              | 90 (5%)            |
|                                         | Mira Loma – Vista<br>230 kV ck1       | 2300                   | 2618 (114%)             | 2852 (124%)              | 234 (9%)           |
|                                         | Etiwanda-Vista<br>230 kV ck1          | 2000                   | 1933 (97%)              | 2135 (107%)              | 202 (10%)          |
| Devers – Valley<br>500 kV ck1           | Etiwanda-San Bernardino<br>230 kV ck1 | 1800                   | 2421 (135%)             | 2511 (140%)              | 90 (5%)            |
|                                         | Mira Loma – Vista<br>230 kV ck1       | 2300                   | 2618 (114%)             | 2852 (124%)              | 234 (9%)           |
|                                         | Etiwanda-Vista<br>230 kV ck1          | 2000                   | 1933 (97%)              | 2135 (107%)              | 202 (10%)          |

TABLE 3  
Double Contingency Overloads – Spring Condition

| Out of Service Transmission Element(s)                                             | Overloaded Transmission Element      | Rated Capacity Amps | Pre-Project Amps (%) | Post-Project Amps (%) | Impact Amps (%) |
|------------------------------------------------------------------------------------|--------------------------------------|---------------------|----------------------|-----------------------|-----------------|
| Chino – Serrano<br>230 kV ck1 &<br>Mira Loma - Olinda<br>230 kV ck1                | Devers-Valley<br>500 kV ck1          | 3000                | 3153 (105%)          | 3447 (115%)           | 294 (10%)       |
| Etiwanda – San Bernardino<br>230 kV ck1 &<br>Mira Loma - Vista 230 kV<br>ck1       | Etiwanda - Vista<br>230 kV ck1       | 2000                | 2696 (135%)          | 3010 (150%)           | 314 (15%)       |
|                                                                                    | Devers-Valley<br>500 kV ck1          | 3000                | 3610 (120%)          | 3665 (122%)           | 55 (2%)         |
| Etiwanda – San Bernardino<br>230 kV ck1 &<br>Mira Loma - Vista 230 kV<br>ck2       | Etiwanda - Vista<br>230 kV ck1       | 2000                | 2694 (135%)          | 3011 (150%)           | 317 (15%)       |
|                                                                                    | Devers-Valley<br>500 kV ck1          | 3000                | 3580 (119%)          | 3630 (121%)           | 50 (2%)         |
|                                                                                    | Mira Loma - Vista<br>230 kV ck1      | 2300                | 2861 (124%)          | 3176 (138%)           | 315 (14%)       |
| Etiwanda - San Bernardino<br>230 kV ck1 &<br>Etiwanda – Vista<br>230 kV ck1        | Devers-Valley<br>500 kV ck1          | 3000                | 3588 (120%)          | 3638 (121%)           | 50 (2%)         |
|                                                                                    | Mira Loma - Vista<br>230 kV ck1      | 2300                | 2837 (123%)          | 3149 (137%)           | 312 (14%)       |
| Devers - San Bernardino<br>230 kV ck2 &<br>Etiwanda - San Bernardino<br>230 kV ck1 | Devers-Valley<br>500 kV ck1          | 3000                | 3575 (119%)          | 3638 (121%)           | 63 (2%)         |
| Devers – Vista<br>230 kV ck2 &<br>Vista – Devers<br>230 kv ck1                     | San Bernardino – Vista<br>230 kV ck2 | 2300                | 3749 (163%)          | 4020 (175%)           | 541 (12%)       |
|                                                                                    | Serrano – Valley<br>500 kV ck1       | 3000                | 2685 (90%)           | 3017 (101%)           | 332 (11%)       |
|                                                                                    | Devers-Valley<br>500 kV ck1          | 3000                | 3519 (117%)          | 3870 (129%)           | 351 (12%)       |
| Etiwanda – San Bernardino<br>230 kV ck1 &<br>Lugo – Serrano<br>500 kV ck1          | Devers-Valley<br>500 kV ck1          | 3000                | 3483 (116%)          | 3523 (118%)           | 40 (2%)         |
| Devers-Valley<br>500 kV ck1<br>Devers 500 / 230 kV<br>Bank #1                      | Etiwanda-Vista<br>230 kV ck1         | 2000                | 1921 (96%)           | 2201 (110%)           | 280 (14%)       |

TABLE 4  
Single Contingency Overloads – Summer Condition

| Out of Service Transmission Element | Overloaded Transmission Element | Rated Capacity Amps | Pre-Project Amps (%) | Post-Project Amps (%) | Impact Amps (%) |
|-------------------------------------|---------------------------------|---------------------|----------------------|-----------------------|-----------------|
| Mira Loma - Vista<br>230 kV ck1     | Devers – Valley<br>500 kV ck1   | 3000                | 3066 (102%)          | 3117 (104%)           | 51 (2%)         |
| Mira Loma - Vista<br>230 kV ck2     | Devers – Valley<br>500 kV ck1   | 3000                | 3033 (102%)          | 3078 (104%)           | 45 (2%)         |
| Mira Loma – Serrano<br>500 kV ck1   | Devers – Valley<br>500 kV ck1   | 3000                | 3036 (101%)          | 3081 (103%)           | 45 (2%)         |
| Etiwanda – Mira Loma<br>230 kV ck1  | Devers – Valley<br>500 kV ck1   | 3000                | 3021 (100%)          | 3066 (102%)           | 45 (2%)         |

**TABLE 5**  
*Double-Contingency Overloads – Summer Condition*

| Out of Service<br>Transmission Element(s)                                    | Overloaded<br>Transmission Element | Rated<br>Capacity<br>Amps | Pre-Project<br>Amps (%) | Post-Project<br>(Amps) | Impact<br>Amps (%) |
|------------------------------------------------------------------------------|------------------------------------|---------------------------|-------------------------|------------------------|--------------------|
| Mira Loma - Vista<br>230 kV ck1 &<br>Mira Loma - Vista<br>230 kV ck2         | Devers-Valley<br>500 kV ck1        | 3000                      | 3165 (106%)             | 3237 (108%)            | 72 (2%)            |
| Etiwanda – San Bernardino<br>230 kV ck1 &<br>Mira Loma - Vista 230 kV<br>ck1 | Devers-Valley<br>500 kV ck1        | 3000                      | 3144 (105%)             | 3198 (107%)            | 54 (2%)            |
| Etiwanda – San Bernardino<br>230 kV ck1 &<br>Mira Loma - Vista 230 kV<br>ck2 | Devers-Valley<br>500 kV ck1        | 3000                      | 3111 (104%)             | 3162 (106%)            | 51 (2%)            |
| Etiwanda - San Bernardino<br>230 kV ck1 &<br>Etiwanda – Vista<br>230 kV ck1  | Devers-Valley<br>500 kV ck1        | 3000                      | 3105 (103%)             | 3153 (105%)            | 48 (2%)            |
| Etiwanda – San Bernardino<br>230 kV ck1 &<br>Lugo - Mira Loma<br>230 kV ck3  | Devers-Valley<br>500 kV ck1        | 3000                      | 3087 (103%)             | 3123 (105%)            | 48 (2%)            |

**APPENDIX C**  
**GOOD FAITH COST ESTIMATE**

All items include 18% A&G but no ITCC Tax.

- 1) Upgrade of wave trap at Valley Substation on the Devers 500 kV line.  
Replacement of 500 kV Wave Trap: \$90,000
- 2) Upgrade of line drops at Vista & San Bernardino substations.  
Replacement of 230 kV line drops: \$120,000 (\$60,000 each).
- 3) Upgrade of line drops at Barre & Lewis substations.  
Replacement of 230 kV line drops: \$120,000 (\$60,000 each).
- 4) Upgrade of wave trap at Etiwanda Substation on the Vista 230 kV line.  
Replacement of 230 kV Wave Trap: \$80,000
- 5) Upgrade of wave trap at Walnut Substation on the Mira Loma 230 kV line.  
Replacement of 230 kV Wave Trap: \$80,000

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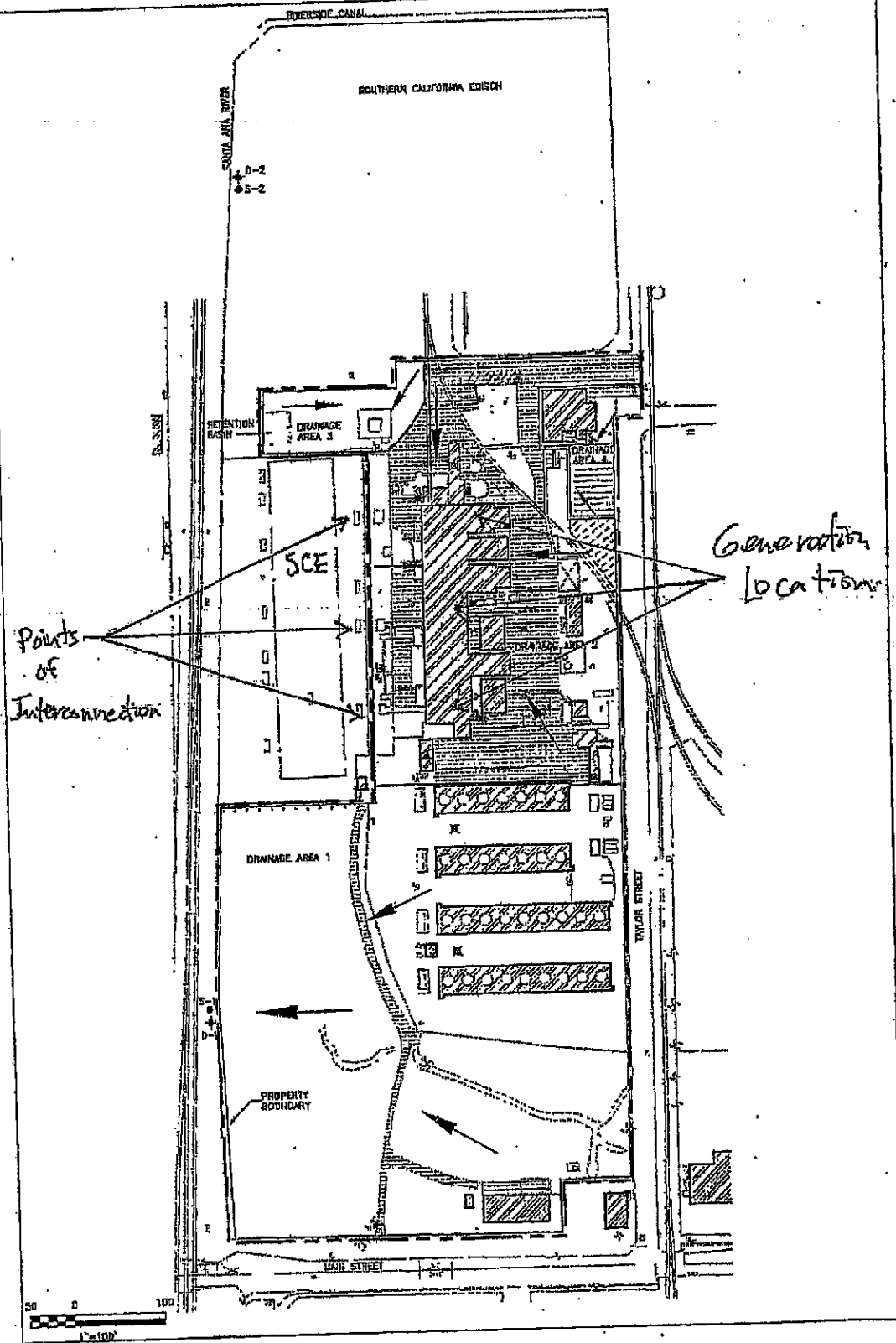
TOTAL : \$490,000

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**Note:**

Per the transmission assessment of the AES Highgrove study, it is not possible to estimate the GIS equipment upgrades and line reconductoring at this time. However, the GIS equipment upgrades will be addressed in the facilities study.

**APPENDIX D**

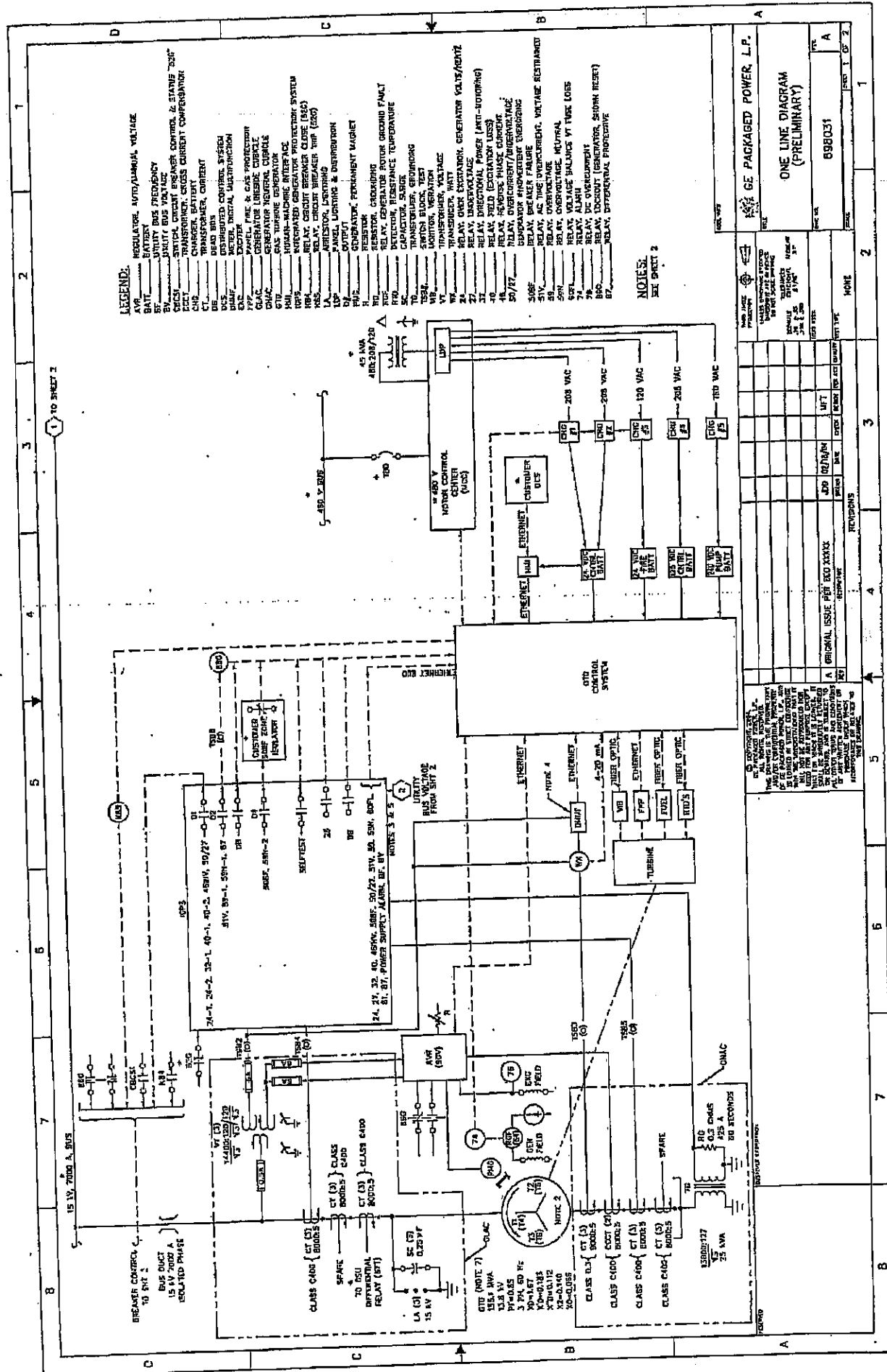


RIVERSIDE CANAL POWER COMPANY  
STORMWATER POLLUTION PREVENTION PLAN  
RCPED-48199-300

DATED: 08/08/02 DRAWN: F.C./L.B.

FACILITY MAP

FIGURE 2





# ELECTRICAL DATA SHEET

P O Box 18, Falcon Works, Loughborough, Leics. LE11 1HJ, England  
 Telephone: +44 (0) 1509 611511 Telefax: +44 (0) 1509 612345 E-mail: Sales@bem.fki-et.com

## 1. RATING DETAILS

|     |                                                        |                         |
|-----|--------------------------------------------------------|-------------------------|
| 1.1 | Frame size                                             | BDAX 98-330ER           |
| 1.2 | Terminal voltage                                       | 13.80 kV                |
| 1.3 | Frequency                                              | 60 Hz                   |
| 1.4 | Speed                                                  | 3600 rev/min            |
| 1.5 | Power factor                                           | 0.850                   |
| 1.6 | Rated stator line current                              | 5325 Amps               |
| 1.7 | Applicable national standard                           | ANSI C50.14             |
| 1.8 | Rated air inlet temperature                            | 15.0 °C                 |
| 1.9 | Rated output with air flow of 28.7 m <sup>3</sup> /sec | 108.190 MW, 127.282 MVA |

## 2. PERFORMANCE CURVES (revision in accordance with test)

|      |                                                                                   |              |
|------|-----------------------------------------------------------------------------------|--------------|
| 2.1  | Output vs. air inlet temperature with air flow of 28.7 m <sup>3</sup> /sec        | H.E.P. 19906 |
| 2.2  | Capability diagram with air flow of 28.7 m <sup>3</sup> /sec                      | H.E.P. 19907 |
| 2.3  | Efficiency vs. output with air flow of 28.7 m <sup>3</sup> /sec                   | H.E.P. 19908 |
| 2.4  | Open and Short circuit curves                                                     | H.E.P. 19951 |
| 2.5  | Permitted duration of negative sequence current                                   | H.E.P. 2959  |
| 2.6  | Decrement curve for a 3 phase short circuit from full load                        | H.E.P. 19871 |
| 2.7  | Generator Voltage/frequency capability                                            | H.E.P. 4727  |
| 2.8  | Generator V-Curves                                                                | H.E.P. 20379 |
| 2.9  | Exciter Open and Load characteristic<br>(high exciter field resistance selection) | H.E.P. 20378 |
| 2.10 | Exciter Open and Load characteristic<br>(low exciter field resistance selection)  | H.E.P. N/A   |
| 2.11 | Stator winding earth fault current versus time                                    | H.E.P. 20375 |
| 2.12 | Permissible Short time stator current<br>overload of generator                    | H.E.P. 5987  |
| 2.13 | Estimated PMG regulation characteristic<br>(high voltage PMG selection)           | H.E.P. 20412 |
| 2.14 | Estimated PMG regulation characteristic                                           |              |

The electrical details provided are calculated values.  
 Unless otherwise stated, all values are subject to  
 tolerances as given in the relevant national standards.  
 The rotor inertia value may vary slightly with  
 generator/turbine interface. In the event of conflict, the  
 figure quoted on the rotor geometry drawing takes  
 precedence.

Doc: Data Sheet - DAX98-330 - 13.8/60 / 7 Deg fan

Ref: 01199/15(INT)/1/13.8/60 / 7 Deg - Rev 7

Date: 8 September, 2004

Page: 1 of 6

BRUSH ELECTRICAL MACHINES LTD

## ELECTRICAL DATA SHEET - CONTINUATION

BDAX 98-330ER, 108.190 MW, 0.850 pf, 13.80 KV, 60 Hz

(low voltage PMG selection)

H.E.P. 20411

The electrical details provided are calculated values. Unless otherwise stated, all values are subject to tolerances as given in the relevant national standards. The rotor inertia value may vary slightly with generator/turbine interface. In the event of conflict, the figure quoted on the rotor geometry drawing takes precedence.

Doc: Data Sheet - DAX98-330 - 13.8/60 / 7 Deg fan

Ref: 01199/15(INT)/1/13.8 / 7 Deg -Rev 7

Date: 8 September, 2004

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**ELECTRICAL DATA SHEET - CONTINUATION**

BDAX 98-330ER, 108.190 MW, 0.850 pf, 13.80 kV, 60 Hz

**3. REACTANCE AND SEQUENCE RESISTANCES****A) Direct Axis Reactances: (revision in accordance with test)**

|      |                                                                   |                    |
|------|-------------------------------------------------------------------|--------------------|
| 3.1  | Saturated synchronous reactance, $X_{d(V)}$ / Short circuit ratio | 155.5 % / 0.643    |
| 3.2  | Unsaturated synchronous reactance, $X_{d(I)}$                     | 165.2 %            |
| 3.3  | Saturated transient reactance, $X'_{d(V)}$                        | 18.55 % $\pm 15$ % |
| 3.4  | Unsaturated transient reactance, $X'_{d(I)}$                      | 21.19 %            |
| 3.5  | Saturated sub transient reactance, $X''_{d(V)}$                   | 12.08 % $\pm 15$ % |
| 3.6  | Unsaturated sub transient reactance, $X''_{d(I)}$                 | 15.82 %            |
| 3.7  | Saturated negative sequence reactance, $X_{2(V)}$                 | 13.2 %             |
| 3.8  | Unsaturated negative sequence reactance, $X_{2(I)}$               | 15.48 %            |
| 3.9  | Saturated zero sequence reactance, $X_{0(V)}$                     | 7.85 %             |
| 3.10 | Unsaturated zero sequence reactance, $X_{0(I)}$                   | 7.85 %             |
| 3.11 | Potier reactance, $X_p$                                           | 21.38 %            |
| 3.12 | Saturated stator leakage, $X_{s(I)}$                              | 9.53 %             |
| 3.13 | Unsaturated stator leakage, $X_{s(I)}$                            | 11.21 %            |

**B) Quadrature Axis Reactances:**

|      |                                                   |         |
|------|---------------------------------------------------|---------|
| 3.14 | Saturated synchronous reactance, $X_{q(V)}$       | 134.6 % |
| 3.15 | Unsaturated synchronous reactance, $X_{q(I)}$     | 159 %   |
| 3.16 | Saturated transient reactance, $X'_{q(V)}$        | 24.8 %  |
| 3.17 | Unsaturated transient reactance, $X'_{q(I)}$      | 29.2 %  |
| 3.18 | Saturated sub transient reactance, $X''_{q(V)}$   | 11.5 %  |
| 3.19 | Unsaturated sub transient reactance, $X''_{q(I)}$ | 13.5 %  |

**C) Sequence resistances: (revision in accordance with test)**

|      |                                     |                      |
|------|-------------------------------------|----------------------|
| 3.20 | Positive sequence resistance, $R_1$ | 0.00259 p.u at 75 °C |
| 3.21 | Negative sequence resistance, $R_2$ | 0.00978 p.u at 75 °C |
| 3.22 | Zero sequence resistance, $R_0$     | 0.00100 p.u at 75 °C |

**4. RESISTANCES (revision in accordance with test)**

4.1 Rotor resistance

0.2225 Ohms at 20 °C

The electrical details provided are calculated values. Unless otherwise stated, all values are subject to tolerances as given in the relevant national standards. The rotor inertia value may vary slightly with generator/turbine interface. In the event of conflict, the figure quoted on the rotor geometry drawing takes precedence.

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Ref: 01199/15(INT)/1/13.8 / 7 Deg -Rev 7

Date: 8 September, 2004

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**ELECTRICAL DATA SHEET - CONTINUATION**BDAX 98-330ER, 108.190 MW, 0.850 pf, 13.80 kV, 60 Hz

|      |                                                                 |                        |
|------|-----------------------------------------------------------------|------------------------|
| 4.2  | Rotor resistance                                                | 0.2923 Ohms at 100 °C  |
| 4.3  | Stator resistance per phase                                     | 0.00085 Ohms at 20 °C  |
| 4.4  | Stator resistance per phase                                     | 0.00111 Ohms at 100 °C |
| 5.   | <b><u>TIME CONSTANTS AT 20°C</u></b>                            |                        |
| A)   | <b><u>Direct Axis:</u></b> (revision in accordance with test)   |                        |
| 5.1  | Transient O.C. time constant, $T'_{do}$                         | 10.6 seconds           |
| 5.2  | Transient S.C. time constant, 3 ph, $T'_{ds}$                   | 0.93 seconds           |
| 5.3  | Transient S.C. time constant, L-L, $T'_{d2}$                    | 2.1 seconds            |
| 5.4  | Transient S.C. time constant, L-N, $T'_{d1}$                    | 2.5 seconds            |
| 5.5  | Subtransient O.C. time constant, $T''_{do}$                     | 0.04 seconds           |
| 5.6  | Subtransient S.C. time constant, 3 ph, $T''_{ds}$               | 0.03 seconds           |
| 5.7  | Subtransient S.C. time constant, L-L, $T''_{d2}$                | 0.037 seconds          |
| 5.8  | Subtransient S.C. time constant, L-N, $T''_{d1}$                | 0.038 seconds          |
| B)   | <b><u>Quadrature Axis:</u></b>                                  |                        |
| 5.9  | Transient O.C. time constant, $T'_{qo}$                         | 3.8 seconds            |
| 5.10 | Transient S.C. time constant, 3 ph, $T'_{qs}$                   | 0.7 seconds            |
| 5.11 | Transient S.C. time constant, L-L, $T'_{q2}$                    | 0.95 seconds           |
| 5.12 | Transient S.C. time constant, L-N, $T'_{q1}$                    | 1.05 seconds           |
| 5.13 | Subtransient O.C. time constant, $T''_{qo}$                     | 0.042 seconds          |
| 5.14 | Subtransient S.C. time constant, 3 ph, $T''_{qs}$               | 0.019 seconds          |
| 5.15 | Subtransient S.C. time constant, L-L, $T''_{q2}$                | 0.027 seconds          |
| 5.16 | Subtransient S.C. time constant, L-N, $T''_{q1}$                | 0.029 seconds          |
| C)   | <b><u>Miscellaneous:</u></b> (revision in accordance with test) |                        |
| 5.17 | D.C. Armature time constant, 3 ph, $T_{a3}$                     | 0.74 seconds           |
| 5.18 | D.C. Armature time constant, L-L, $T_{a2}$                      | 0.74 seconds           |
| 5.19 | D.C. Armature time constant, L-N, $T_{a1}$                      | 0.51 seconds           |
| 6.   | <b><u>INERTIA</u></b> (revision in accordance with test)        |                        |
| 6.1  | Moment of inertia, $WR^2$ (See note 2)                          | 3813 kg.m <sup>2</sup> |

The electrical details provided are calculated values. Unless otherwise stated, all values are subject to tolerances as given in the relevant national standards. The rotor inertia value may vary slightly with generator/turbine interface. In the event of conflict, the figure quoted on the rotor geometry drawing takes precedence.

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ELECTRICAL DATA SHEET - CONTINUATION

BDAX 98-330ER, 108.190 MW, 0.850 pf, 13.80 kV, 60 Hz

6.2. Inertia constant, H

2.129 kW.secs/KVA

7. CAPACITANCE AND SURGE IMPEDANCE (revision in accordance with test)

7.1 Capacitance per phase of stator winding to earth

0.47 microFarad

7.2 Surge impedance per phase

32 Ohms

8. EXCITATION

## A) No load (cold): (revision in accordance with test)

8.1 Excitation current at no load, rated voltage

370 Amps

8.2 Excitation voltage at no load, rated voltage

82 Volts

8.3 Exciter field current at no load (high resistance selection)

2.84 Amps

Exciter field current at no load (low resistance selection)

N/A Amps

8.4 Exciter field voltage at no load (high resistance selection)

21.85 Volts

Exciter field voltage at no load (low resistance selection)

N/A Volts

## B) Rated load (hot): (revision in accordance with test)

8.5 Excitation current at rated load and P.F.

862 Amps

8.6 Excitation voltage at rated load and P.F.

252 Volts

8.7 Exciter field current at rated load and P.F. (high resist. selection)

7.95 Amps

Exciter field current at rated load and P.F. (low resist. selection)

N/A Amps

8.8 Exciter field voltage at rated load and P.F. (high resist. selection)

80 Volts

Exciter field voltage at rated load and P.F. (low resist. selection)

N/A Volts

## C) Short circuit clearance of 2.2 p.u rated line amps (hot): (revision in accordance with test)

8.9 Excitation current on clearance

1263 Amps for 10 sec

8.10 Excitation voltage on clearance

369 Volts

8.11 Exciter field current on clearance (high resistance selection)

11.65 Amps

Exciter field current on clearance (low resistance selection)

N/A Amps

8.12 Exciter field voltage on clearance (high resistance selection)

118 Volts

Exciter field voltage on clearance (low resistance selection)

N/A Volts

9. INHERENT VOLTAGE REGULATION (revision in accordance with test)

9.1 F.L to N.L rated P.F., constant excitation

42 %

The electrical details provided are calculated values. Unless otherwise stated, all values are subject to tolerances as given in the relevant national standards. The rotor inertia value may vary slightly with generator/turbine interface. In the event of conflict, the figure quoted on the rotor geometry drawing takes precedence.

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## ELECTRICAL DATA SHEET - CONTINUATION

BDAX 98-330ER, 108.190 MW, 0.850 pf, 13.80 kV, 60 Hz

|     |                                                |         |
|-----|------------------------------------------------|---------|
| 9.2 | F.L to N.L unity P.F., constant excitation     | 32 %    |
| 9.3 | F.L to N.L steady state under full AVR control | ± 0.5 % |

The electrical details provided are calculated values. Unless otherwise stated, all values are subject to tolerances as given in the relevant national standards. The rotor inertia value may vary slightly with generator/turbine interface. In the event of conflict, the figure quoted on the rotor geometry drawing takes precedence.

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**ELECTRICAL DATA SHEET - CONTINUATION**BDAX 98-330ER, 108.190 MW, 0.850 pf, 13.80 kV, 60 Hz**10. EXCITER**

|       |                                         |                        |
|-------|-----------------------------------------|------------------------|
| 10.1  | Exciter frame size                      | HA 412422/6            |
| 10.2  | Voltage rating                          | 256 Volts D.C          |
| 10.3  | Current rating                          | 934 Amps D.C           |
| 10.4  | Output                                  | 239 kW                 |
| 10.5  | Frequency                               | 180 Hz                 |
| 10.6  | AC voltage at full load                 | 200 Volts RMS          |
| 10.7  | AC current at full load                 | 715 Amps RMS           |
| 10.8  | Power factor                            | 0.97                   |
| 10.9  | Number of phases                        | 3                      |
| 10.10 | Excitation System Voltage Response Time | 0.3 secs <sup>-1</sup> |

**11. ROTATING RECTIFIER**

|      |                                          |                                                   |
|------|------------------------------------------|---------------------------------------------------|
| 11.1 | Number of diodes                         | 12                                                |
| 11.2 | Arrangement                              | 3 ph full wave bridge; 6 arms; 2 diodes in series |
| 11.3 | Diode Repetitive peak reverse voltage    | 3800 Volts                                        |
| 11.4 | Diode rated mean forward current         | 1620 Amps                                         |
| 11.5 | Diode mean forward current at rated load | 335 Amps                                          |
| 11.6 | Diode reverse voltage at rated load      | 276 Volts                                         |

**12. PERMANENT MAGNET PILOT EXCITER (revision in accordance with test)**

|      |                                                    |             |
|------|----------------------------------------------------|-------------|
| 12.1 | Pilot exciter frame size                           | X 422260/16 |
| 12.2 | Open circuit volts (high voltage PMG selection)    | N/A Volts   |
|      | Open circuit volts (low voltage PMG selection)     | 276 Volts   |
| 12.3 | Short circuit current (high voltage PMG selection) | N/A Amps    |
|      | Short circuit current (low voltage PMG selection)  | 110 Amps    |
| 12.4 | Full load voltage (high voltage PMG selection)     | N/A Volts   |
|      | Full load voltage (low voltage PMG selection)      | 250 Volts   |
| 12.5 | Full load current (high voltage PMG selection)     | N/A Amps    |
|      | Full load current (low voltage PMG selection)      | 24 Amps     |
| 12.6 | Power factor                                       | —           |
| 12.7 | Rated frequency                                    | 480 Hz      |

The electrical details provided are calculated values. Unless otherwise stated, all values are subject to tolerances as given in the relevant national standards. The rotor inertia value may vary slightly with generator/turbine interface. In the event of conflict, the figure quoted on the rotor geometry drawing takes precedence.

Doc: Data Sheet - DAX98-330 - 13.8/60 / 7 Deg fan

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# ELECTRICAL DATA SHEET - CONTINUATION

BDAX 88-330ER, 108.190 MW, 0.850 pf, 13.80 KV, 60 Hz

12.8 Number of phases

1

The electrical details provided are calculated values.  
Unless otherwise stated, all values are subject to  
tolerances as given in the relevant national standards.  
The rotor inertia value may vary slightly with  
generator/turbine interface. In the event of conflict, the  
figure quoted on the rotor geometry drawing takes  
precedence.

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**ELECTRICAL DATA SHEET - CONTINUATION**BDAX 98-330ER, 108.190 MW, 0.850 pf, 13.80 KV, 60 Hz**13. MISCELLANEDUS GENERATOR DATA** (revision in accordance with test)

|      |                                                             |               |
|------|-------------------------------------------------------------|---------------|
| 13.1 | X/R ratio                                                   | 176           |
| 13.2 | Synchronising coefficient                                   | 97 MW/radian  |
| 13.3 | No load synchronising power                                 | 180 MW/radian |
| 13.4 | Full load synchronising power                               | 145 MW/radian |
| 13.5 | Damping torque coefficient                                  | 42 p.u.       |
| 13.6 | Magnetic centering force for an axial displacement of 20 mm | 694 kg        |
| 13.7 | Motoring power                                              | 1102 kW       |
| 13.8 | Saturation factor                                           | 1.45          |

The electrical details provided are calculated values. Unless otherwise stated, all values are subject to tolerances as given in the relevant national standards. The rotor inertia value may vary slightly with generator/turbine interface. In the event of conflict, the figure quoted on the rotor geometry drawing takes precedence.

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Ref: 01199/16(INT)/1/13.8 / 7 Deg -Rev 7

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|                    |                                     |          |
|--------------------|-------------------------------------|----------|
| SEMAX              | Saturation Factor                   | REVISION |
| EFD 0.75MAX        | Voltage At 0.75 of Saturation Point | REVISION |
| SE 0.75 MAX        | Saturation Factor                   | REVISION |
| * Typical Settings |                                     |          |

| REV | DESCRIPTION     | DRAWING NO |
|-----|-----------------|------------|
| A   | REVISED PER ECO | REVISION   |
|     |                 | SHEET      |
|     |                 | 1 of 1     |

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107 generator rotor volts at rated voltage on the gen. air gap line, hot gen. field resistance (82 V = cold resistance)  
296,8 =  $11,2 \times 26,5$ , filled according to your formula

Saturation functions at 26.5 A @  $(11,05 - 9,84) / 9,84 = (C-B)/B$   
Saturation functions at 26.5 A  
Saturation functions at 26.5 A @  $(26,5 - 13,21) / 13,21 = (C-B)/B$   
Saturation functions at 26.5 A

## GE DYNAMIC MODELS

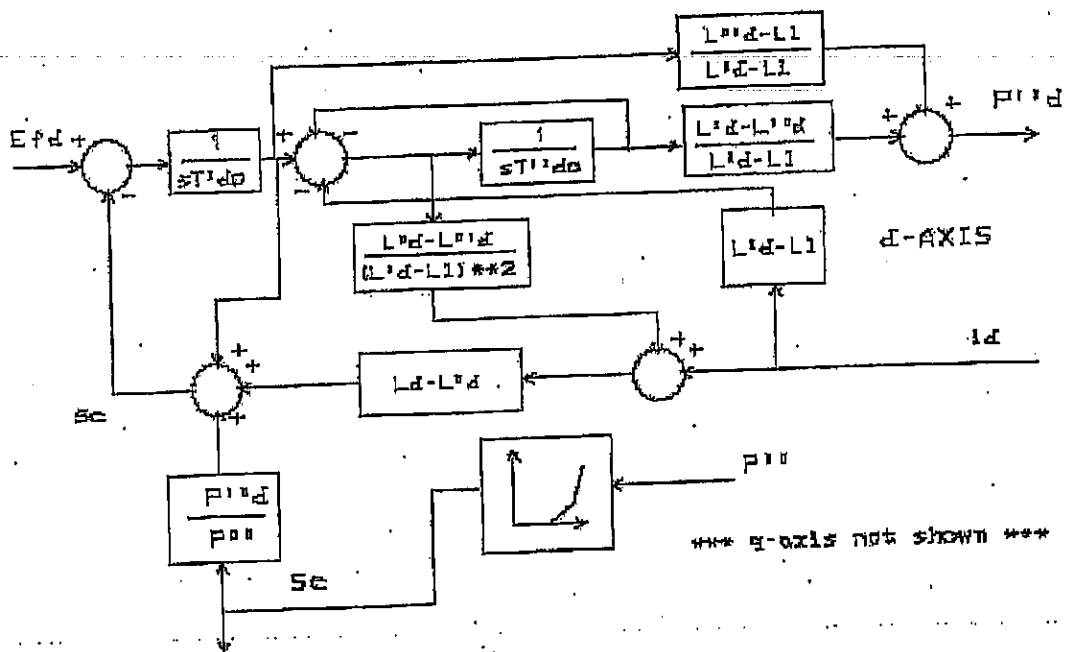
**Generator:**

Model Name: genrou

Description: Solid rotor generator represented by equal mutual inductance rotor modeling

Parameters:

| Name     | Epcl Variable | Description                                    | Value               |
|----------|---------------|------------------------------------------------|---------------------|
| T'do     | tpdo          | D-axis transient rotor time constant           | 10.6 seconds        |
| T''do    | tppdo         | D-axis sub-transient rotor time constant       | 0.04 seconds        |
| T'qo     | tpqo          | Q-axis transient rotor time constant           | 3.8 seconds         |
| T''qo    | tppqo         | Q-axis sub-transient rotor time constant       | 0.042 seconds       |
| H        | h             | Inertia constant sec                           | 2.129 kW.secs/KVA   |
| D        | d             | Damping factor pu                              | 42 p.u.             |
| Ld       | ld            | D- axis synchronous reactance                  | 155.5%              |
| Lq       | lq            | Q- axis synchronous reactance                  | 134.6%              |
| L'd      | lpd           | D- axis transient reactance                    | 18.55%              |
| L'q      | lqd           | Q- axis transient reactance                    | 24.8%               |
| L''d     | lppd          | D- axis sub-transient reactance                | 12.08%              |
| Ll       | il            | Stator Leakage reactance, pu                   | 9.53 %              |
| Se (1.0) | S1            | Saturation factor at 1pu flux                  | 1.45                |
| Se (1.2) | S12           | Saturation factor at 1.2pu flux                |                     |
| Ra       | ra            | Stator Resistance, pu                          | 0.00085 ohms /phase |
| Rcomp    | rcomp         | Compounding resistance for voltage control, pu |                     |
| Xcomp    | xcomp         | Compounding reactance for voltage control, pu  |                     |



Exciter:

Model Name: exac2

Description: IEEE type AC2 excitation system

Parameters:

| Name    | Epc Variable | Description                                 | Value  |
|---------|--------------|---------------------------------------------|--------|
| Tr      | tr           | Filter time constant, sec                   | 0.01   |
| Tb      | tb           | Time constant, sec                          | 1.00   |
| Tc      | tc           | Time constant, sec                          | 1.00   |
| Ka      | ka           | Voltage regulator gain                      | 1000   |
| Ta      | ta           | Time constant, sec                          | 0.01   |
| Vamax   | vamax        | Maximum control element output, p.u.        | 11.5   |
| Vamin   | vamin        | Minimum control element output, p.u.        | -11.5  |
| Kb      | kb           | Exciter field current controller gain, p.u. | 1.00   |
| Vrmax   | vrmax        | Maximum exciter control signal, p.u.        | 27.00  |
| Vrmin   | vrmin        | Minimum exciter control signal, p.u.        | -27.00 |
| Te      | te           | Exciter time constant, sec                  | 1.16   |
| Kl      | kl           | Exciter field current limiter gain, p.u.    | 4.00   |
| Kh      | kh           | Exciter field current feedback gain, p.u.   | 0.00   |
| Kf      | kf           | Rate feedback gain, p.u.                    | 0.05   |
| Tf      | tf           | Rate feedback time constant, sec            | 1      |
| Kc      | kc           | Rectifier regulation factor, p.u.           | 0.10   |
| Kd      | kd           | Exciter internal reactance, p.u.            | 1.30   |
| Ke      | ke           | Exciter field resistance constant, p.u.     | 1.00   |
| Vlr     | vlr          | Maximum exciter field current, p.u.         | 18.30  |
| E1      | e1           | Field voltage value, 1                      | 1.98   |
| Se (E1) | se1          | Saturation factor at E1                     | 0.00   |
| E2      | e2           | Field voltage value, 2                      | 1.38   |
| Se (E2) | se2          | Saturation factor at E2                     | 0.00   |

Block Diagram attached.

**Power System Stabilizer:**

Model Name: pss2a

Description: Dual input Power system stabilizer (IEEE type PSS2A)

Data sheet attached

**Turbine- Governor:**

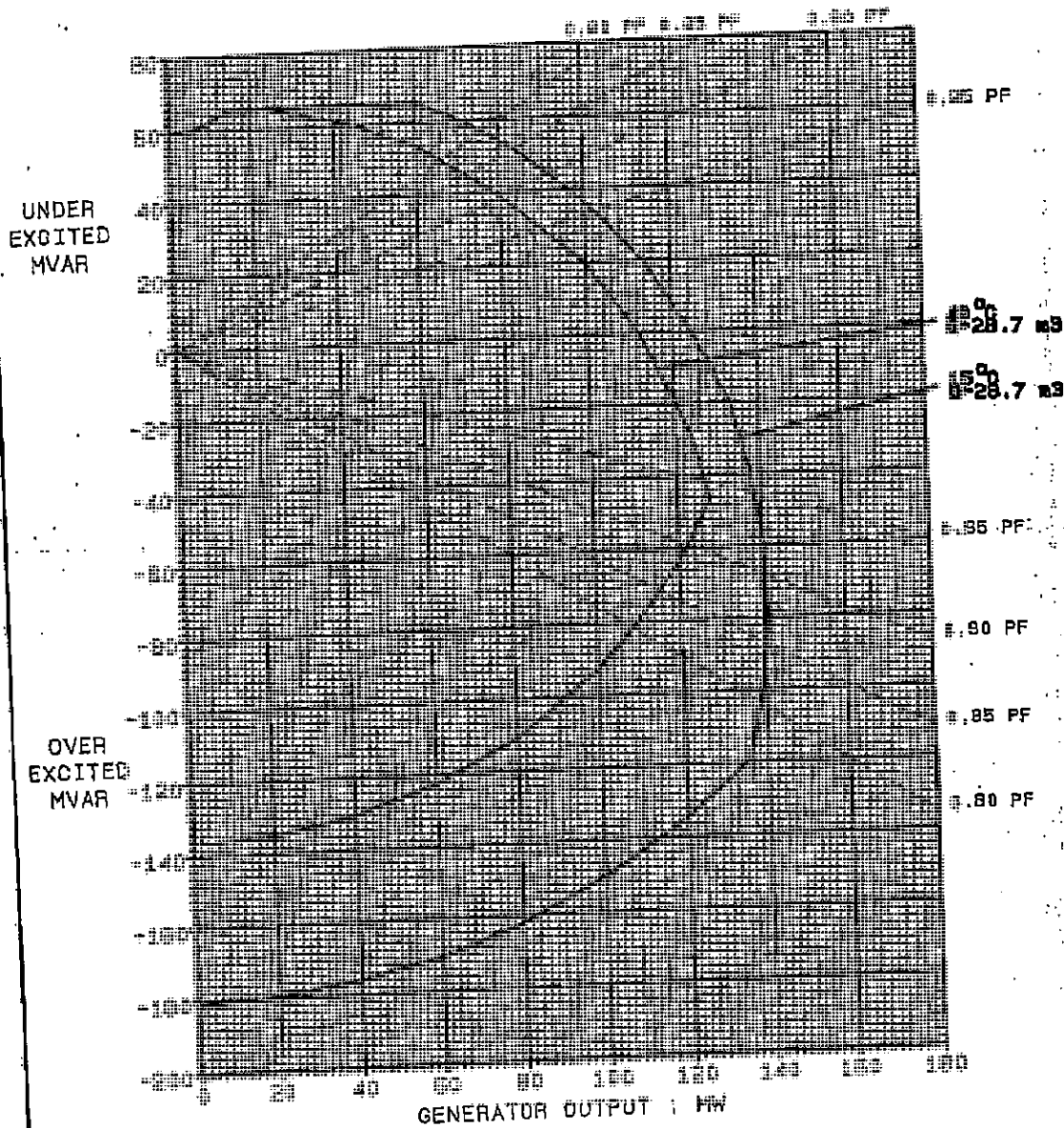
Model Name: ieee1

Description: IEEE steam turbine/governor model (with deadband and nonlinear valve gain added)

Data sheet attached

---

# GENERATOR CAPABILITY DIAGRAM



BDAX 98-330ER  
13.80KV, 3Ph, 60.Hz.

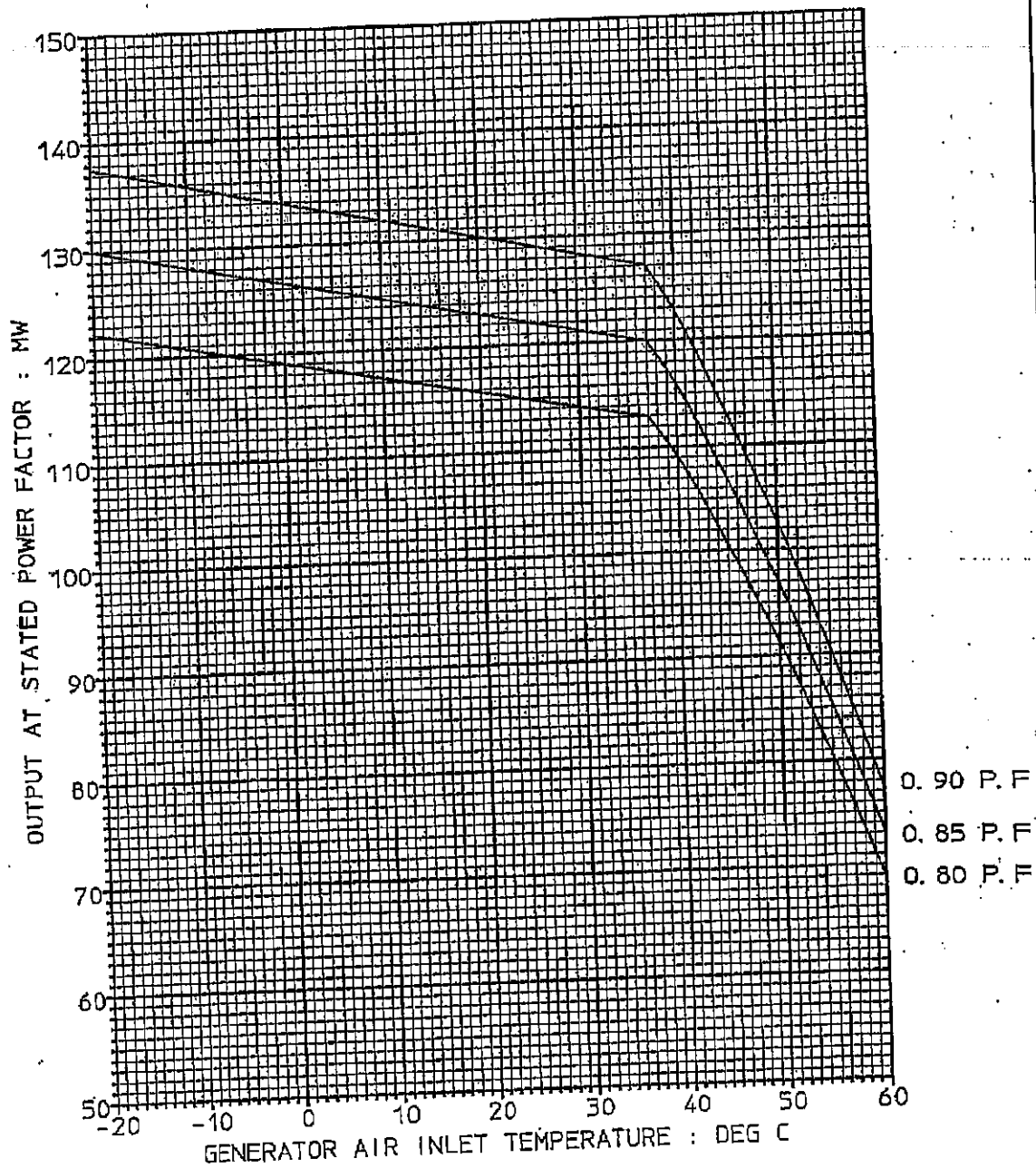
Up to 1000. meters ASL

IN ACCORDANCE WITH  
ANSI C50.14

Class B temperatures.

Total temperatures Stator 110 Deg C  
Rotor 125 Deg C

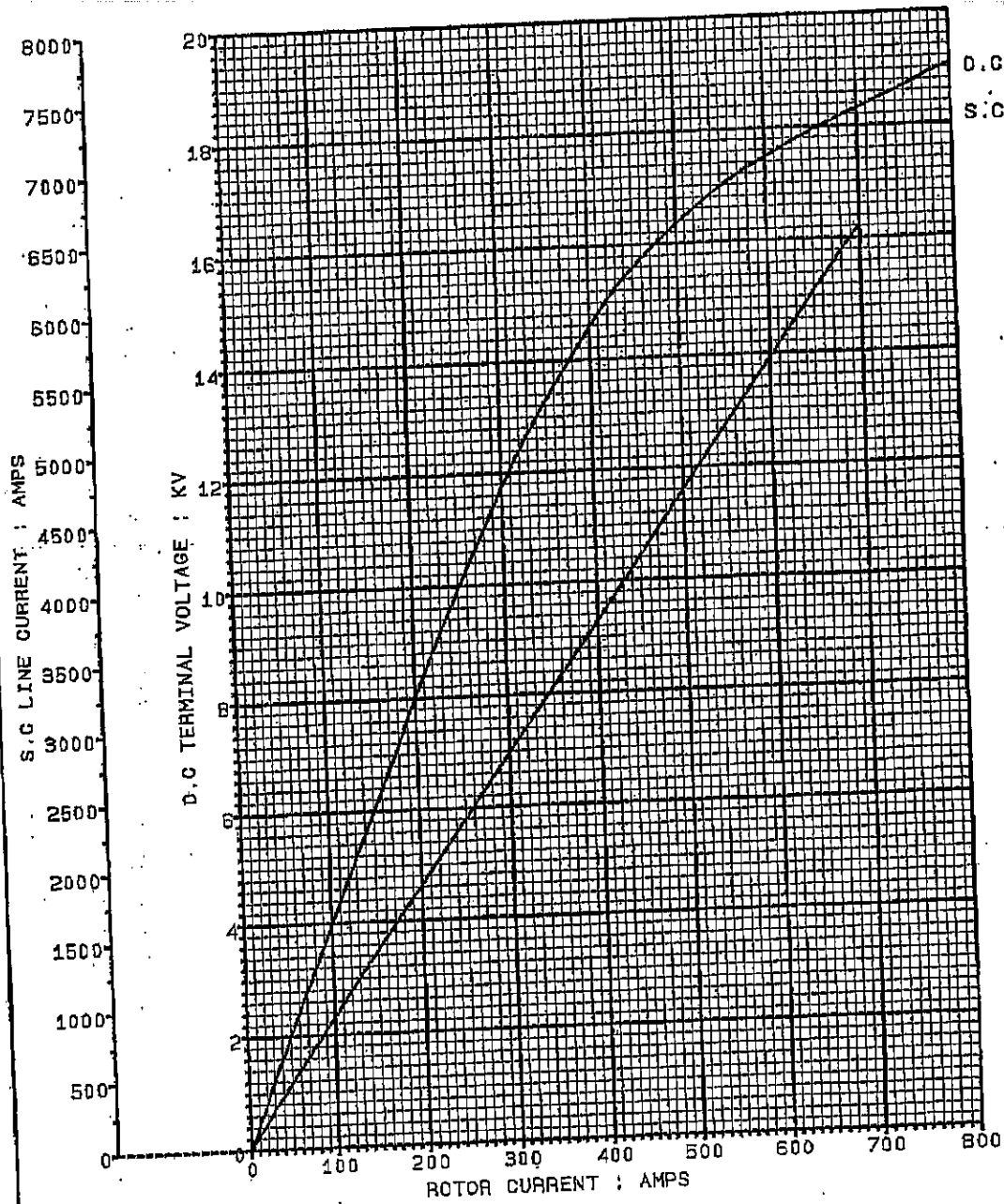
# VARIATION OF GENERATOR OUTPUT WITH AIR INLET TEMP



BDAX 98-330ER  
 13.80KV, 3Ph, 60. Hz.  
 $Q = 28.7 \text{ m}^3/\text{s}$   
 Up to 1000. meters ASL

IN ACCORDANCE WITH  
 ANSI C50.14  
 Class B temperatures.  
 Total temperatures Stator 110 Deg C  
 Rotor 125 Deg C

# OPEN CIRCUIT AND SHORT CIRCUIT CHARACTERISTIC



BDAX 98-330ER  
3Ph, 60.Hz, 3600. RPM.



# LMS100 Simplified Grid Dynamic Model (preliminary)

The information contained in this document is from the GEAC preliminary transient simulation (lms100.fsirn) of the LMS100 gas turbine and control. The gas turbine is represented by a Component Level Model (CLM) that models the primary engine components (compressor, combustor, turbines, etc.). The control model is based on a GE preliminary control definition and simulates the digital control, sensors, actuators, fuel metering system and inter-cooler.

**THE MODEL PROVIDES ESTIMATED TRANSIENT PERFORMANCE BUT DOES NOT PROVIDE PERFORMANCE GUARANTEES**

Peter Harrison  
April 23, 2004

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GE Imagination at work

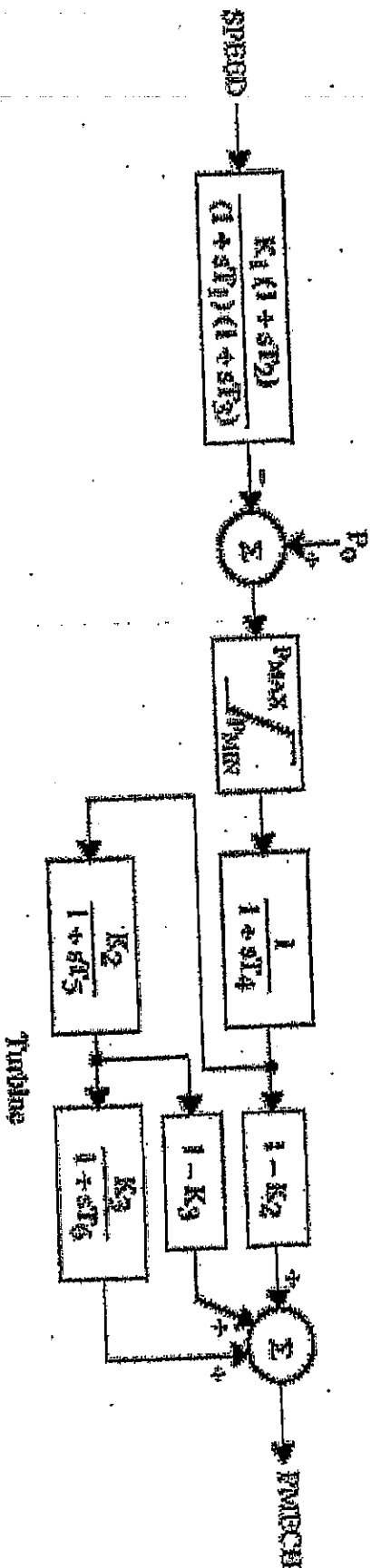
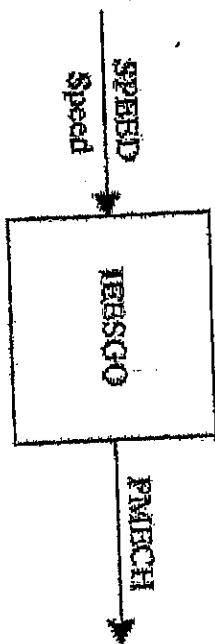


# IEEE Standard Governor

## IEEE Standard Governor

This model is located at system bus machine  
 This model uses CONs starting with  
 and STATs starting with  
 and VAR

# \_\_\_\_\_ BUS,  
 # \_\_\_\_\_ I,  
 # \_\_\_\_\_ J,  
 # \_\_\_\_\_ K,  
 # \_\_\_\_\_ L.



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Patent Pending

April 2004

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10000

| CONS | # | Value | Description                                                                                          |   |
|------|---|-------|------------------------------------------------------------------------------------------------------|---|
| 1    |   | 25.2  | T <sub>1</sub> , controller lag (sec)                                                                | / |
| 1+1  |   | 0.01  | T <sub>2</sub> , controller lead compensation (sec)                                                  | / |
| 1+2  |   | 0.01  | T <sub>3</sub> , governor lag (>0) (sec)                                                             | / |
| 1+3  |   | 0.01  | T <sub>4</sub> , delay due to steam inlet volumes associated with steam chest and inlet piping (sec) | / |
| 1+4  |   | 0.01  | T <sub>5</sub> , reheater delay including hot and cold leads (sec)                                   | / |
| 1+5  |   | 0.01  | T <sub>6</sub> , delay due to RP-LP turbine, crossover pipes, and LP end heads (sec)                 | / |
| 1+6  |   | 24.00 | K <sub>1</sub> , 1/per unit regulation                                                               | / |
| 1+7  |   | 0.0   | K <sub>2</sub> , fraction                                                                            | / |
| 1+8  |   | 0.0   | K <sub>3</sub> , fraction                                                                            | / |
| 1+9  |   | 1.2   | P <sub>MAX</sub> , upper power limit                                                                 | / |
| 1+10 |   | 0.8   | P <sub>MIN</sub> , lower power limit                                                                 | / |

| STATES | # | Description                |
|--------|---|----------------------------|
| K      |   | Filter output              |
| K+1    |   | Valve or gate servo output |
| K+2    |   | Turbine powers             |
| K+3    |   | Turbine powers             |
| K+4    |   | Turbine powers             |

| VAR | # | Description               |
|-----|---|---------------------------|
| L   |   | Reference, P <sub>g</sub> |

# ASSUMPTIONS

1. Values for constants are set to duplicate LMS100 transfer function as specified on sheet 2. Constants do not match the descriptions as specified in table.
2. SPEED is PT rotor deviation from nominal in rpm/3600
3. P<sub>mech</sub> is delivered power in horsepower/134102

IBUS, IHESSO, L, T<sub>1</sub>, T<sub>2</sub>, T<sub>3</sub>, T<sub>4</sub>, T<sub>5</sub>, T<sub>6</sub>, K<sub>1</sub>, K<sub>2</sub>, K<sub>3</sub>, P<sub>MAX</sub>, P<sub>MIN</sub>

GE Transportation - Aircraft Engines

Reed-Hall

April 23, 2004

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Model IV

Hz

MWDELIV for 60 to 59.75 Hz in 0.2 sec

MWDELIV for 60 to 59.75 Hz in 60 sec

Δ Hz

$\frac{-40.0}{(1 + 25.2 S)}$

Δ MWDELIV

Δ Hz

$\frac{-53641}{(1 + 25.2 S)}$

Δ MWDELIV

Assumptions:  
Grid Operation  
Gas fuel, AW Inter-cooler  
59 deg C ambient temperature, sea level  
4 inch H<sub>2</sub>O / 6 inch H<sub>2</sub>O inlet/exhaust losses  
60 Hz = 3600 RPM GT PT speed  
Control droop setting Z\_DROOP = 6 %  
Control MW RANGE setting 120 MW

Hz - 1EE5E1 90M, EO, 59.75 Hz, EO, 0.011  
Hz - 1EE5E1 90M, EO, 59.75 Hz, 0.02, 0.011  
Model IV - 1EE5E1 90M, EO, 59.75 Hz, EO, 0.011  
Model IV - 1EE5E1 90M, EO, 59.75 Hz, 0.02, 0.011

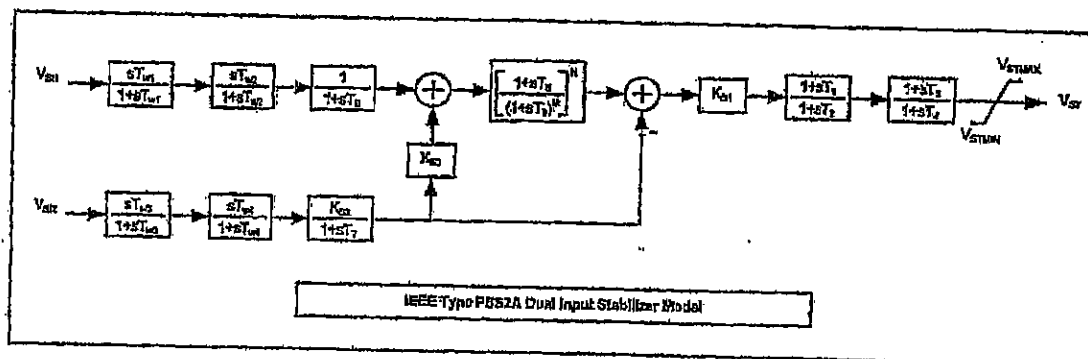
TIME (sec)

CE: <http://www.ceat-world.com>



| IEEE PSS2A Model Constants |                                           |                   |                     |
|----------------------------|-------------------------------------------|-------------------|---------------------|
| Customer                   | TBA                                       |                   |                     |
| Alternator                 | Brush 98-300ER                            |                   |                     |
| Unit                       | LMS100 Gas Turbine Generator              |                   |                     |
| Prepared by                | R Kleen                                   |                   |                     |
| Date                       | June 1, 2004                              |                   |                     |
| Comment                    | Model for PSS Tuning Study for EX2100 AVR |                   |                     |
| VS1                        | Machine Speed (pu)                        |                   |                     |
| VS2                        | Electrical Power (pu)                     |                   |                     |
|                            |                                           | Preliminary Value | Suggested Range     |
| TW1                        | Washout Time Constant                     | 2.000             | 2 - 15              |
| TW2                        | Washout Time Constant                     | 2.000             | 2 - 15              |
| TW3                        | Washout Time Constant                     | 2.000             | 2 - 15              |
| TW4                        | Washout Time Constant                     | 0.000             | 0                   |
| T1                         | 1st Lead Time Constant                    | 0.150             | 0.1 - 2             |
| T2                         | 1st Lag Time Constant                     | 0.030             | 0.01 - 1            |
| T3                         | 2nd Lead Time Constant                    | 0.150             | 0.1 - 2             |
| T4                         | 2nd Lag Time Constant                     | 0.030             | 0.01 - 1            |
| T6                         | Filter Time Constant                      | 0.000             | 0                   |
| T7                         | Filter Time Constant                      | 2.000             | 2 - 15              |
| T8                         | RTF Numerator                             | 0.500             | 5 x RTF Denominator |
| T9                         | RTF Denominator                           | 0.100             |                     |
| N                          | RTF Order                                 | 1.000             | 1                   |
| M                          | RTF # Poles                               | 5.000             | 5                   |
| KS1                        | PSS Gain                                  | 15.000            | 0-100               |
| KS2                        | Inertia Gain (=Tw/2H)                     | 0.237             | Tw/(2H)             |
| KS3                        | Pe Gain                                   | 1.000             | 1                   |
| VSTmax                     | Positive Output Limit (pu)                | 0.100             | 0.02 - 0.1          |
| VSTmin                     | Negative Output Limit (pu)                | -0.100            | -0.02 - -0.1        |

The data on this sheet is **GENERIC** and should **NOT** be used with equipment in the field. Such data should only come from tuning studies which determine the optimal PSS settings.



APPENDIX 8.1A

# **Construction Emission Estimates and Dispersion Modeling**

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# Construction Emission Estimates And Dispersion Modeling

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The contents of Appendix 8.1A include:

- Methodology used to estimate construction emissions and perform dispersion modeling,
- A summary of the ISCST3 model (demolition, power plant construction, and overlap) results (Table 8.1A.1),
- A summary of the construction emission calculations (Tables 8.1A.2a through 8.1A.5v),
- A summary of the emission rates and input summaries used for ISCST3 modeling (Tables 8.1A.6 and 8.1A.7),
- An excerpt from the electronic file used to convert 1-hour NO<sub>x</sub> to NO<sub>2</sub> using the SCAQMD "Localized Significance Threshold Methodology", June 2003 (Tables 8.1A.8 a-c) (note: the complete electronic file is included in the modeling DVDs submitted as part of this application), and,
- All of the ISCST3 construction modeling files submitted on DVD

## Construction Emission Estimate Methodology

### Construction Emissions

The proposed 14 month construction schedule consists of five months of demolition (months 1-5) and eleven months of power plant construction (months 4-14). To evaluate the emissions expected to occur during the construction period, the emission sources were divided into two categories: sources within the boundary of the proposed power plant site (i.e., onsite) and activities related to the project which occur outside the boundary (i.e., offsite). Onsite construction emissions would be generated during demolition of existing structures and power plant construction. Onsite emission sources include exhaust emissions from construction equipment and motorized vehicles, and fugitive dust emissions. During demolition, the contractor hired to demolish the existing structures would mitigate asbestos emissions by complying with all local, state, and federal laws and regulations. In addition, painted steel members, which may contain lead, would be torch cut and removed in compliance with all local, state, and federal laws and regulations.

Offsite construction emissions would be generated during construction of the natural gas pipeline and potable water line, and offsite motorized vehicle travel resulting from demolition and power plant construction. Offsite emission sources include the exhaust emissions from construction equipment and motorized vehicles used to install the project related linears (i.e., the natural gas and potable water line), as well as, the exhaust emissions from motor vehicles traveling to and from the proposed work site.

The offsite linear construction would include a 1,300-foot long (8-12 -inch diameter) potable water line and the proposed 7-mile long 12-inch diameter natural gas pipeline.

Construction emissions were estimated for the following sources:

- Onsite and offsite construction equipment engine exhaust.
- Fugitive PM<sub>10</sub> from bulldozing, vehicle travel on unpaved construction site areas, and storage pile wind erosion.
- Onsite and offsite motor vehicle engine exhaust and entrained paved road dust.

## **Construction Activities and Equipment Requirements**

Demolition and power plant construction activities are anticipated to take place over approximately 14 months, including the commissioning phase. Construction of the natural gas, recycled water, and sewer pipelines includes trenching, installing pipe, backfilling the trench, and repaving. The construction schedule for both onsite and offsite construction is based on one eight-hour shift per day, five days per week, and twenty-two days per month. A summary of the equipment and motor vehicle requirements for both onsite and offsite construction are contained in Tables 8.1A.3b-d, Tables 8.1A4g, j-k, n-o, r-s, and v.

## **Emission Factors**

Construction emissions were based on the methodologies contained in the SCAQMD CEQA handbook (1993 and 2006) and the USEPA AP-42 guidance. A detailed breakdown of the algorithms and emission factors used to estimate construction emissions are included with Tables 8.1A.3 g-h and Tables 8.1A.4a, f, and g.

## **Assessment of Construction Related Impacts on Ambient Air Quality**

Onsite emissions from demolition and construction of the power plant were estimated for each month of the 14 month construction schedule. Based on the construction schedule, demolition and power plant construction activities would overlap during months 4 and 5. Therefore, three modeling scenarios were evaluated to determine whether the maximum modeled pollutant concentrations would result from demolition alone, power plant construction alone, or the overlap. For each scenario, the peak monthly on-site emissions were identified and used to determine the emission rates for the dispersion modeling analysis. For all sources except for the on-site construction vehicles, the peak hourly emissions entered in ISCST3 were calculated by dividing the peak monthly emissions by the number of working days proposed (i.e., 22 days per month) and the proposed working hours in a day (i.e. 8 hours per day). For on-site vehicles, the maximum miles traveled in one hour were used to estimate hourly emission rates and the average miles traveled in one day were used to estimate daily emissions. The annual hourly emission rates entered into ISCST3 were determined by dividing the total annual emissions by 8,760 hours.

The EPA-approved ISCST3 model was used to estimate the ambient impacts from construction activity. ISCST3 default options were chosen with the exception of the CALMs

processing routine. The SCAQMD 1981 meteorological data from the Rubidoux monitoring station was used for the modeling analysis. The demolition and construction sites were represented as area sources. For exhaust emissions, a plume height of 4.6 meters (15 feet) was used to represent an average release height from the construction equipment. For dust emissions, a release height of two meters was used. Emissions were divided into three categories: on-site exhaust, fugitive dust from vehicle and construction equipment, and windblown fugitive dust. A receptor grid was set up starting from the property boundary and extending to approximately two kilometers in all directions. Receptor spacing was 30 meters along the demolition and construction boundaries out to 500 meters and 100 meter spacing out to two kilometers. A summary of the emission factors used for the dispersion modeling are located in Tables 8.1A-2 through 8.1A-6.

The first high concentrations from ISCST3 output were reported with the exception of the 1-hour  $\text{NO}_2$  concentration. The maximum  $\text{NO}_2$  concentration was derived from the predicted 1-hour  $\text{NO}_x$  concentrations at each receptor and the  $\text{NO}_2$  to  $\text{NO}_x$  ratios as a function of downwind distance, as discussed in the SCAQMD "Localized Significance Threshold Methodology," June 2003. The  $\text{PM}_{2.5}$  concentration from exhaust and fugitive sources assumes all PM from exhaust emissions are less than 2.5 micron and 21 percent of the fugitive PM emissions are less than 2.5 micron (SCAQMD LST, June 2003). The results of the analysis (Table 8.1A.1) indicate that the maximum construction impacts will be below the ambient air quality standards for each of the criteria pollutants and averaging periods with the exception of the 24-hour  $\text{PM}_{10}$  compared to the SCAQMD threshold, the 24-hour  $\text{PM}_{2.5}$  averaging period, and the annual  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$  averaging periods. For both  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$ , the 24-hour and the annual background concentrations exceed the ambient air quality standards.

TABLE 8.1A.1

ISCST3 Results for On-site demolition, power plant construction, and overlap

| Pollutant                              | Modeled<br>Concentration -<br>Demolition<br>( $\mu\text{g}/\text{m}^3$ ) | Modeled<br>Concentration -<br>Power Plant<br>Construction<br>( $\mu\text{g}/\text{m}^3$ ) | Modeled<br>Concentration -<br>Overlap ( $\mu\text{g}/\text{m}^3$ ) | Maximum<br>Modeled<br>Concentration<br>( $\mu\text{g}/\text{m}^3$ ) | Background<br>( $\mu\text{g}/\text{m}^3$ ) <sup>a</sup> | Total<br>Concentration<br>( $\mu\text{g}/\text{m}^3$ ) | Significance<br>Threshold or<br>Lowest Ambient Air<br>Quality Standard<br>( $\mu\text{g}/\text{m}^3$ ) <sup>b</sup> |
|----------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| 1-hour NO <sub>2</sub> <sup>c</sup>    | 123.5                                                                    | 136.3                                                                                     | 149.7                                                              | 150                                                                 | 188.1                                                   | 338                                                    | 470                                                                                                                 |
| Annual NO <sub>2</sub>                 | -                                                                        | -                                                                                         | -                                                                  | 40.4                                                                | 44.6                                                    | 85.0                                                   | 100                                                                                                                 |
| 1-hour CO                              | 398.0                                                                    | 505.7                                                                                     | 468.2                                                              | 506                                                                 | 9,162                                                   | 9,667                                                  | 23,000                                                                                                              |
| 8-hour CO                              | 147.8                                                                    | 255.4                                                                                     | 236.7                                                              | 255                                                                 | 4,237                                                   | 4,493                                                  | 10,000                                                                                                              |
| 1-hour SO <sub>2</sub>                 | 5.10                                                                     | 4.91                                                                                      | 5.24                                                               | 5                                                                   | 52.4                                                    | 57.6                                                   | 655                                                                                                                 |
| 3-hour SO <sub>2</sub> <sup>d</sup>    | 3.77                                                                     | 4.07                                                                                      | 4.34                                                               | 4.3                                                                 | 41.9                                                    | 46.2                                                   | 1300                                                                                                                |
| 24-hour SO <sub>2</sub>                | 0.82                                                                     | 1.05                                                                                      | 1.12                                                               | 1.1                                                                 | 39.3                                                    | 40.4                                                   | 105                                                                                                                 |
| Annual SO <sub>2</sub>                 | -                                                                        | -                                                                                         | -                                                                  | 0.17                                                                | 10.5                                                    | 10.6                                                   | 80                                                                                                                  |
| 24-hour PM <sub>10</sub>               | 121.5                                                                    | 85.02                                                                                     | 75.89                                                              | 122                                                                 | 164                                                     | 286                                                    | 10.4                                                                                                                |
| Annual PM <sub>10</sub>                | -                                                                        | -                                                                                         | -                                                                  | 18.4                                                                | 58.5                                                    | 76.9                                                   | 1                                                                                                                   |
| 24-hour PM <sub>2.5</sub> <sup>e</sup> | 32.2                                                                     | 30.3                                                                                      | 27.7                                                               | 32                                                                  | 104                                                     | 137                                                    | 65                                                                                                                  |
| Annual PM <sub>2.5</sub> <sup>e</sup>  | -                                                                        | -                                                                                         | -                                                                  | 5.9                                                                 | 27.5                                                    | 33.4                                                   | 12                                                                                                                  |

<sup>a</sup> Background concentrations were the highest concentrations monitored during 2002 through 2004.

<sup>b</sup> For the 24-hour and annual PM<sub>10</sub>, the concentration is the SCAQMD significance threshold. For the other pollutants and averaging periods, the concentrations are the lowest ambient air quality standard, either California or federal.

<sup>c</sup> The maximum 1-hour NO<sub>2</sub> concentration was derived from the predicted 1-hour NO<sub>x</sub> concentrations at each receptor and the NO<sub>2</sub> to NO<sub>x</sub> ratios as a function of downwind distance, as discussed in the SCAQMD "Localized Significance Threshold Methodology (LST)", June 2003.

<sup>d</sup> The 3-hour averaging period for SO<sub>2</sub> is a secondary federal standard.

<sup>e</sup> Reported PM<sub>2.5</sub> concentration from exhaust and fugitive sources assumes all PM from exhaust emissions are less than 2.5 micron and for fugitive emissions, 21 percent of the fugitive PM emissions are less than 2.5 micron (SCAQMD LST, June 2003).

The tables summarizing the construction emission calculations, ISCST3 inputs, and LST excerpts are included after the following table list.

## Onsite Construction Emissions Tables

Tables 8.1A.2a through 8.1A.2t summarize the onsite construction emissions from both demolition and power plant construction. Demolition occurs during months 1 through 5 and power plant construction occurs during months 4 through 14.

Table 8.1A.2a Onsite Demolition Equipment CO Emissions

Table 8.1A.2b Onsite Demolition Equipment VOC Emissions

Table 8.1A.2c Onsite Demolition Equipment NO<sub>x</sub> Emissions

Table 8.1A.2d Onsite Demolition Equipment SO<sub>x</sub> Emissions

Table 8.1A.2e Onsite Demolition Equipment PM<sub>10</sub> Emissions

Table 8.1A.2f Onsite Demolition Motor Vehicle CO Emissions

Table 8.1A.2g Onsite Demolition Motor Vehicle VOC Emissions

Table 8.1A.2h Onsite Demolition Motor Vehicle SO<sub>x</sub> Emissions

Table 8.1A.2i Onsite Demolition Motor Vehicle NO<sub>x</sub> Emissions

Table 8.1A.2j Onsite Demolition Motor Vehicle PM<sub>10</sub> Emissions

Table 8.1A.2k Onsite Power Plant Construction Equipment CO Emissions

Table 8.1A.2l Onsite Power Plant Construction Equipment VOC Emissions

Table 8.1A.2m Onsite Power Plant Construction Equipment NO<sub>x</sub> Emissions

Table 8.1A.2n Onsite Power Plant Construction Equipment SO<sub>x</sub> Emissions

Table 8.1A.2o Onsite Power Plant Construction Equipment PM<sub>10</sub> Emissions

Table 8.1A.2p Onsite Power Plant Construction Motor Vehicle CO Emissions

Table 8.1A.2q Onsite Power Plant Construction Motor Vehicle VOC Emissions

Table 8.1A.2r Onsite Power Plant Construction Motor Vehicle SO<sub>x</sub> Emissions

Table 8.1A.2s Onsite Power Plant Construction Motor Vehicle NO<sub>x</sub> Emissions

Table 8.1A.2t Onsite Power Plant Construction Motor Vehicle PM<sub>10</sub> Emissions

Tables 8.1A.3a through 8.1A.3h summarize the fugitive dust emissions from demolition and power plant construction.

Table 8.1A.3a Onsite Demolition and Power Plant Construction Fugitive PM<sub>10</sub> Monthly Activity Levels

Table 8.1A.3b Onsite Demolition and Power Plant Construction Fugitive PM<sub>10</sub> Emissions

Table 8.1A.3c Onsite Demolition Motor Vehicle Activity

Table 8.1A.3d Onsite Demolition Motor Vehicle Fugitive PM<sub>10</sub> Emissions

Table 8.1A.3e Onsite Power Plant Construction Motor Vehicle Activity

Table 8.1A.3f Onsite Power Plant Construction Motor Vehicle Fugitive PM<sub>10</sub> Emissions

Table 8.1A.3g Fugitive PM<sub>10</sub> Emission Factors for Unpaved Roads

Table 8.1A.3h Fugitive PM<sub>10</sub> Emission Factors for Demolition, Bulldozing and Wind Erosion of Storage Piles

Tables 8.1A.4a through 8.1A.4g contain the equations, number of equipment, and emission factors used to calculate onsite demolition and power plant construction emissions.

Table 8.1A.4a Equations Used to Calculate Exhaust Emissions

Table 8.1A.4b Number of Onsite Demolition Equipment

Table 8.1A.4c Number of Onsite Demolition Motor Vehicles

Table 8.1A.4d Number of Onsite Power Plant Construction Equipment

Table 8.1A.4e Number of Onsite Power Plant Construction Motor Vehicles

Table 8.1A.4f Demolition and Power Plant Construction Emission Factors

Table 8.1A.4g Motor Vehicle Emission Factors

Table 8.1A.4h Onsite Demolition Motor Vehicles Activity Assumptions

Table 8.1A.4i Onsite Power Plant Construction Motor Vehicles Activity Assumptions

## Offsite Construction Emission Tables

Tables 8.1A.5a through 8.1A.5v summarize the offsite motor vehicle emissions and offsite emissions from construction of the natural gas pipeline and construction of the potable water line.

Table 8.1A.5a Offsite Motor Vehicle Usage during Demolition

Table 8.1A.5b Offsite Motor Vehicle CO Emissions (Demolition)

Table 8.1A.5c Offsite Motor Vehicle VOC Emissions (Demolition)

Table 8.1A.5d Offsite Motor Vehicle SO<sub>x</sub> Emissions (Demolition)

Table 8.1A.5e Offsite Motor Vehicle NO<sub>x</sub> Emissions (Demolition)

Table 8.1A.5f Offsite Motor Vehicle PM<sub>10</sub> Emissions (Demolition)

Table 8.1A.5g Offsite Motor Vehicle Emission Factors

Table 8.1A.5h Offsite Motor Vehicle Usage during Power Plant Construction

Table 8.1A.5i Offsite Motor Vehicle CO Emissions (Power Plant Construction)

Table 8.1A.5j Offsite Motor Vehicle VOC Emissions (Power Plant Construction)

Table 8.1A.5k Offsite Motor Vehicle SO<sub>x</sub> Emissions (Power Plant Construction)

Table 8.1A.5l Offsite Motor Vehicle NO<sub>x</sub> Emissions (Power Plant Construction)

Table 8.1A.5m Offsite Motor Vehicle PM<sub>10</sub> Emissions (Power Plant Construction)

Table 8.1A.5n Offsite Natural Gas Pipeline Construction Equipment Requirements

Table 8.1A.5o Offsite Natural Gas Pipeline Construction Equipment Emission Factors

Table 8.1A.5p Offsite Emissions from Natural Gas Pipeline Construction

Table 8.1A.5q Offsite VOC Emissions from Paving during Natural Gas Pipeline Construction

Table 8.1A.5r Offsite Motor Vehicle Usage during Natural Gas Pipeline Construction

Table 8.1A.5s Offsite Potable Water Line Construction Equipment Requirements

Table 8.1A.5t Offsite Potable Water Line Construction Equipment Emission Factors

Table 8.1A.5u Offsite Emissions from Potable Water Line Construction

Table 8.1A.5v Offsite Motor Vehicle Usage during Potable Water Line Construction

## ISC Input Summary

Table 8.1A.6 Summary of Emission Rates used for Dispersion Modeling

Table 8.1A.7 ISC Construction Model Input Summary

## Localized Significance Threshold Methodology

Table 8.1A.8a LST Conversion of 1-Hour NO<sub>x</sub> to NO<sub>2</sub> -Demolition

Table 8.1A.8b LST Conversion of 1-Hour NO<sub>x</sub> to NO<sub>2</sub> - Construction

Table 8.1A.8c LST Conversion of 1-Hour NO<sub>x</sub> to NO<sub>2</sub> - Overlap





**Table 8.1A.2f: Onsite Demolition Motor Vehicle CO Emissions**

| Vehicle Type             | CO Emissions (E <sub>h</sub> , lbs/hr)    |              |              |               |               |                                              |   |   |   |    |    |    |    |    |
|--------------------------|-------------------------------------------|--------------|--------------|---------------|---------------|----------------------------------------------|---|---|---|----|----|----|----|----|
|                          | 1                                         | 2            | 3            | 4             | 5             | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Onsite Pickup Truck      | 0.051                                     | 0.051        | 0.051        | 0.051         | 0.051         | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Onsite Dump Truck        | 0.022                                     | 0.022        | 0.015        | 0.0074        | 0.0074        |                                              |   |   |   |    |    |    |    |    |
| Onsite Water Truck       | 0.011                                     | 0.011        | 0.011        | 0.011         | 0.011         |                                              |   |   |   |    |    |    |    |    |
| Semi Tractor             | 0.0074                                    | 0.0074       | 0.0074       | 0             | 0             |                                              |   |   |   |    |    |    |    |    |
| <b>Total (lbs/hr)</b>    | <b>0.092</b>                              | <b>0.092</b> | <b>0.085</b> | <b>0.0698</b> | <b>0.0698</b> |                                              |   |   |   |    |    |    |    |    |
| Vehicle Type             | CO Emissions (E <sub>d</sub> , lbs/day)   |              |              |               |               |                                              |   |   |   |    |    |    |    |    |
|                          | 1                                         | 2            | 3            | 4             | 5             | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Onsite Pickup Truck      | 0.27                                      | 0.27         | 0.27         | 0.27          | 0.27          | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Onsite Dump Truck        | 0.09                                      | 0.09         | 0.06         | 0.030         | 0.030         |                                              |   |   |   |    |    |    |    |    |
| Onsite Water Truck       | 0.055                                     | 0.055        | 0.055        | 0.055         | 0.055         |                                              |   |   |   |    |    |    |    |    |
| Semi Tractor             | 0.030                                     | 0.030        | 0.030        | 0             | 0             |                                              |   |   |   |    |    |    |    |    |
| <b>Total (lbs/day)</b>   | <b>0.45</b>                               | <b>0.45</b>  | <b>0.42</b>  | <b>0.36</b>   | <b>0.36</b>   |                                              |   |   |   |    |    |    |    |    |
| Vehicle Type             | CO Emissions (E <sub>m</sub> , lbs/month) |              |              |               |               |                                              |   |   |   |    |    |    |    |    |
|                          | 1                                         | 2            | 3            | 4             | 5             | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Onsite Pickup Truck      | 6.03                                      | 6.03         | 6.03         | 6.03          | 6.03          | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Onsite Dump Truck        | 1.95                                      | 1.95         | 1.30         | 0.65          | 0.65          |                                              |   |   |   |    |    |    |    |    |
| Onsite Water Truck       | 1.22                                      | 1.22         | 1.22         | 1.22          | 1.22          |                                              |   |   |   |    |    |    |    |    |
| Semi Tractor             | 0.65                                      | 0.65         | 0.65         | 0             | 0             |                                              |   |   |   |    |    |    |    |    |
| <b>Total (lbs/month)</b> | <b>9.84</b>                               | <b>9.84</b>  | <b>9.19</b>  | <b>7.90</b>   | <b>7.90</b>   |                                              |   |   |   |    |    |    |    |    |
| <b>Total (ton/yr)</b>    | <b>0.022</b>                              |              |              |               |               |                                              |   |   |   |    |    |    |    |    |

**Table 8.1A.2g: Onsite Demolition Motor Vehicle VOC Emissions**

| Vehicle Type                 | VOC Emissions (E <sub>h</sub> , lbs/hr)    |              |              |              |              |                                              |   |   |   |    |    |    |    |    |
|------------------------------|--------------------------------------------|--------------|--------------|--------------|--------------|----------------------------------------------|---|---|---|----|----|----|----|----|
|                              | 1                                          | 2            | 3            | 4            | 5            | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Onsite Pickup Truck          | 0.0055                                     | 0.0055       | 0.0055       | 0.0055       | 0.0055       | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Onsite Dump Truck            | 0.0049                                     | 0.0049       | 0.0033       | 0.0016       | 0.0016       |                                              |   |   |   |    |    |    |    |    |
| Onsite Water Truck           | 0.0025                                     | 0.0025       | 0.0025       | 0.0025       | 0.0025       |                                              |   |   |   |    |    |    |    |    |
| Semi Tractor                 | 0.0016                                     | 0.0016       | 0.0016       | 0            | 0            |                                              |   |   |   |    |    |    |    |    |
| <b>Total (lbs/hr)</b>        | <b>0.015</b>                               | <b>0.015</b> | <b>0.013</b> | <b>0.010</b> | <b>0.010</b> |                                              |   |   |   |    |    |    |    |    |
| Vehicle Type                 | VOC Emissions (E <sub>d</sub> , lbs/day)   |              |              |              |              |                                              |   |   |   |    |    |    |    |    |
|                              | 1                                          | 2            | 3            | 4            | 5            | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Onsite Pickup Truck          | 0.030                                      | 0.030        | 0.030        | 0.030        | 0.030        | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Onsite Dump Truck            | 0.020                                      | 0.020        | 0.013        | 0.007        | 0.007        |                                              |   |   |   |    |    |    |    |    |
| Onsite Water Truck           | 0.012                                      | 0.012        | 0.012        | 0.012        | 0.012        |                                              |   |   |   |    |    |    |    |    |
| Semi Tractor                 | 0.007                                      | 0.007        | 0.007        | 0            | 0            |                                              |   |   |   |    |    |    |    |    |
| <b>Total (lbs/day)</b>       | <b>0.07</b>                                | <b>0.07</b>  | <b>0.06</b>  | <b>0.048</b> | <b>0.048</b> |                                              |   |   |   |    |    |    |    |    |
| Vehicle Type                 | VOC Emissions (E <sub>m</sub> , lbs/month) |              |              |              |              |                                              |   |   |   |    |    |    |    |    |
|                              | 1                                          | 2            | 3            | 4            | 5            | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Onsite Pickup Truck          | 0.65                                       | 0.65         | 0.65         | 0.65         | 0.65         | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Onsite Dump Truck            | 0.43                                       | 0.43         | 0.29         | 0.14         | 0.14         |                                              |   |   |   |    |    |    |    |    |
| Onsite Water Truck           | 0.27                                       | 0.27         | 0.27         | 0.27         | 0.27         |                                              |   |   |   |    |    |    |    |    |
| Semi Tractor                 | 0.14                                       | 0.14         | 0.14         | 0            | 0            |                                              |   |   |   |    |    |    |    |    |
| <b>Total (lbs/month)</b>     | <b>1.50</b>                                | <b>1.50</b>  | <b>1.35</b>  | <b>1.07</b>  | <b>1.07</b>  |                                              |   |   |   |    |    |    |    |    |
| <b>Year 1 Total (ton/yr)</b> | <b>0.0032</b>                              |              |              |              |              |                                              |   |   |   |    |    |    |    |    |





**Table 8.1A.2j: Onsite Demolition Motor Vehicle PM<sub>10</sub> Emissions**

| Vehicle Type                 | PM <sub>10</sub> Emissions (E <sub>h</sub> , lbs/hr)    |               |               |               |               |                                              |   |   |   |    |    |    |    |    |
|------------------------------|---------------------------------------------------------|---------------|---------------|---------------|---------------|----------------------------------------------|---|---|---|----|----|----|----|----|
|                              | 1                                                       | 2             | 3             | 4             | 5             | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Onsite Pickup Truck          | 0.00032                                                 | 0.00032       | 0.00032       | 0.00032       | 0.00032       | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Onsite Dump Truck            | 0.0026                                                  | 0.0026        | 0.0017        | 0.0009        | 0.0009        |                                              |   |   |   |    |    |    |    |    |
| Onsite Water Truck           | 0.0013                                                  | 0.0013        | 0.0013        | 0.0013        | 0.0013        |                                              |   |   |   |    |    |    |    |    |
| Semi Tractor                 | 0.00086                                                 | 0.00086       | 0.00086       | 0             | 0             |                                              |   |   |   |    |    |    |    |    |
| <b>Total (lbs/hr)</b>        | <b>0.0051</b>                                           | <b>0.0051</b> | <b>0.0042</b> | <b>0.0025</b> | <b>0.0025</b> |                                              |   |   |   |    |    |    |    |    |
| Vehicle Type                 | PM <sub>10</sub> Emissions (E <sub>d</sub> , lbs/day)   |               |               |               |               |                                              |   |   |   |    |    |    |    |    |
|                              | 1                                                       | 2             | 3             | 4             | 5             | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Onsite Pickup Truck          | 0.0017                                                  | 0.0017        | 0.0017        | 0.0017        | 0.0017        | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Onsite Dump Truck            | 0.0103                                                  | 0.0103        | 0.0069        | 0.0034        | 0.0034        |                                              |   |   |   |    |    |    |    |    |
| Onsite Water Truck           | 0.0065                                                  | 0.0065        | 0.0065        | 0.0065        | 0.0065        |                                              |   |   |   |    |    |    |    |    |
| Semi Tractor                 | 0.0034                                                  | 0.0034        | 0.0034        | 0             | 0             |                                              |   |   |   |    |    |    |    |    |
| <b>Total (lbs/day)</b>       | <b>0.0219</b>                                           | <b>0.0219</b> | <b>0.0185</b> | <b>0.0116</b> | <b>0.0116</b> |                                              |   |   |   |    |    |    |    |    |
| Vehicle Type                 | PM <sub>10</sub> Emissions (E <sub>m</sub> , lbs/month) |               |               |               |               |                                              |   |   |   |    |    |    |    |    |
|                              | 1                                                       | 2             | 3             | 4             | 5             | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Onsite Pickup Truck          | 0.038                                                   | 0.038         | 0.038         | 0.038         | 0.038         | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Onsite Dump Truck            | 0.227                                                   | 0.227         | 0.151         | 0.076         | 0.076         |                                              |   |   |   |    |    |    |    |    |
| Onsite Water Truck           | 0.142                                                   | 0.142         | 0.142         | 0.142         | 0.142         |                                              |   |   |   |    |    |    |    |    |
| Semi Tractor                 | 0.076                                                   | 0.076         | 0.076         | 0             | 0             |                                              |   |   |   |    |    |    |    |    |
| <b>Total (lbs/month)</b>     | <b>0.48</b>                                             | <b>0.48</b>   | <b>0.41</b>   | <b>0.26</b>   | <b>0.26</b>   |                                              |   |   |   |    |    |    |    |    |
| <b>Year 1 Total (ton/yr)</b> | <b>0.0009</b>                                           |               |               |               |               |                                              |   |   |   |    |    |    |    |    |



**Table 8.1A.2I: Onsite Power Plant Construction Equipment VOC Emissions**

| Onsite Equipment                   | VOC Emissions (lbs/month)                                   |   |   |        |        |        |        |        |        |        |        |        |    |    |
|------------------------------------|-------------------------------------------------------------|---|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|----|----|
|                                    | 1                                                           | 2 | 3 | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13 | 14 |
| Bulldozer                          | Power Plant Construction occurs during months 4 through 14. |   |   | 74.27  | 74.27  | 37.136 | 37.136 | 0      | 0      | 0      | 0      | 0      | 0  | 0  |
| Excavator                          |                                                             |   |   | 34.14  | 34.14  | 34.14  | 17.07  | 17.07  | 0      | 0      | 0      | 0      | 0  | 0  |
| Grader                             |                                                             |   |   | 21.82  | 21.82  | 21.82  | 21.82  | 21.82  | 0      | 0      | 0      | 0      | 0  | 0  |
| Forklift                           |                                                             |   |   | 13.90  | 27.81  | 27.81  | 41.71  | 41.71  | 41.71  | 27.81  | 27.81  | 13.90  | 0  | 0  |
| Generator sets                     |                                                             |   |   | 16.54  | 16.54  | 33.09  | 33.09  | 33.09  | 33.09  | 33.09  | 33.09  | 16.54  | 0  | 0  |
| Light Plant                        |                                                             |   |   | 16.54  | 16.54  | 16.54  | 33.09  | 33.09  | 33.09  | 16.54  | 16.54  | 16.54  | 0  | 0  |
| Backhoe/Front End Loader           |                                                             |   |   | 44.00  | 44.00  | 44     | 44     | 22     | 22     | 22     | 22     | 22     | 0  | 0  |
| Rubber Tired Crane                 |                                                             |   |   | 15.14  | 15.14  | 15.14  | 15.14  | 30.27  | 30.27  | 30.27  | 15.14  | 15.14  | 0  | 0  |
| Cherry Picker Hydraulic Crane      |                                                             |   |   | 0      | 0      | 15.14  | 15.14  | 15.14  | 30.27  | 30.27  | 30.27  | 15.14  | 0  | 0  |
| 300 Ton Cranes                     |                                                             |   |   | 0      | 0      | 0      | 15.14  | 15.14  | 15.14  | 15.14  | 0      | 0      | 0  | 0  |
| Concrete Vibrator                  |                                                             |   |   | 5.21   | 15.63  | 20.84  | 20.84  | 20.84  | 15.63  | 10.42  | 10.42  | 0      | 0  | 0  |
| Paving Equipment                   |                                                             |   |   | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 18.83  | 0  | 0  |
| Roller/Compactor                   |                                                             |   |   | 13.55  | 13.55  | 13.55  | 13.55  | 13.55  | 0      | 0      | 0      | 13.55  | 0  | 0  |
| Welding Machine                    |                                                             |   |   | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0  | 0  |
| Pipe Grinder                       |                                                             |   |   | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0  | 0  |
| JLG Lift (Scissor Lift)            |                                                             |   | 0 | 0      | 0      | 13.90  | 13.90  | 13.90  | 27.81  | 27.808 | 13.90  | 0      | 0  |    |
| Total (lbs/month, E <sub>m</sub> ) |                                                             |   |   | 255.13 | 279.45 | 279.21 | 321.62 | 277.62 | 235.10 | 213.35 | 183.08 | 145.55 | 0  | 0  |
| Total (lbs/day, E <sub>d</sub> )   |                                                             |   |   | 11.60  | 12.70  | 12.69  | 14.62  | 12.62  | 10.69  | 9.70   | 8.32   | 6.62   | 0  | 0  |
| Total (lbs/hr, E <sub>h</sub> )    |                                                             |   |   | 1.45   | 1.59   | 1.59   | 1.83   | 1.58   | 1.34   | 1.21   | 1.04   | 0.83   | 0  | 0  |
| Total (ton/yr, E <sub>y</sub> )    |                                                             |   |   | 1.10   |        |        |        |        |        |        |        |        |    |    |

**Table 8.1A.m: Onsite Power Plant Construction Equipment NOx Emissions**

| Onsite Equipment                   | NO <sub>x</sub> Emissions (lbs/month)                       |   |   |          |          |          |          |          |          |          |          |          |      |      |
|------------------------------------|-------------------------------------------------------------|---|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|------|------|
|                                    | 1                                                           | 2 | 3 | 4        | 5        | 6        | 7        | 8        | 9        | 10       | 11       | 12       | 13   | 14   |
| Bulldozer                          | Power Plant Construction occurs during months 4 through 14. |   |   | 991.58   | 991.58   | 495.79   | 495.79   | 0        | 0        | 0        | 0        | 0        | 0    | 0    |
| Excavator                          |                                                             |   |   | 400.58   | 400.58   | 400.58   | 200.29   | 200.29   | 0.00     | 0.00     | 0.00     | 0.00     | 0    | 0    |
| Grader                             |                                                             |   |   | 253.79   | 253.79   | 253.79   | 253.79   | 253.79   | 0.00     | 0.00     | 0.00     | 0.00     | 0    | 0    |
| Forklift                           |                                                             |   |   | 80.43    | 160.86   | 160.86   | 241.30   | 241.30   | 241.30   | 160.86   | 160.86   | 80.43    | 0    | 0    |
| Generator sets                     |                                                             |   |   | 115.46   | 115.46   | 230.91   | 230.91   | 230.91   | 230.91   | 230.91   | 230.91   | 115.46   | 0    | 0    |
| Light Plant                        |                                                             |   |   | 115.46   | 115.46   | 115.46   | 230.91   | 230.91   | 230.91   | 115.46   | 115.46   | 115.46   | 0    | 0    |
| Backhoe/Front End Loader           |                                                             |   |   | 287.23   | 287.23   | 287      | 287      | 144      | 144      | 144      | 144      | 144      | 0    | 0    |
| Rubber Tired Crane                 |                                                             |   |   | 180.05   | 180.05   | 180.05   | 180.05   | 360.10   | 360.10   | 360.10   | 180      | 180      | 0    | 0    |
| Cherry Picker Hydraulic Crane      |                                                             |   |   | 0        | 0        | 180.05   | 180.05   | 180.05   | 360.10   | 360.10   | 360.10   | 180.05   | 0    | 0    |
| 300 Ton Cranes                     |                                                             |   |   | 0        | 0        | 0        | 180.05   | 180.05   | 180.05   | 180.05   | 0        | 0        | 0    | 0    |
| Concrete Vibrator                  |                                                             |   |   | 46.89    | 140.66   | 187.55   | 187.55   | 187.55   | 140.66   | 93.77    | 93.77    | 0        | 0    | 0    |
| Paving Equipment                   |                                                             |   |   | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 159.98   | 0    | 0    |
| Roller/Compactor                   |                                                             |   |   | 122.67   | 122.67   | 122.67   | 122.67   | 122.67   | 0.00     | 0.00     | 0.00     | 122.67   | 0    | 0    |
| Welding Machine                    |                                                             |   |   | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0    | 0    |
| Pipe Grinder                       |                                                             |   | 0 | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0    |      |
| JLG Lift (Scissor Lift)            |                                                             |   | 0 | 0        | 0        | 80.43    | 80.43    | 80.43    | 160.86   | 160.86   | 80.43    | 0        | 0    |      |
| Total (lbs/month, E <sub>m</sub> ) |                                                             |   |   | 2,594.13 | 2,768.34 | 2,614.94 | 2,871.02 | 2,411.66 | 1,968.07 | 1,805.72 | 1,445.63 | 1,178.14 | 0.00 | 0.00 |
| Total (lbs/day, E <sub>d</sub> )   |                                                             |   |   | 117.92   | 125.83   | 118.86   | 130.50   | 109.62   | 89.46    | 82.08    | 65.71    | 53.55    | 0.00 | 0.00 |
| Total (lbs/hr, E <sub>h</sub> )    |                                                             |   |   | 14.74    | 15.73    | 14.86    | 16.31    | 13.70    | 11.18    | 10.26    | 8.21     | 6.69     | 0    | 0    |
| Total (ton/yr, E <sub>y</sub> )    |                                                             |   |   | 9.83     |          |          |          |          |          |          |          |          |      |      |

**Table 8.1A.n: Onsite Power Plant Construction Equipment SOx Emissions**

| Onsite Equipment                   | SO <sub>x</sub> Emissions (lbs/month)                       |   |   |         |        |        |        |        |        |        |        |        |    |    |
|------------------------------------|-------------------------------------------------------------|---|---|---------|--------|--------|--------|--------|--------|--------|--------|--------|----|----|
|                                    | 1                                                           | 2 | 3 | 4       | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13 | 14 |
| Bulldozer                          | Power Plant Construction occurs during months 4 through 14. |   |   | 4.77    | 4.77   | 2      | 2      | 0      | 0      | 0      | 0      | 0      | 0  | 0  |
| Excavator                          |                                                             |   |   | 2.57    | 2.57   | 2.57   | 1.28   | 1.28   | 0      | 0      | 0      | 0      | 0  | 0  |
| Grader                             |                                                             |   |   | 1.46    | 1.46   | 1.46   | 1.46   | 1.46   | 0      | 0      | 0      | 0      | 0  | 0  |
| Forklift                           |                                                             |   |   | 0       | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0  | 0  |
| Generator sets                     |                                                             |   |   | 0.0053  | 0.0053 | 0.0106 | 0.0106 | 0.0106 | 0.0106 | 0.0106 | 0.0106 | 0.0053 | 0  | 0  |
| Light Plant                        |                                                             |   |   | 0.0053  | 0.0053 | 0.0053 | 0.0106 | 0.0106 | 0.0106 | 0.0053 | 0.0053 | 0.0053 | 0  | 0  |
| Backhoe/Front End Loader           |                                                             |   |   | 1.21    | 1.21   | 1.21   | 1.21   | 0.61   | 0.61   | 0.61   | 0.61   | 0.61   | 0  | 0  |
| Rubber Tired Crane                 |                                                             |   |   | 1.03    | 1.03   | 1.03   | 1.03   | 2.07   | 2.07   | 2.07   | 1.03   | 1.03   | 0  | 0  |
| Cherry Picker Hydraulic Crane      |                                                             |   |   | 0       | 0      | 1.03   | 1.03   | 1.03   | 2.07   | 2.07   | 2.07   | 1.03   | 0  | 0  |
| 300 Ton Cranes                     |                                                             |   |   | 0       | 0      | 0      | 1.03   | 1.03   | 1.03   | 1.03   | 0      | 0      | 0  | 0  |
| Concrete Vibrator                  |                                                             |   |   | 0.52    | 1.56   | 2.08   | 2.08   | 2.08   | 1.56   | 1.04   | 1.04   | 0      | 0  | 0  |
| Paving Equipment                   |                                                             |   |   | 0       | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0.76   | 0  | 0  |
| Roller/Compactor                   |                                                             |   |   | 0.73    | 0.73   | 0.73   | 0.73   | 0.73   | 0      | 0      | 0      | 0.73   | 0  | 0  |
| Welding Machine                    |                                                             |   |   | 0       | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0  | 0  |
| Pipe Grinder                       |                                                             |   | 0 | 0       | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0  |    |
| JLG Lift (Scissor Lift)            |                                                             |   | 0 | 0       | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0  |    |
| Total (lbs/month, E <sub>m</sub> ) |                                                             |   |   | 12.31   | 13.35  | 12.53  | 12.28  | 10.33  | 7.37   | 6.84   | 4.77   | 4.18   | 0  | 0  |
| Total (lbs/day, E <sub>d</sub> )   |                                                             |   |   | 0.56    | 0.61   | 0.57   | 0.56   | 0.47   | 0.33   | 0.31   | 0.22   | 0.19   | 0  | 0  |
| Total (lbs/hr, E <sub>h</sub> )    |                                                             |   |   | 0.06995 | 0.076  | 0.071  | 0.0698 | 0.059  | 0.042  | 0.039  | 0.027  | 0.024  | 0  | 0  |
| Total (ton/yr, E <sub>y</sub> )    |                                                             |   |   | 0.042   |        |        |        |        |        |        |        |        |    |    |

**Table 8.1A.o: Onsite Power Plant Construction Equipment PM<sub>10</sub> Emissions**

| Onsite Equipment                   | PM <sub>10</sub> Emissions (lbs/month)                      |   |   |        |        |        |        |        |        |        |        |       |      |    |   |
|------------------------------------|-------------------------------------------------------------|---|---|--------|--------|--------|--------|--------|--------|--------|--------|-------|------|----|---|
|                                    | 1                                                           | 2 | 3 | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12    | 13   | 14 |   |
| Bulldozer                          | Power Plant Construction occurs during months 4 through 14. |   |   | 39.42  | 39.42  | 20     | 19.71  | 0      | 0      | 0      | 0      | 0     | 0    | 0  |   |
| Excavator                          |                                                             |   |   | 21.12  | 21.12  | 21.12  | 10.56  | 10.56  | 0      | 0      | 0      | 0     | 0    | 0  |   |
| Grader                             |                                                             |   |   | 13.02  | 13.02  | 13.02  | 13.02  | 13.02  | 0      | 0      | 0      | 0     | 0    | 0  |   |
| Forklift                           |                                                             |   |   | 8.80   | 17.60  | 17.60  | 26.40  | 26.40  | 26.40  | 17.60  | 17.60  | 8.80  | 0    | 0  |   |
| Generator sets                     |                                                             |   |   | 8.45   | 8.45   | 16.90  | 16.90  | 16.90  | 16.90  | 16.90  | 16.90  | 8.45  | 0    | 0  |   |
| Light Plant                        |                                                             |   |   | 8.45   | 8.45   | 8.45   | 16.90  | 16.90  | 16.90  | 8.45   | 8.45   | 8.45  | 0    | 0  |   |
| Backhoe/Front End Loader           |                                                             |   |   | 29.22  | 29.22  | 29.22  | 29.22  | 14.61  | 14.61  | 14.61  | 14.61  | 14.61 | 0    | 0  |   |
| Rubber Tired Crane                 |                                                             |   |   | 9.15   | 9.15   | 9.15   | 9.15   | 18.30  | 18.30  | 18.30  | 9.15   | 9.15  | 0    | 0  |   |
| Cherry Picker Hydraulic Crane      |                                                             |   |   | 0      | 0      | 9.15   | 9.15   | 9.15   | 18.30  | 18.30  | 18.30  | 9.15  | 0    | 0  |   |
| 300 Ton Cranes                     |                                                             |   |   | 0      | 0      | 0      | 9.15   | 9.15   | 9.15   | 9.15   | 0      | 0     | 0    | 0  |   |
| Concrete Vibrator                  |                                                             |   |   | 2.60   | 7.81   | 10.42  | 10.42  | 10.42  | 7.81   | 5.21   | 5.21   | 0     | 0    | 0  |   |
| Paving Equipment                   |                                                             |   |   | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 11.62 | 0    | 0  |   |
| Roller/Compactor                   |                                                             |   |   | 8.98   | 8.98   | 8.98   | 8.98   | 8.98   | 8.98   | 0      | 0      | 0     | 8.98 | 0  | 0 |
| Welding Machine                    |                                                             |   |   | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0     | 0    | 0  | 0 |
| Pipe Grinder                       |                                                             |   |   | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0      | 0     | 0    | 0  | 0 |
| JLG Lift (Scissor Lift)            |                                                             |   | 0 | 0      | 0      | 8.80   | 8.80   | 8.80   | 17.60  | 17.60  | 8.80   | 0     | 0    | 0  |   |
| Total (lbs/month, E <sub>m</sub> ) |                                                             |   |   | 149.21 | 163.22 | 163.72 | 188.36 | 163.19 | 137.17 | 126.12 | 107.82 | 88.00 | 0    | 0  |   |
| Total (lbs/day, E <sub>d</sub> )   |                                                             |   |   | 6.78   | 7.42   | 7.44   | 8.56   | 7.42   | 6.24   | 5.73   | 4.90   | 4.00  | 0    | 0  |   |
| Total (lbs/hr, E <sub>h</sub> )    |                                                             |   |   | 0.85   | 0.93   | 0.93   | 1.07   | 0.93   | 0.78   | 0.72   | 0.61   | 0.50  | 0    | 0  |   |
| Total (ton/yr, E <sub>t</sub> )    |                                                             |   |   | 0.64   |        |        |        |        |        |        |        |       |      |    |   |

| Vehicle Type        | CO Emissions (E <sub>h</sub> , lbs/hr)                      |   |       |         |         |         |         |         |         |         |         |         |       |    |   |
|---------------------|-------------------------------------------------------------|---|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|----|---|
|                     | 1                                                           | 2 | 3     | 4       | 5       | 6       | 7       | 8       | 9       | 10      | 11      | 12      | 13    | 14 |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |       | 0.017   | 0.035   | 0.035   | 0.035   | 0.035   | 0.05247 | 0.05247 | 0.070   | 0.05247 | 0     | 0  |   |
| Onsite Dump Truck   |                                                             |   |       | 0.00502 | 0.00502 | 0.00502 | 0.00502 | 0.00502 | 0       | 0       | 0       | 0       | 0     | 0  |   |
| Onsite Water Truck  |                                                             |   |       | 0.011   | 0.011   | 0.011   | 0.011   | 0.011   | 0.011   | 0.011   | 0.011   | 0.011   | 0.011 | 0  | 0 |
| Semi Tractor        |                                                             |   |       | 0       | 0       | 0       | 0.00502 | 0.00502 | 0.00502 | 0.00502 | 0.00502 | 0       | 0     | 0  | 0 |
| Total (lbs/hr)      |                                                             |   | 0.033 | 0.051   | 0.051   | 0.056   | 0.056   | 0.068   | 0.068   | 0.086   | 0.063   | 0       | 0     |    |   |
|                     | CO Emissions (E <sub>d</sub> , lbs/day)                     |   |       |         |         |         |         |         |         |         |         |         |       |    |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |       | 0.09    | 0.19    | 0.19    | 0.19    | 0.19    | 0.28    | 0.28    | 0.37    | 0.28    | 0     | 0  |   |
| Onsite Dump Truck   |                                                             |   |       | 0.0201  | 0.0201  | 0.0201  | 0.0201  | 0.0201  | 0       | 0       | 0       | 0       | 0     | 0  |   |
| Onsite Water Truck  |                                                             |   |       | 0.065   | 0.065   | 0.065   | 0.065   | 0.065   | 0.065   | 0.065   | 0.065   | 0.065   | 0.065 | 0  | 0 |
| Semi Tractor        |                                                             |   |       | 0       | 0       | 0       | 0.0201  | 0.0201  | 0.0201  | 0.0201  | 0.0201  | 0       | 0     | 0  | 0 |
| Total (lbs/day)     |                                                             |   | 0.18  | 0.27    | 0.27    | 0.29    | 0.29    | 0.36    | 0.36    | 0.46    | 0.34    | 0       | 0     |    |   |
|                     | CO Emissions (E <sub>m</sub> , lbs/month)                   |   |       |         |         |         |         |         |         |         |         |         |       |    |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |       | 2.05    | 4.10    | 4.10    | 4.10    | 4.10    | 6.16    | 6.16    | 8.21    | 6.16    | 0     | 0  |   |
| Onsite Dump Truck   |                                                             |   |       | 0.44    | 0.44    | 0.44    | 0.44    | 0.44    | 0       | 0       | 0       | 0       | 0     | 0  |   |
| Onsite Water Truck  |                                                             |   |       | 1.43    | 1.43    | 1.43    | 1.43    | 1.43    | 1.43    | 1.43    | 1.43    | 1.43    | 1.43  | 0  | 0 |
| Semi Tractor        |                                                             |   |       | 0       | 0       | 0       | 0.44    | 0.44    | 0.44    | 0.44    | 0.44    | 0       | 0     | 0  | 0 |
| Total (lbs/month)   |                                                             |   | 3.92  | 5.98    | 5.98    | 6.42    | 6.42    | 8.03    | 8.03    | 10.08   | 7.59    | 0       | 0     |    |   |
| Total (ton/yr)      |                                                             |   | 0.031 |         |         |         |         |         |         |         |         |         |       |    |   |

| Vehicle Type        | CO Emissions (E <sub>h</sub> , lbs/hr)                      |   |   |         |         |         |         |         |         |         |         |         |       |    |   |
|---------------------|-------------------------------------------------------------|---|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|----|---|
|                     | 1                                                           | 2 | 3 | 4       | 5       | 6       | 7       | 8       | 9       | 10      | 11      | 12      | 13    | 14 |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 0.017   | 0.035   | 0.035   | 0.035   | 0.035   | 0.05247 | 0.05247 | 0.070   | 0.05247 | 0     | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 0.00502 | 0.00502 | 0.00502 | 0.00502 | 0.00502 | 0       | 0       | 0       | 0       | 0     | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 0.011   | 0.011   | 0.011   | 0.011   | 0.011   | 0.011   | 0.011   | 0.011   | 0.011   | 0.011 | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0       | 0       | 0       | 0.00502 | 0.00502 | 0.00502 | 0.00502 | 0.00502 | 0.00502 | 0     | 0  | 0 |
| Total (lbs/hr)      |                                                             |   |   | 0.033   | 0.051   | 0.051   | 0.056   | 0.056   | 0.068   | 0.068   | 0.086   | 0.063   | 0     | 0  |   |
|                     | CO Emissions (E <sub>d</sub> , lbs/day)                     |   |   |         |         |         |         |         |         |         |         |         |       |    |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 0.09    | 0.19    | 0.19    | 0.19    | 0.19    | 0.28    | 0.28    | 0.37    | 0.28    | 0     | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 0.0201  | 0.0201  | 0.0201  | 0.0201  | 0.0201  | 0       | 0       | 0       | 0       | 0     | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 0.065   | 0.065   | 0.065   | 0.065   | 0.065   | 0.065   | 0.065   | 0.065   | 0.065   | 0.065 | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0       | 0       | 0       | 0.0201  | 0.0201  | 0.0201  | 0.0201  | 0.0201  | 0.0201  | 0     | 0  | 0 |
| Total (lbs/day)     |                                                             |   |   | 0.18    | 0.27    | 0.27    | 0.29    | 0.29    | 0.36    | 0.36    | 0.46    | 0.34    | 0     | 0  |   |
|                     | CO Emissions (E <sub>m</sub> , lbs/month)                   |   |   |         |         |         |         |         |         |         |         |         |       |    |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 2.05    | 4.10    | 4.10    | 4.10    | 4.10    | 6.16    | 6.16    | 8.21    | 6.16    | 0     | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 0.44    | 0.44    | 0.44    | 0.44    | 0.44    | 0       | 0       | 0       | 0       | 0     | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 1.43    | 1.43    | 1.43    | 1.43    | 1.43    | 1.43    | 1.43    | 1.43    | 1.43    | 1.43  | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0       | 0       | 0       | 0.44    | 0.44    | 0.44    | 0.44    | 0.44    | 0.44    | 0     | 0  | 0 |
| Total (lbs/month)   |                                                             |   |   | 3.92    | 5.98    | 5.98    | 6.42    | 6.42    | 8.03    | 8.03    | 10.08   | 7.59    | 0     | 0  |   |
| Total (ton/yr)      |                                                             |   |   | 0.031   |         |         |         |         |         |         |         |         |       |    |   |

**Table 8.1A.2q: Onsite Power Plant Construction Motor Vehicle VOC Emissions**

| Vehicle Type        | VOC Emissions (E <sub>h</sub> , lbs/hr)                     |   |   |        |        |        |        |        |        |        |        |        |        |    |   |
|---------------------|-------------------------------------------------------------|---|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----|---|
|                     | 1                                                           | 2 | 3 | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13     | 14 |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 0.0019 | 0.0038 | 0.0038 | 0.0038 | 0.0038 | 0.0057 | 0.0057 | 0.0075 | 0.0057 | 0      | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0      | 0      | 0      | 0      | 0      | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 0.0024 | 0.0024 | 0.0024 | 0.0024 | 0.0024 | 0.0024 | 0.0024 | 0.0024 | 0.0024 | 0.0024 | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0      | 0      | 0      | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0      | 0  | 0 |
| Total (lbs/hr)      |                                                             |   |   | 0.005  | 0.007  | 0.007  | 0.008  | 0.008  | 0.009  | 0.009  | 0.011  | 0.008  | 0      | 0  |   |
|                     | VOC Emissions (E <sub>d</sub> , lbs/day)                    |   |   |        |        |        |        |        |        |        |        |        |        |    |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 0.0101 | 0.0201 | 0.0201 | 0.0201 | 0.0201 | 0.0302 | 0.0302 | 0.0403 | 0.0302 | 0      | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 0.0045 | 0.0045 | 0.0045 | 0.0045 | 0.0045 | 0      | 0      | 0      | 0      | 0      | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 0.0144 | 0.0144 | 0.0144 | 0.0144 | 0.0144 | 0.0144 | 0.0144 | 0.0144 | 0.0144 | 0.0144 | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0      | 0      | 0      | 0.0045 | 0.0045 | 0.0045 | 0.0045 | 0.0045 | 0.0045 | 0      | 0  | 0 |
| Total (lbs/day)     |                                                             |   |   | 0.029  | 0.039  | 0.039  | 0.043  | 0.043  | 0.049  | 0.049  | 0.059  | 0.045  | 0      | 0  |   |
|                     | VOC Emissions (E <sub>m</sub> , lbs/month)                  |   |   |        |        |        |        |        |        |        |        |        |        |    |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 0.22   | 0.44   | 0.44   | 0.44   | 0.44   | 0.66   | 0.66   | 0.89   | 0.66   | 0      | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 0.10   | 0.10   | 0.10   | 0.10   | 0.10   | 0      | 0      | 0      | 0      | 0      | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 0.32   | 0.32   | 0.32   | 0.32   | 0.32   | 0.32   | 0.32   | 0.32   | 0.32   | 0.32   | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0      | 0      | 0      | 0.098  | 0.098  | 0.098  | 0.098  | 0.098  | 0.098  | 0      | 0  | 0 |
| Total (lbs/month)   |                                                             |   |   | 0.64   | 0.86   | 0.86   | 0.96   | 0.96   | 1.08   | 1.08   | 1.30   | 0.98   | 0      | 0  |   |
| Total (ton/yr)      |                                                             |   |   | 0.0044 |        |        |        |        |        |        |        |        |        |    |   |

**Table 8.1A.2r: Onsite Power Plant Construction Motor Vehicle SOx Emissions**

| Vehicle Type        | SOx Emissions (E <sub>h</sub> , lbs/hr)                     |   |   |          |          |          |          |          |          |          |          |          |          |    |   |
|---------------------|-------------------------------------------------------------|---|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----|---|
|                     | 1                                                           | 2 | 3 | 4        | 5        | 6        | 7        | 8        | 9        | 10       | 11       | 12       | 13       | 14 |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 0.000012 | 0.000025 | 0.000025 | 0.000025 | 0.000025 | 0.000037 | 0.000037 | 0.000049 | 0.000037 | 0        | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 0.000042 | 0.000042 | 0.000042 | 0.000042 | 0.000042 | 0        | 0        | 0        | 0        | 0        | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 0.000090 | 0.000090 | 0.000090 | 0.000090 | 0.000090 | 0.000090 | 0.000090 | 0.000090 | 0.000090 | 0.000090 | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0        | 0        | 0        | 0.000042 | 0.000042 | 0.000042 | 0.000042 | 0.000042 | 0.000042 | 0        | 0  | 0 |
| Total (lbs/hr)      |                                                             |   |   | 0.000144 | 0.000156 | 0.000156 | 0.000197 | 0.000197 | 0.000168 | 0.000168 | 0.000180 | 0.000127 | 0        | 0  |   |
|                     | SOx Emissions (E <sub>d</sub> , lbs/day)                    |   |   |          |          |          |          |          |          |          |          |          |          |    |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 0.00007  | 0.00013  | 0.00013  | 0.00013  | 0.00013  | 0.00020  | 0.00020  | 0.00026  | 0.00020  | 0        | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 0.00017  | 0.00017  | 0.00017  | 0.00017  | 0.00017  | 0        | 0        | 0        | 0        | 0        | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 0.00054  | 0.00054  | 0.00054  | 0.00054  | 0.00054  | 0.00054  | 0.00054  | 0.00054  | 0.00054  | 0.00054  | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0        | 0        | 0        | 0.00017  | 0.00017  | 0.00017  | 0.00017  | 0.00017  | 0.00017  | 0        | 0  | 0 |
| Total (lbs/day)     |                                                             |   |   | 0.00077  | 0.00084  | 0.00084  | 0.00100  | 0.00100  | 0.00090  | 0.00090  | 0.00097  | 0.00073  | 0        | 0  |   |
|                     | SOx Emissions (E <sub>m</sub> , lbs/month)                  |   |   |          |          |          |          |          |          |          |          |          |          |    |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 0.0014   | 0.0029   | 0.0029   | 0.0029   | 0.0029   | 0.0043   | 0.0043   | 0.0058   | 0.0043   | 0        | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 0.0037   | 0.0037   | 0.0037   | 0.0037   | 0.0037   | 0        | 0        | 0        | 0        | 0        | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 0.012    | 0.012    | 0.012    | 0.012    | 0.012    | 0.012    | 0.012    | 0.012    | 0.012    | 0.012    | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0        | 0        | 0        | 0.0037   | 0.0037   | 0.0037   | 0.0037   | 0.0037   | 0.0037   | 0        | 0  | 0 |
| Total (lbs/month)   |                                                             |   |   | 0.017    | 0.018    | 0.018    | 0.022    | 0.022    | 0.020    | 0.020    | 0.021    | 0.016    | 0        | 0  |   |
| Total (ton/yr)      |                                                             |   |   | 0.00009  |          |          |          |          |          |          |          |          |          |    |   |

**Table 8.1A.2s: Onsite Power Plant Construction Motor Vehicle NOx Emissions**

| Vehicle Type        | NOx Emissions (E <sub>n</sub> , lbs/hr)                     |   |   |        |        |        |        |        |        |        |        |        |        |    |   |
|---------------------|-------------------------------------------------------------|---|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----|---|
|                     | 1                                                           | 2 | 3 | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11     | 12     | 13     | 14 |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 0.0019 | 0.0037 | 0.0037 | 0.0037 | 0.0037 | 0.0056 | 0.0056 | 0.0074 | 0.0056 | 0      | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 0.0324 | 0.0324 | 0.0324 | 0.0324 | 0.0324 | 0      | 0      | 0      | 0      | 0      | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 0.0699 | 0.0699 | 0.0699 | 0.0699 | 0.0699 | 0.0699 | 0.0699 | 0.0699 | 0.0699 | 0.0699 | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0      | 0      | 0      | 0.0324 | 0.0324 | 0.0324 | 0.0324 | 0.0324 | 0.0324 | 0.0000 | 0  | 0 |
| Total (lbs/hr)      |                                                             |   |   | 0.10   | 0.11   | 0.11   | 0.14   | 0.14   | 0.11   | 0.11   | 0.11   | 0.08   | 0      | 0  |   |
|                     | NOx Emissions (E <sub>d</sub> , lbs/day)                    |   |   |        |        |        |        |        |        |        |        |        |        |    |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 0.01   | 0.02   | 0.02   | 0.02   | 0.02   | 0.03   | 0.03   | 0.04   | 0.03   | 0      | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 0.13   | 0.13   | 0.13   | 0.13   | 0.13   | 0      | 0      | 0      | 0      | 0      | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 0.42   | 0.42   | 0.42   | 0.42   | 0.42   | 0.42   | 0.42   | 0.42   | 0.42   | 0.42   | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0      | 0      | 0      | 0.13   | 0.13   | 0.13   | 0.13   | 0.13   | 0.13   | 0      | 0  | 0 |
| Total (lbs/day)     |                                                             |   |   | 0.56   | 0.57   | 0.57   | 0.70   | 0.70   | 0.58   | 0.58   | 0.59   | 0.45   | 0      | 0  |   |
|                     | NOx Emissions (E <sub>m</sub> , lbs/month)                  |   |   |        |        |        |        |        |        |        |        |        |        |    |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 0.22   | 0.44   | 0.44   | 0.44   | 0.44   | 0.65   | 0.65   | 0.87   | 0.65   | 0      | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 2.85   | 2.85   | 2.85   | 2.85   | 2.85   | 0.00   | 0.00   | 0.00   | 0.00   | 0      | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 9.23   | 9.23   | 9.23   | 9.23   | 9.23   | 9.23   | 9.23   | 9.23   | 9.23   | 9.23   | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0      | 0      | 0      | 2.852  | 2.852  | 2.852  | 2.852  | 2.852  | 2.852  | 0      | 0  | 0 |
| Total (lbs/month)   |                                                             |   |   | 12.30  | 12.52  | 12.52  | 15.37  | 15.37  | 12.74  | 12.74  | 12.95  | 9.88   | 0      | 0  |   |
| Total (ton/yr)      |                                                             |   |   | 0.058  |        |        |        |        |        |        |        |        |        |    |   |

**Table 8.1A.2t: Onsite Power Plant Construction Motor Vehicle PM<sub>10</sub> Emissions**

| Vehicle Type        | PM <sub>10</sub> Emissions (E <sub>h</sub> , lbs/hr)        |   |   |         |         |         |         |         |         |         |         |         |         |    |   |
|---------------------|-------------------------------------------------------------|---|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----|---|
|                     | 1                                                           | 2 | 3 | 4       | 5       | 6       | 7       | 8       | 9       | 10      | 11      | 12      | 13      | 14 |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 0.00011 | 0.00022 | 0.00022 | 0.00022 | 0.00022 | 0.00033 | 0.00033 | 0.00044 | 0.00033 | 0       | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 0.00059 | 0.00059 | 0.00059 | 0.00059 | 0.00059 | 0       | 0       | 0       | 0       | 0       | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 0.00126 | 0.00126 | 0.00126 | 0.00126 | 0.00126 | 0.00126 | 0.00126 | 0.00126 | 0.00126 | 0.00126 | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0       | 0       | 0       | 0.00059 | 0.00059 | 0.00059 | 0.00059 | 0.00059 | 0.00059 | 0       | 0  | 0 |
| Total (lbs/hr)      |                                                             |   |   | 0.00196 | 0.00207 | 0.00207 | 0.00265 | 0.00265 | 0.00218 | 0.00218 | 0.00229 | 0.00159 | 0       | 0  |   |
|                     | PM <sub>10</sub> Emissions (E <sub>d</sub> , lbs/day)       |   |   |         |         |         |         |         |         |         |         |         |         |    |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 0.00058 | 0.00116 | 0.00116 | 0.00116 | 0.00116 | 0.00175 | 0.00175 | 0.00233 | 0.00175 | 0       | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 0.00234 | 0.00234 | 0.00234 | 0.00234 | 0.00234 | 0       | 0       | 0       | 0       | 0       | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 0.00758 | 0.00758 | 0.00758 | 0.00758 | 0.00758 | 0.00758 | 0.00758 | 0.00758 | 0.00758 | 0.00758 | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0       | 0       | 0       | 0.00234 | 0.00234 | 0.00234 | 0.00234 | 0.00234 | 0.00234 | 0       | 0  | 0 |
| Total (lbs/day)     |                                                             |   |   | 0.01051 | 0.01109 | 0.01109 | 0.01343 | 0.01343 | 0.01167 | 0.01167 | 0.01225 | 0.00933 | 0       | 0  |   |
|                     | PM <sub>10</sub> Emissions (E <sub>m</sub> , lbs/month)     |   |   |         |         |         |         |         |         |         |         |         |         |    |   |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 0.013   | 0.026   | 0.026   | 0.026   | 0.026   | 0.038   | 0.038   | 0.051   | 0.038   | 0       | 0  |   |
| Onsite Dump Truck   |                                                             |   |   | 0.052   | 0.052   | 0.052   | 0.052   | 0.052   | 0       | 0       | 0       | 0       | 0       | 0  |   |
| Onsite Water Truck  |                                                             |   |   | 0.167   | 0.167   | 0.167   | 0.167   | 0.167   | 0.167   | 0.167   | 0.167   | 0.167   | 0.167   | 0  | 0 |
| Semi Tractor        |                                                             |   |   | 0       | 0       | 0       | 0.052   | 0.052   | 0.052   | 0.052   | 0.052   | 0.052   | 0       | 0  | 0 |
| Total (lbs/month)   |                                                             |   |   | 0.23    | 0.24    | 0.24    | 0.30    | 0.30    | 0.26    | 0.26    | 0.27    | 0.21    | 0       | 0  |   |
| Total (ton/yr)      |                                                             |   |   | 0.0011  |         |         |         |         |         |         |         |         |         |    |   |

**Table 8.1A.3a: Onsite Demolition and Power Plant Construction Fugitive PM<sub>10</sub> Monthly Activity Levels**

| Source                                 | Monthly Activity Levels |      |      |      |      |                                              |     |    |    |    |    |    |    |    |
|----------------------------------------|-------------------------|------|------|------|------|----------------------------------------------|-----|----|----|----|----|----|----|----|
|                                        | 1                       | 2    | 3    | 4    | 5    | 6                                            | 7   | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| Demolition (yd <sup>3</sup> )          | 3000                    | 3000 | 2000 | 2000 | 1000 | Demolition occurs during months 1 through 5. |     |    |    |    |    |    |    |    |
| Bulldozing (hr)                        | 16                      | 8    | 0    | 16   | 16   | 8                                            | 8   | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Backhoe/Loader on Unpaved Areas (mile) | 176                     | 88   | 88   | 264  | 176  | 176                                          | 176 | 88 | 88 | 88 | 88 | 88 | 0  | 0  |
| Storage Pile Wind Erosion (acres)      | 0.5                     | 0.5  | 0.5  | 0.5  | 0.5  | 0                                            | 0   | 0  | 0  | 0  | 0  | 0  | 0  | 0  |

**Table 8.1A.3b: Onsite Demolition and Power Plant Construction Fugitive PM<sub>10</sub> Emissions**

| Source                                       | Fugitive PM <sub>10</sub> Emissions (lb/month) |               |               |               |               |                                              |               |              |              |              |              |              |          |          |
|----------------------------------------------|------------------------------------------------|---------------|---------------|---------------|---------------|----------------------------------------------|---------------|--------------|--------------|--------------|--------------|--------------|----------|----------|
|                                              | 1                                              | 2             | 3             | 4             | 5             | 6                                            | 7             | 8            | 9            | 10           | 11           | 12           | 13       | 14       |
| Demolition                                   | 34.02                                          | 34.02         | 22.68         | 22.68         | 11.34         | Demolition occurs during months 1 through 5. |               |              |              |              |              |              |          |          |
| Bulldozing                                   | 5.27                                           | 2.63          | 0.00          | 5.27          | 5.27          | 2.63                                         | 2.63          | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00     | 0.00     |
| Backhoe/Loader on Unpaved Areas <sup>a</sup> | 118.33                                         | 59.16         | 59.16         | 177.49        | 118.33        | 118.33                                       | 118.33        | 59.16        | 59.16        | 59.16        | 59.16        | 59.16        | 0.00     | 0.00     |
| Storage Pile Wind Erosion <sup>b</sup>       | 18.27                                          | 18.27         | 18.27         | 18.27         | 18.27         | 0.00                                         | 0.00          | 0.00         | 0.00         | 0.00         | 0.00         | 0.00         | 0.00     | 0.00     |
| <b>Total (lbs/month)</b>                     | <b>175.89</b>                                  | <b>114.09</b> | <b>100.11</b> | <b>223.71</b> | <b>153.21</b> | <b>120.96</b>                                | <b>120.96</b> | <b>59.16</b> | <b>59.16</b> | <b>59.16</b> | <b>59.16</b> | <b>59.16</b> | <b>0</b> | <b>0</b> |
| <b>Total (lbs/day)</b>                       | <b>7.77</b>                                    | <b>4.96</b>   | <b>4.33</b>   | <b>9.95</b>   | <b>6.74</b>   | <b>5.50</b>                                  | <b>5.50</b>   | <b>2.69</b>  | <b>2.69</b>  | <b>2.69</b>  | <b>2.69</b>  | <b>2.69</b>  | <b>0</b> | <b>0</b> |
| <b>Total (lbs/hr)</b>                        | <b>0.97</b>                                    | <b>0.62</b>   | <b>0.54</b>   | <b>1.24</b>   | <b>0.84</b>   | <b>0.69</b>                                  | <b>0.69</b>   | <b>0.34</b>  | <b>0.34</b>  | <b>0.34</b>  | <b>0.34</b>  | <b>0.34</b>  | <b>0</b> | <b>0</b> |

<sup>a</sup> Calculation based on highest (controlled) unpaved road emission factor of 0.67 lb/mile.

<sup>b</sup> Based on 30 days/month

**Table 8.1A.3c: Onsite Demolition Motor Vehicle Activity<sup>a</sup>**

| Vehicle Type        | Miles Traveled per Hour | Miles/Day | Working Days per Month |
|---------------------|-------------------------|-----------|------------------------|
| Onsite Pickup Truck | 2.0                     | 11        | 22                     |
| Onsite Dump Truck   | 1.3                     | 5         | 22                     |
| Onsite Water Truck  | 2.0                     | 10        | 22                     |
| Semi Tractor        | 1.3                     | 5         | 22                     |

<sup>a</sup>See Onsite Vehicle Activity Assumption table for travel distances used to estimate maximum hourly and daily miles traveled.

**Table 8.1A.3d: Onsite Demolition Motor Vehicle Fugitive PM<sub>10</sub> Emissions**

| Vehicle Type        | Maximum Hourly Fugitive PM <sub>10</sub> Emissions (lb/hr) for Each Month |        |        |        |        |                                              |   |   |   |    |    |    |    |    |
|---------------------|---------------------------------------------------------------------------|--------|--------|--------|--------|----------------------------------------------|---|---|---|----|----|----|----|----|
|                     | 1                                                                         | 2      | 3      | 4      | 5      | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Onsite Pickup Truck | 2.69                                                                      | 2.69   | 2.63   | 2.50   | 2.40   | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Onsite Dump Truck   | 2.69                                                                      | 2.69   | 1.75   | 0.83   | 0.80   |                                              |   |   |   |    |    |    |    |    |
| Onsite Water Truck  | 1.35                                                                      | 1.35   | 1.32   | 1.25   | 1.20   |                                              |   |   |   |    |    |    |    |    |
| Semi Tractor        | 0.90                                                                      | 0.90   | 0.88   | 0.00   | 0.00   |                                              |   |   |   |    |    |    |    |    |
| Total (lbs/hr)      | 7.64                                                                      | 7.64   | 6.58   | 4.59   | 4.40   |                                              |   |   |   |    |    |    |    |    |
| Vehicle Type        | Daily Fugitive PM <sub>10</sub> Emissions (lb/day) for Each Month         |        |        |        |        |                                              |   |   |   |    |    |    |    |    |
|                     | 1                                                                         | 2      | 3      | 4      | 5      | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Onsite Pickup Truck | 14.37                                                                     | 14.37  | 14.04  | 13.34  | 12.79  | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Onsite Dump Truck   | 10.78                                                                     | 10.78  | 7.02   | 3.34   | 3.20   |                                              |   |   |   |    |    |    |    |    |
| Onsite Water Truck  | 6.74                                                                      | 6.74   | 6.59   | 6.26   | 6.00   |                                              |   |   |   |    |    |    |    |    |
| Semi Tractor        | 3.59                                                                      | 3.59   | 3.51   | 0.00   | 0.00   |                                              |   |   |   |    |    |    |    |    |
| Total (lbs/day)     | 35.49                                                                     | 35.49  | 31.15  | 22.93  | 21.98  |                                              |   |   |   |    |    |    |    |    |
| Vehicle Type        | Monthly Fugitive PM <sub>10</sub> Emissions (lb/month)                    |        |        |        |        |                                              |   |   |   |    |    |    |    |    |
|                     | 1                                                                         | 2      | 3      | 4      | 5      | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Onsite Pickup Truck | 316.18                                                                    | 316.18 | 308.84 | 293.48 | 281.29 | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Onsite Dump Truck   | 237.13                                                                    | 237.13 | 154.42 | 73.37  | 70.32  |                                              |   |   |   |    |    |    |    |    |
| Onsite Water Truck  | 148.32                                                                    | 148.32 | 144.88 | 137.68 | 131.96 |                                              |   |   |   |    |    |    |    |    |
| Semi Tractor        | 79.04                                                                     | 79.04  | 77.21  | 0.00   | 0.00   |                                              |   |   |   |    |    |    |    |    |
| Total (lb/month)    | 780.68                                                                    | 780.68 | 685.35 | 504.53 | 483.57 |                                              |   |   |   |    |    |    |    |    |
| Total (ton/yr)      | 1.62                                                                      |        |        |        |        |                                              |   |   |   |    |    |    |    |    |

**Table 8.1A.3e: Onsite Power Plant Construction Motor Vehicle Activity<sup>a</sup>**

| Vehicle Type        | Maximum Miles Traveled per Hour | Miles/Day | Working Days per Month |
|---------------------|---------------------------------|-----------|------------------------|
| Onsite Pickup Truck | 1.4                             | 7         | 22                     |
| Onsite Dump Truck   | 0.9                             | 4         | 22                     |
| Onsite Water Truck  | 2.0                             | 12        | 22                     |
| Semi Tractor        | 0.9                             | 4         | 22                     |

<sup>a</sup>See Onsite Vehicle Activity Assumption table for travel distances used to estimate maximum hourly and daily miles traveled.

**Table 8.1A.3f: Onsite Power Plant Construction Vehicle Fugitive PM<sub>10</sub> Emissions**

| Vehicle Type        |                                                             |  |  | Maximum Hourly Fugitive PM <sub>10</sub> Emissions (lb/hr) for Each Month |        |        |        |        |        |        |        |        |    |    |
|---------------------|-------------------------------------------------------------|--|--|---------------------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|----|----|
|                     |                                                             |  |  | 1                                                                         | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10 | 11 |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |  |  | 0.85                                                                      | 1.63   | 1.63   | 1.73   | 1.73   | 2.29   | 2.29   | 2.90   | 2.02   | 0  | 0  |
| Onsite Dump Truck   |                                                             |  |  | 0.57                                                                      | 0.54   | 0.54   | 0.58   | 0.58   | 0      | 0      | 0      | 0      | 0  | 0  |
| Onsite Water Truck  |                                                             |  |  | 1.22                                                                      | 1.17   | 1.17   | 1.24   | 1.24   | 1.10   | 1.10   | 1.04   | 0.97   | 0  | 0  |
| Semi Tractor        |                                                             |  |  | 0                                                                         | 0      | 0      | 1      | 1      | 1      | 1      | 0      | 0      | 0  | 0  |
| Total (lbs/hr)      |                                                             |  |  | 2.64                                                                      | 3.35   | 3.35   | 4.13   | 4.13   | 3.90   | 3.90   | 4.43   | 2.99   | 0  | 0  |
| Vehicle Type        |                                                             |  |  | Daily Fugitive PM <sub>10</sub> Emissions (lb/day) for Each Month         |        |        |        |        |        |        |        |        |    |    |
|                     |                                                             |  |  | 1                                                                         | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10 | 11 |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |  |  | 4.54                                                                      | 8.71   | 8.71   | 9.23   | 9.23   | 12.21  | 12.21  | 15.47  | 10.79  | 0  | 0  |
| Onsite Dump Truck   |                                                             |  |  | 2.27                                                                      | 2.18   | 2.18   | 2.31   | 2.31   | 0.00   | 0.00   | 0.00   | 0.00   | 0  | 0  |
| Onsite Water Truck  |                                                             |  |  | 7.35                                                                      | 7.04   | 7.04   | 7.47   | 7.47   | 6.59   | 6.59   | 6.26   | 5.82   | 0  | 0  |
| Semi Tractor        |                                                             |  |  | 0                                                                         | 0      | 0      | 2      | 2      | 2      | 2      | 2      | 0      | 0  | 0  |
| Total (lbs/day)     |                                                             |  |  | 14.16                                                                     | 17.92  | 17.92  | 21.31  | 21.31  | 20.83  | 20.83  | 23.66  | 16.60  | 0  | 0  |
| Vehicle Type        |                                                             |  |  | Monthly Fugitive PM <sub>10</sub> Emissions (lb/month)                    |        |        |        |        |        |        |        |        |    |    |
|                     |                                                             |  |  | 1                                                                         | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10 | 11 |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |  |  | 99.91                                                                     | 191.51 | 191.51 | 203.02 | 203.02 | 268.63 | 268.63 | 340.37 | 237.27 | 0  | 0  |
| Onsite Dump Truck   |                                                             |  |  | 49.95                                                                     | 47.88  | 47.88  | 50.76  | 50.76  | 0.00   | 0.00   | 0.00   | 0.00   | 0  | 0  |
| Onsite Water Truck  |                                                             |  |  | 161.65                                                                    | 154.93 | 154.93 | 164.24 | 164.24 | 144.88 | 144.88 | 137.68 | 127.97 | 0  | 0  |
| Semi Tractor        |                                                             |  |  | 0.00                                                                      | 0.00   | 0.00   | 50.76  | 50.76  | 44.77  | 44.77  | 42.55  | 0.00   | 0  | 0  |
| Total (lb/month)    |                                                             |  |  | 311.51                                                                    | 394.32 | 394.32 | 468.77 | 468.77 | 458.29 | 458.29 | 520.59 | 365.24 | 0  | 0  |
| Total (ton/yr)      |                                                             |  |  | 1.92                                                                      |        |        |        |        |        |        |        |        |    |    |

**Table 8.1A.3g: Fugitive PM<sub>10</sub> Emission Factors for Unpaved Roads**

**Motor Vehicles and Equipment on Unpaved Surfaces**

Emission Factor [lb/mi] =  $1.5 \times (\text{silt content } \%) / 12^{0.9} \times (\text{average vehicle weight [tons]} / 3)^{0.45}$

Reference: AP-42, Section 13.2.2, December 2003

| Parameter                               | Value by Month |       |       |       |      |      |       |       |      |      |      |      |     |     |
|-----------------------------------------|----------------|-------|-------|-------|------|------|-------|-------|------|------|------|------|-----|-----|
|                                         | 1              | 2     | 3     | 4     | 5    | 6    | 7     | 8     | 9    | 10   | 11   | 12   | 13  | 14  |
| Average Vehicle Weight (tons) by month  | 12.64          | 12.64 | 12.00 | 10.71 | 9.75 | 9.75 | 11.10 | 11.10 | 8.40 | 8.40 | 7.50 | 6.38 | 0   | 0   |
| Silt Content                            | 8.5            | 8.5   | 8.5   | 8.5   | 8.5  | 8.5  | 8.5   | 8.5   | 8.5  | 8.5  | 8.5  | 8.5  | 8.5 | 8.5 |
| Emission Factor (Uncontrolled, lb/mile) | 2.10           | 2.10  | 2.05  | 1.95  | 1.87 | 1.87 | 1.98  | 1.98  | 1.75 | 1.75 | 1.66 | 1.54 | 0   | 0   |
| Reduction from Watering Twice/Day       | 68%            | 68%   | 68%   | 68%   | 68%  | 68%  | 68%   | 68%   | 68%  | 68%  | 68%  | 68%  | 68% | 68% |
| Controlled Emission Factor (lb/mile)    | 0.67           | 0.67  | 0.66  | 0.62  | 0.60 | 0.60 | 0.63  | 0.63  | 0.56 | 0.56 | 0.53 | 0.49 | 0   | 0   |

Reference for Silt Content: AP-42, Section 13.2.2, Table 13.2.2-1, Average for a Construction Site, Scraper Route

Reference for Control Efficiency: SCAQMD CEQA Handbook, Table 11-4

**Table 8.1A.3h: Fugitive PM<sub>10</sub> Emission Factors for Demolition, Bulldozing, and Storage Pile Wind Erosion**

|                                                                                                                                      |                                                 |                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Demolition</b>                                                                                                                    |                                                 |                                                                                                                                                                                          |
| Emission Factor [lb/ft <sup>3</sup> ] = 0.00042                                                                                      |                                                 |                                                                                                                                                                                          |
| Emissions [lb/day] = 0.00042*J                                                                                                       |                                                 |                                                                                                                                                                                          |
| Reference: SCAQMD CEQA Handbook, Table A9-9-H, November 1993                                                                         |                                                 |                                                                                                                                                                                          |
| <b>Parameter</b>                                                                                                                     | <b>Value</b>                                    | <b>Basis</b>                                                                                                                                                                             |
| J                                                                                                                                    | See above                                       | Daily building volume demolished                                                                                                                                                         |
| Emission Factor (Uncontrolled)                                                                                                       | 0.00042 lb/ft <sup>3</sup>                      |                                                                                                                                                                                          |
| <b>Bulldozing</b>                                                                                                                    |                                                 |                                                                                                                                                                                          |
| Emission Factor [lb/hr] = 0.75 x (silt content [%]) <sup>1.5</sup> / (moisture(%)) <sup>1.4</sup>                                    |                                                 |                                                                                                                                                                                          |
| Reference: AP-42, Table 11.9-1, October 1998                                                                                         |                                                 |                                                                                                                                                                                          |
| <b>Parameter</b>                                                                                                                     | <b>Value</b>                                    | <b>Basis</b>                                                                                                                                                                             |
| Silt Content                                                                                                                         | 8.50                                            | AP-42, Section 13.2.2, Table 13.2.2-1                                                                                                                                                    |
| Moisture                                                                                                                             | 7.90                                            | AP-42, Section 11.9, Table 11.9-3                                                                                                                                                        |
| Emission Factor (Uncontrolled)                                                                                                       | 1.03 lb/hr                                      |                                                                                                                                                                                          |
| Reduction from Watering Twice/Day                                                                                                    | 68% Reference: SCAQMD CEQA Handbook, Table 11-4 |                                                                                                                                                                                          |
| Controlled Emission Factor                                                                                                           | 0.33 lb/hr                                      |                                                                                                                                                                                          |
| <b>Storage Pile Wind Erosion</b>                                                                                                     |                                                 |                                                                                                                                                                                          |
| Emission Factor [lb/day-acre] = 1.7 x (silt content [%] / 1.5) x (365 - p / 235) x (% of time unobstructed wind exceeds 12 mph / 15) |                                                 |                                                                                                                                                                                          |
| Reference: SCAQMD CEQA Air Quality Handbook, November 1993. Table A9-9-E.                                                            |                                                 |                                                                                                                                                                                          |
| <b>Parameter</b>                                                                                                                     | <b>Value</b>                                    | <b>Basis</b>                                                                                                                                                                             |
| Silt Content                                                                                                                         | 8.5                                             | AP-42, Section 13.2.2, Table 13.2.2-1                                                                                                                                                    |
| Pct. time wind > 12 mph                                                                                                              | 1.7                                             | Based on met data for 1981 used for modeling,<br>SCAQMD website<br><a href="http://www.aqmd.gov/smog/metdata/MeteorologicalData">http://www.aqmd.gov/smog/metdata/MeteorologicalData</a> |
| p (# of days of precipitation)                                                                                                       | 34                                              | SCAQMD 1993 CEQA Air Quality Handbook                                                                                                                                                    |
| Emission Factor (Uncontrolled)                                                                                                       | 1.54 lb/day-acre                                |                                                                                                                                                                                          |
| Reduction from Watering Twice/Day                                                                                                    | 68% Reference: SCAQMD CEQA Handbook, Table 11-4 |                                                                                                                                                                                          |
| Controlled Emission Factor                                                                                                           | 1.22 lb/day-acre                                |                                                                                                                                                                                          |

**Table 8.1A.4a: Equations Used to Calculate Emissions**

| Emission Source                                                         | Pollutant(s)                            | Equation                 | Variables                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------|-----------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Construction Equipment Exhaust                                          | CO, VOC, NOx, SOx, and PM <sub>10</sub> | $E_m = N * EF * H * 22$  | $E_m$ = Emissions (lb/month)<br>N = number of pieces of equipment<br>EF = emission factor (lb/hr)<br>H = daily hours of operation, assumed to be 8 hr/day<br>22 = 22 construction days per month                                                                                              |
|                                                                         |                                         | $E_d = E_m / 22$         | $E_d$ = Emissions (lb/day)<br>$E_m$ = Emissions (lb/month)<br>22 = 22 construction days per month                                                                                                                                                                                             |
|                                                                         |                                         | $E_h = E_d / 8$          | $E_h$ = Emissions (lb/hr)<br>$E_d$ = Emissions (lb/day)<br>8 = 8 hours per work day                                                                                                                                                                                                           |
|                                                                         |                                         | $Et = \Sigma E_m / 2000$ | $E_i$ = Emissions (ton/yr)<br>$E_m$ = Emissions (lb/month)<br>2000 = conversion from lbs to tons                                                                                                                                                                                              |
| Onsite Motor Vehicle Exhaust and Unpaved Road Fugitive PM <sub>10</sub> | CO, VOC, NOx, SOx, PM <sub>10</sub>     | $E_h = N * M * EF$       | $E_h$ = Emissions (lb/hr)<br>N = number of vehicles<br>M = maximum miles traveled in one hour (miles/hour)<br><br>EF = EMFAC2002 emission factor (lb/mile). For fugitive PM <sub>10</sub> , Unpaved road dust emission factor based on equation in AP-42, ch. 13.2.2, December 2003 (lb/mile) |
|                                                                         |                                         | $E_d = N * VMT * EF$     | $E_d$ = Emissions (lb/day)<br>N = number of vehicles<br>VMT = vehicle miles traveled per day (miles/day)<br><br>EF = EMFAC2002 emission factor (lb/mile). For fugitive PM <sub>10</sub> , Unpaved road dust emission factor based on equation in AP-42, ch. 13.2.2, December 2003 (lb/mile)   |
|                                                                         |                                         | $E_m = E_d * D$          | $E_m$ = Emissions (lb/month)<br>$E_d$ = Emissions (lb/day)<br>D = number of construction days (days/month)                                                                                                                                                                                    |
| Offsite Motor Vehicle Exhaust                                           | CO, VOC, NOx, SOx, and PM <sub>10</sub> | $E_m = N * TL * EF * 22$ | $E_m$ = Emissions (lb/month)<br>N = number of vehicles<br>TL = trip length (miles/day)<br>EF = emission factor (lb/mile)<br>22 = 22 construction days per month                                                                                                                               |
|                                                                         |                                         | $E_d = E_m / 22$         | $E_d$ = Emissions (lb/day)<br>$E_m$ = Emissions (lb/month)<br>22 = 22 construction days per month                                                                                                                                                                                             |
|                                                                         |                                         | $E_h = E_d / 8$          | $E_h$ = Emissions (lb/hr)<br>$E_d$ = Emissions (lb/day)<br>8 = 8 hours per work day                                                                                                                                                                                                           |
| Offsite Motor Vehicle Paved Road Fugitive PM <sub>10</sub>              | PM <sub>10</sub>                        | $E_m = N * TL * EF * 22$ | $E_m$ = Emissions (lb/month)<br>N = number of vehicles<br>TL = trip length (miles/day)<br>EF = emission factor (lb/mile) from AP-42, ch. 13.2.1, fugitive dust from paved roads<br>22 = 22 construction days per month                                                                        |
|                                                                         |                                         | $E_d = E_m / 22$         | $E_d$ = Emissions (lb/day)<br>$E_m$ = Emissions (lb/month)<br>22 = 22 construction days per month                                                                                                                                                                                             |
|                                                                         |                                         | $E_h = E_d / 8$          | $E_h$ = Emissions (lb/hr)<br>$E_d$ = Emissions (lb/day)<br>8 = 8 hours per work day                                                                                                                                                                                                           |

Note: Tables 8.1A.3g and 8.1A.3h contain the equations used to calculate fugitive dust emissions.

Reference: SCAQMD CEQA Handbook online, <http://www.aqmd.gov/ceqa/handbook/offroad/offroad.html> for construction equipment exhaust emissions and <http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html> for vehicle exhaust.

**Table 8.1A.4b: Number of Onsite Demolition Equipment**

| Onsite Equipment         | Number of Equipment (N) |   |   |   |   |                                              |   |   |   |    |    |    |    |    |
|--------------------------|-------------------------|---|---|---|---|----------------------------------------------|---|---|---|----|----|----|----|----|
|                          | 1                       | 2 | 3 | 4 | 5 | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Bulldozer                | 2                       | 1 | 0 | 0 | 0 | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Excavator                | 2                       | 2 | 0 | 0 | 0 |                                              |   |   |   |    |    |    |    |    |
| Grader                   | 0                       | 0 | 1 | 1 | 1 |                                              |   |   |   |    |    |    |    |    |
| Backhoe/Front End Loader | 2                       | 1 | 1 | 1 | 0 |                                              |   |   |   |    |    |    |    |    |
| Rubber Tired Crane       | 1                       | 1 | 1 | 0 | 0 |                                              |   |   |   |    |    |    |    |    |

**Table 8.1A.4c: Number of Onsite Demolition Motor Vehicles**

| Vehicle Type        | Number Used Each Month (N) |   |   |   |   |                                              |   |   |   |    |    |    |    |    |
|---------------------|----------------------------|---|---|---|---|----------------------------------------------|---|---|---|----|----|----|----|----|
|                     | 1                          | 2 | 3 | 4 | 5 | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Onsite Pickup Truck | 2                          | 2 | 2 | 2 | 2 | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Onsite Dump Truck   | 3                          | 3 | 2 | 1 | 1 |                                              |   |   |   |    |    |    |    |    |
| Onsite Water Truck  | 1                          | 1 | 1 | 1 | 1 |                                              |   |   |   |    |    |    |    |    |
| Semi Tractor        | 1                          | 1 | 1 | 0 | 0 |                                              |   |   |   |    |    |    |    |    |

**Table 8.1A.4d: Number of Onsite Power Plant Construction Equipment**

| Onsite Equipment               | Number of Equipment (N)                                     |   |   |   |   |   |    |    |    |    |    |    |    |    |
|--------------------------------|-------------------------------------------------------------|---|---|---|---|---|----|----|----|----|----|----|----|----|
|                                | 1                                                           | 2 | 3 | 4 | 5 | 6 | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| Bulldozer                      | Power Plant Construction occurs during months 4 through 14. |   |   | 2 | 2 | 1 | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| Excavator                      |                                                             |   |   | 2 | 2 | 2 | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  |
| Grader                         |                                                             |   |   | 1 | 1 | 1 | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  |
| Forklift                       |                                                             |   |   | 1 | 2 | 2 | 3  | 3  | 3  | 2  | 2  | 1  | 0  | 0  |
| Generator sets                 |                                                             |   |   | 1 | 1 | 2 | 2  | 2  | 2  | 2  | 2  | 1  | 0  | 0  |
| Light Plant                    |                                                             |   |   | 1 | 1 | 1 | 2  | 2  | 2  | 1  | 1  | 1  | 0  | 0  |
| Backhoe/Front End Loader       |                                                             |   |   | 2 | 2 | 2 | 2  | 1  | 1  | 1  | 1  | 1  | 0  | 0  |
| Rubber Tired Crane             |                                                             |   |   | 1 | 1 | 1 | 1  | 2  | 2  | 2  | 1  | 1  | 0  | 0  |
| Cherry Picker Hydraulic Crane  |                                                             |   |   | 0 | 0 | 1 | 1  | 1  | 2  | 2  | 2  | 1  | 0  | 0  |
| 300 Ton Cranes                 |                                                             |   |   | 0 | 0 | 0 | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  |
| Concrete Vibrator <sup>a</sup> |                                                             |   |   | 1 | 3 | 4 | 4  | 4  | 3  | 2  | 2  | 0  | 0  | 0  |
| Paving Equipment               |                                                             |   |   | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  |
| Roller/Compactor               |                                                             |   |   | 1 | 1 | 1 | 1  | 1  | 0  | 0  | 0  | 1  | 0  | 0  |
| Welding Machine                |                                                             |   |   | 0 | 1 | 1 | 1  | 1  | 2  | 2  | 1  | 1  | 0  | 0  |
| Pipe Grinder                   |                                                             |   |   | 0 | 4 | 9 | 14 | 14 | 14 | 15 | 12 | 6  | 0  | 0  |
| JLG Lift (Scissor Lift)        |                                                             |   |   | 0 | 0 | 0 | 1  | 1  | 1  | 2  | 2  | 1  | 0  | 0  |

<sup>a</sup> Assumes 2 concrete vibrators use one generator.

**Table 8.1A.4e: Number of Onsite Power Plant Construction Motor Vehicles**

| Vehicle Type        | Number Used Each Month (N)                                  |   |   |   |   |   |   |   |   |    |    |    |    |    |
|---------------------|-------------------------------------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|
|                     | 1                                                           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Onsite Pickup Truck | Power Plant Construction occurs during months 4 through 14. |   |   | 1 | 2 | 2 | 2 | 2 | 3 | 3  | 4  | 3  | 0  | 0  |
| Onsite Dump Truck   |                                                             |   |   | 1 | 1 | 1 | 1 | 1 | 0 | 0  | 0  | 0  | 0  | 0  |
| Onsite Water Truck  |                                                             |   |   | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 0  | 0  |
| Semi Tractor        |                                                             |   |   | 0 | 0 | 0 | 1 | 1 | 1 | 1  | 1  | 0  | 0  | 0  |

**Table 8.1A.4f: Demolition and Power Plant Construction Equipment Emission Factors**

|                                | Fuel Type | Emission Factors, EF (lb/hr) <sup>a</sup> |       |                 |                              |                  |
|--------------------------------|-----------|-------------------------------------------|-------|-----------------|------------------------------|------------------|
|                                |           | CO                                        | VOC   | NO <sub>x</sub> | SO <sub>x</sub> <sup>b</sup> | PM <sub>10</sub> |
| Bulldozer                      | diesel    | 1.024                                     | 0.211 | 2.817           | 0.014                        | 0.112            |
| Excavator                      | diesel    | 0.472                                     | 0.097 | 1.138           | 0.0073                       | 0.06             |
| Grader                         | diesel    | 0.546                                     | 0.124 | 1.442           | 0.0083                       | 0.074            |
| Forklift                       | diesel    | 0.259                                     | 0.079 | 0.457           | 0                            | 0.05             |
| Generator sets                 | diesel    | 0.322                                     | 0.094 | 0.656           | 0.00003                      | 0.048            |
| Light Plant <sup>c</sup>       | diesel    | 0.322                                     | 0.094 | 0.656           | 0.00003                      | 0.048            |
| Backhoe/Front End Loader       | diesel    | 0.419                                     | 0.125 | 0.816           | 0.0035                       | 0.083            |
| Rubber Tired Crane             | diesel    | 0.355                                     | 0.086 | 1.023           | 0.0059                       | 0.052            |
| Cherry Picker Hydraulic Crane  | diesel    | 0.355                                     | 0.086 | 1.023           | 0.0059                       | 0.052            |
| 300 Ton Crane                  | diesel    | 0.355                                     | 0.086 | 1.023           | 0.0059                       | 0.052            |
| Concrete Vibrator <sup>d</sup> | diesel    | 0.16                                      | 0.03  | 0.27            | 0                            | 0.01             |
| Paving Equipment               | diesel    | 0.411                                     | 0.107 | 0.909           | 0.0043                       | 0.066            |
| Roller/Compactor               | diesel    | 0.364                                     | 0.077 | 0.697           | 0.0042                       | 0.051            |
| Welding Machine                | electric  | 0                                         | 0     | 0               | 0                            | 0                |
| Pipe Grinder                   | electric  | 0                                         | 0     | 0               | 0                            | 0                |
| JLG Lift (Scissor Lift)        | diesel    | 0.259                                     | 0.079 | 0.457           | 0                            | 0.05             |

<sup>a</sup> Offroad mobile source emission factors from SCAQMD website (<http://www.aqmd.gov/ceqa/handbook/offroad/offroad.html>). To be conservative, the emission factors for the year 2007 were used for the construction equipment exhaust emission calculations although some construction activities may occur after 2007.

<sup>b</sup> According to SCAQMD Rule 431.2 (c)(3), on or after January 1, 2005, the sulfur content of diesel fuel supplied for mobile sources shall not exceed 15 ppm by weight. Therefore, the SO<sub>x</sub> emission factors were reduced by 97% to account for the change in diesel fuel sulfur content from 500 ppm to 15 ppm.

<sup>c</sup> Assumed the emission factors for the light plant were the same as the generator.

<sup>d</sup> Assumes emission factor for generator <50hp from SCAQMD CEQA Handbook, Table A9-8-B, using 20 hp and 74% load.

**Table 8.1A.4g: Motor Vehicle Emission Factors <sup>a</sup>**

| Vehicle Type                            | Vehicle Class                           | Mean Vehicle Weight (tons) <sup>b</sup> | Silt loading (g/m <sup>2</sup> ) <sup>c</sup> | CO            | VOC           | SO <sub>x</sub> | NO <sub>x</sub> | PM <sub>10</sub> |                              |
|-----------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------------|---------------|---------------|-----------------|-----------------|------------------|------------------------------|
|                                         |                                         |                                         |                                               | Exhaust lb/mi | Exhaust lb/mi | Exhaust lb/mile | Exhaust lb/mi   | Exhaust lb/mi    | Road Dust <sup>d</sup> lb/mi |
| Onsite Pickup Truck                     | Passenger Vehicle (<8500 lbs), gasoline | 3                                       | 0.6                                           | 0.0128        | 0.0014        | 0.000009        | 0.0014          | 0.00008          | N/A                          |
| Onsite Dump /Water Truck / Semi Tractor | Heavy heavy-duty truck, diesel          | 16.5                                    | 0.6                                           | 0.0055        | 0.0012        | 0.000046        | 0.0356          | 0.00064          | N/A                          |
| Offsite Construction Commuter           | Passenger Vehicle (<8500 lbs), gasoline | 3                                       | 0.6                                           | 0.0128        | 0.0014        | 0.000009        | 0.0014          | 0.00008          | 0.0043                       |
| Offsite Miscellaneous Noncommute        | Passenger Vehicle (<8500 lbs), gasoline | 3                                       | 0.6                                           | 0.0128        | 0.0014        | 0.000009        | 0.0014          | 0.00008          | 0.0043                       |
| Offsite Delivery/Haul Truck             | Heavy heavy-duty truck, diesel          | 16.5                                    | 0.6                                           | 0.0055        | 0.0012        | 0.000046        | 0.0356          | 0.00064          | 0.06                         |

<sup>a</sup> All emission factors, except paved road dust, are from the SCAQMD EMFAC2002 v 2.2 Summary table (<http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html>), for calendar year 2007. The emission factors account for emissions from start, running, and idling exhaust. In addition, the ROG emission factors take into account diurnal, hot soak, running and resting emissions, and PM10 emission factor takes into account the tire and brake wear.

<sup>b</sup> Weighted average assumes that autos/trucks weigh 3 tons and heavy duty trucks weigh 16.5 tons.

<sup>c</sup> Silt loading from AP-42, Ch. 13, Table 13.2.1-3, for average daily traffic <500.

<sup>d</sup> Paved Road Dust emission factor [lb/mi] = 0.016 (Silt Loading/2)<sup>0.65</sup> (Fleet Average Vehicle Weight/3)<sup>1.5</sup> - 0.00047 \* (1 - # days precipitation/365 day/yr \*4), from AP-42, ch 13.2.1. The number of days of precipitation (34 days) taken from the SCAQMD CEQA Handbook (November, 1993) Table A9-9-D-4.

<sup>e</sup> Onsite Dump Trucks/Semi Tractors/Pickup Trucks/Water Trucks were assumed to travel only on unpaved roads.

Table 8.1A.4h: Onsite Demolition Vehicle Activity Assumptions

| Truck Type          | Distance Traveled (miles) per One-way Trip | Maximum Roundtrips per Hour | Average Roundtrips per Hour | Assumptions                                   |                                    |                       |               |                        | Notes                                                                                                                                                | References                                                                                                                                 |
|---------------------|--------------------------------------------|-----------------------------|-----------------------------|-----------------------------------------------|------------------------------------|-----------------------|---------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|                     |                                            |                             |                             | Maximum Miles Traveled in One Hour            | Average Miles Traveled per Hour    | Working Hours per Day | Miles per Day | Working Days per Month |                                                                                                                                                      |                                                                                                                                            |
| Onsite Pickup Truck | 0.2                                        | 6                           | 4                           | 2.0                                           | 1.3                                | 8                     | 11            | 22                     | - Assumes length traveled is ~270 meters long (or ~540 meters roundtrip)                                                                             | Dimensions from area used for modeling demolition                                                                                          |
| Onsite Dump Truck   | 0.2                                        | 4                           | 2                           | 1.3                                           | 0.7                                | 8                     | 5             | 22                     | - Assumes length traveled is ~270 meters long (or ~540 meters roundtrip)                                                                             | Dimensions from area used for modeling demolition                                                                                          |
| Semi Tractor        | 0.2                                        | 4                           | 2                           | 1.3                                           | 0.7                                | 8                     | 5             | 22                     | - Assumes length traveled is ~270 meters long (or ~540 meters roundtrip)                                                                             | Dimensions from area used for modeling demolition                                                                                          |
| Onsite Water Truck  | Width of Area (m)                          | Length of Area (m)          | Width of Sprayer (m)        | Fraction of Area (5.7 acres) Watered per Hour | Maximum Miles Traveled in One Hour | Working Hours per Day | Miles per Day | Working Days per Month |                                                                                                                                                      |                                                                                                                                            |
|                     | 86                                         | 270                         | 3.66                        | 0.51                                          | 2.01                               | 5                     | 10            | 22                     | - Assumes water truck covers 2.9 acres/hour over the 5.7 acre site                                                                                   | Final BACM Technological and Economic Feasibility Analysis, SJVUAPCD, March 21, 2003                                                       |
|                     |                                            |                             |                             |                                               |                                    |                       |               |                        | - Assumes 4,000 gallon water truck with water spray width of ~12 feet (~3.66m)                                                                       | Width estimated from photos on <a href="http://www.dfiequipment.com/Water%20Trucks.htm">http://www.dfiequipment.com/Water%20Trucks.htm</a> |
|                     |                                            |                             |                             |                                               |                                    |                       |               |                        | - Assumes in two hours entire site is watered and this is done twice per day, for a total of 4 hours of watering and 1 hour for refilling water tank | Dimensions from area used for modeling demolition                                                                                          |

Table 8.1A.4i: Onsite Power Plant Construction Vehicle Activity Assumptions

| Truck Type          | Distance Traveled (miles) per One-way Trip | Maximum Roundtrips per Hour | Average Roundtrips per Hour | Assumptions                                 |                                    |                       |               |                        | Notes                                                                                                                                                | References                                                                                                                                 |
|---------------------|--------------------------------------------|-----------------------------|-----------------------------|---------------------------------------------|------------------------------------|-----------------------|---------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|                     |                                            |                             |                             | Maximum Miles Traveled in One Hour          | Average Miles Traveled per Hour    | Working Hours per Day | Miles per Day | Working Days per Month |                                                                                                                                                      |                                                                                                                                            |
| Onsite Pickup Truck | 0.1                                        | 6                           | 4                           | 1.4                                         | 0.9                                | 8                     | 7             | 22                     | - Assumes length traveled is ~180 meters long (or ~360 meters roundtrip)                                                                             | Dimensions from area used for modeling construction                                                                                        |
| Onsite Dump Truck   | 0.1                                        | 4                           | 2                           | 0.9                                         | 0.5                                | 8                     | 4             | 22                     | - Assumes length traveled is ~180 meters long (or ~360 meters roundtrip)                                                                             | Dimensions from area used for modeling construction                                                                                        |
| Semi Tractor        | 0.1                                        | 4                           | 2                           | 0.9                                         | 0.5                                | 8                     | 4             | 22                     | - Assumes length traveled is ~180 meters long (or ~360 meters roundtrip)                                                                             | Dimensions from area used for modeling construction                                                                                        |
| Onsite Water Truck  | Width of Area (m)                          | Length of Area (m)          | Width of Sprayer (m)        | Fraction of Area (7 acres) Watered per Hour | Maximum Miles Traveled in One Hour | Working Hours per Day | Miles per Day | Working Days per Month |                                                                                                                                                      |                                                                                                                                            |
|                     | 155                                        | 180                         | 3.66                        | 0.4                                         | 2.0                                | 6                     | 12            | 22                     | - Assumes water truck covers 2.9 acres/hour over the 7 acre site                                                                                     | Final BACM Technological and Economic Feasibility Analysis, SJVUAPCD, March 21, 2003                                                       |
|                     |                                            |                             |                             |                                             |                                    |                       |               |                        | - Assumes 4,000 gallon water truck with water spray width of ~12 feet (~3.66m)                                                                       | Width estimated from photos on <a href="http://www.dfiequipment.com/Water%20Trucks.htm">http://www.dfiequipment.com/Water%20Trucks.htm</a> |
|                     |                                            |                             |                             |                                             |                                    |                       |               |                        | - Assumes in 2.5 hours entire site is watered and this is done twice per day, for a total of 5 hours of watering and 1 hour for refilling water tank | Dimensions from area used for modeling construction                                                                                        |

**Table 8.1A.5a: Offsite Motor Vehicle Usage during Demolition**

[illegible]

**Table 8.1A.5b: Offsite Motor Vehicle CO Emissions (Demolition)**

| Vehicle Type                     | CO Emissions (lbs/month) |               |               |               |               |                                              |   |   |   |    |    |    |    |    |
|----------------------------------|--------------------------|---------------|---------------|---------------|---------------|----------------------------------------------|---|---|---|----|----|----|----|----|
|                                  | 1                        | 2             | 3             | 4             | 5             | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Offsite Construction Commuter    | 169.22                   | 169.22        | 169.22        | 169.22        | 169.22        | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Offsite Miscellaneous Noncommute | 2.82                     | 2.82          | 2.82          | 2.82          | 2.82          |                                              |   |   |   |    |    |    |    |    |
| Offsite Delivery/Haul Truck      | 4.86                     | 4.86          | 4.86          | 4.86          | 4.86          |                                              |   |   |   |    |    |    |    |    |
| <b>Total (lbs/month)</b>         | <b>176.90</b>            | <b>176.90</b> | <b>176.90</b> | <b>176.90</b> | <b>176.90</b> |                                              |   |   |   |    |    |    |    |    |
| <b>Total (lbs/day)</b>           | <b>8.04</b>              | <b>8.04</b>   | <b>8.04</b>   | <b>8.04</b>   | <b>8.04</b>   |                                              |   |   |   |    |    |    |    |    |
| <b>Total (ton/yr)</b>            | <b>0.44</b>              |               |               |               |               |                                              |   |   |   |    |    |    |    |    |

**Table 8.1A.5c: Offsite Motor Vehicle VOC Emissions (Demolition)**

| Vehicle Type                     | VOC Emissions (lbs/month) |       |       |       |       |                                              |   |   |   |    |    |    |    |    |
|----------------------------------|---------------------------|-------|-------|-------|-------|----------------------------------------------|---|---|---|----|----|----|----|----|
|                                  | 1                         | 2     | 3     | 4     | 5     | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Offsite Construction Commuter    | 18.26                     | 18.26 | 18.26 | 18.26 | 18.26 | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Offsite Miscellaneous Noncommute | 0.304                     | 0.304 | 0.304 | 0.304 | 0.304 |                                              |   |   |   |    |    |    |    |    |
| Offsite Delivery/Haul Truck      | 1.08                      | 1.08  | 1.08  | 1.08  | 1.08  |                                              |   |   |   |    |    |    |    |    |
| Total (lbs/month)                | 19.64                     | 19.64 | 19.64 | 19.64 | 19.64 |                                              |   |   |   |    |    |    |    |    |
| Total (lbs/day)                  | 0.89                      | 0.89  | 0.89  | 0.89  | 0.89  |                                              |   |   |   |    |    |    |    |    |
| Total (ton/yr)                   | 0.049                     |       |       |       |       |                                              |   |   |   |    |    |    |    |    |

**Table 8.1A.5d: Offsite Motor Vehicle SOx Emissions (Demolition)**

| Vehicle Type                     | SO <sub>x</sub> Emissions (lbs/month) |         |         |         |         |                                              |   |   |   |    |    |    |    |    |
|----------------------------------|---------------------------------------|---------|---------|---------|---------|----------------------------------------------|---|---|---|----|----|----|----|----|
|                                  | 1                                     | 2       | 3       | 4       | 5       | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Offsite Construction Commuter    | 0.12                                  | 0.12    | 0.12    | 0.12    | 0.12    | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Offsite Miscellaneous Noncommute | 0.00198                               | 0.00198 | 0.00198 | 0.00198 | 0.00198 |                                              |   |   |   |    |    |    |    |    |
| Offsite Delivery/Haul Truck      | 0.0402                                | 0.0402  | 0.0402  | 0.0402  | 0.0402  |                                              |   |   |   |    |    |    |    |    |
| Total (lbs/month)                | 0.16                                  | 0.16    | 0.16    | 0.16    | 0.16    |                                              |   |   |   |    |    |    |    |    |
| Total (lbs/day)                  | 0.0073                                | 0.0073  | 0.0073  | 0.0073  | 0.0073  |                                              |   |   |   |    |    |    |    |    |
| Total (ton/yr)                   | 0.000403                              |         |         |         |         |                                              |   |   |   |    |    |    |    |    |

**Table 8.1A.5e: Offsite Motor Vehicle NO<sub>x</sub> Emissions (Demolition)**

| Vehicle Type                     | NO <sub>x</sub> Emissions (lbs/month) |       |       |       |       |                                              |   |   |   |    |    |    |    |    |
|----------------------------------|---------------------------------------|-------|-------|-------|-------|----------------------------------------------|---|---|---|----|----|----|----|----|
|                                  | 1                                     | 2     | 3     | 4     | 5     | 6                                            | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Offsite Construction Commuter    | 17.97                                 | 17.97 | 17.97 | 17.97 | 17.97 | Demolition occurs during months 1 through 5. |   |   |   |    |    |    |    |    |
| Offsite Miscellaneous Noncommute | 0.299                                 | 0.299 | 0.299 | 0.299 | 0.299 |                                              |   |   |   |    |    |    |    |    |
| Offsite Delivery/Haul Truck      | 31.36                                 | 31.36 | 31.36 | 31.36 | 31.36 |                                              |   |   |   |    |    |    |    |    |
| Total (lbs/month)                | 49.62                                 | 49.62 | 49.62 | 49.62 | 49.62 |                                              |   |   |   |    |    |    |    |    |
| Total (lbs/day)                  | 2.26                                  | 2.26  | 2.26  | 2.26  | 2.26  |                                              |   |   |   |    |    |    |    |    |
| Total (ton/yr)                   | 0.12                                  |       |       |       |       |                                              |   |   |   |    |    |    |    |    |

**Table 8.1A.5f: Offsite Motor Vehicle PM<sub>10</sub> Emissions (Demolition)**

| Vehicle Type                     | PM <sub>10</sub> Emissions (lbs/month) |        |        |        |        |                                     |   |   |   |    |    |    |    |    |
|----------------------------------|----------------------------------------|--------|--------|--------|--------|-------------------------------------|---|---|---|----|----|----|----|----|
|                                  | 1                                      | 2      | 3      | 4      | 5      | 6                                   | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Offsite Construction Commuter    | 57.75                                  | 57.75  | 57.75  | 57.75  | 57.75  | Demolition occurs during months 1-5 |   |   |   |    |    |    |    |    |
| Offsite Miscellaneous Noncommute | 0.96                                   | 0.96   | 0.96   | 0.96   | 0.96   |                                     |   |   |   |    |    |    |    |    |
| Offsite Delivery/Haul Truck      | 52.40                                  | 52.40  | 52.40  | 52.40  | 52.40  |                                     |   |   |   |    |    |    |    |    |
| Total (lbs/month)                | 111.12                                 | 111.12 | 111.12 | 111.12 | 111.12 |                                     |   |   |   |    |    |    |    |    |
| Total (lbs/day)                  | 5.05                                   | 5.05   | 5.05   | 5.05   | 5.05   |                                     |   |   |   |    |    |    |    |    |
| Total (ton/yr)                   | 0.28                                   |        |        |        |        |                                     |   |   |   |    |    |    |    |    |

**Table 8.1A.5g: Offsite Motor Vehicle Emission Factors**

| Vehicle Type                     | Miles/Day | CO<br>(lb/mile) | VOC<br>(lb/mile) | SO <sub>x</sub><br>(lb/mile) | NO <sub>x</sub><br>(lb/mile) | PM <sub>10</sub><br>(lb/mile) |
|----------------------------------|-----------|-----------------|------------------|------------------------------|------------------------------|-------------------------------|
| Offsite Construction Commuter    | 40        | 0.013           | 0.0014           | 0.000009                     | 0.0014                       | 0.0044                        |
| Offsite Miscellaneous Noncommute | 10        | 0.013           | 0.0014           | 0.000009                     | 0.0014                       | 0.0044                        |
| Offsite Delivery/Haul Truck      | 40        | 0.006           | 0.0012           | 0.000046                     | 0.036                        | 0.060                         |





**Table 8.1A.5n: Offsite Natural Gas Pipeline Construction Equipment Requirements**

| Equipment                      | Peak Number |
|--------------------------------|-------------|
| Compressor, 250 cfm            | 1           |
| Tractor/Loader/Backhoe, 1/2 CY | 1           |
| Crane, 5 ton                   | 1           |
| Welder                         | 1           |
| Vibratory Compactor            | 1           |
| Roller, 5 ton                  | 1           |
| Paver                          | 1           |
| Number of acres paved*         | 2.5         |
| <b>Duration (months)</b>       | <b>6</b>    |

\*Estimated based on approximately 7 mile long 3 foot wide trench.

**Table 8.1A.5o: Offsite Natural Gas Pipeline Construction Equipment Emission Factors**

| Equipment                      | CO<br>(lbs/hr) | VOC<br>(lbs/hr) | NO <sub>x</sub><br>(lbs/hr) | SO <sub>x</sub><br>(lbs/hr) | PM <sub>10</sub><br>(lbs/hr) |
|--------------------------------|----------------|-----------------|-----------------------------|-----------------------------|------------------------------|
| Compressor, 250 cfm            | 0.23           | 0.079           | 0.32                        | 0                           | 0.034                        |
| Tractor/Loader/Backhoe, 1/2 CY | 0.42           | 0.13            | 0.82                        | 0.0035                      | 0.083                        |
| Crane, 5 ton                   | 0.36           | 0.086           | 1.02                        | 0.0059                      | 0.052                        |
| Welder                         | 0.23           | 0.079           | 0.32                        | 0                           | 0.034                        |
| Vibratory Compactor            | 0.03           | 0.009           | 0.039                       | 0                           | 0.002                        |
| Roller, 5 ton                  | 0.36           | 0.077           | 0.697                       | 0.0042                      | 0.051                        |
| Paver                          | 0.44           | 0.098           | 0.802                       | 0.0050                      | 0.058                        |

**Table 8.1A.5p: Offsite Emissions from Natural Gas Pipeline Construction**

| Construction Activity                                       | CO<br>(lbs/day) | VOC<br>(lbs/day) | NO <sub>x</sub><br>(lbs/day) | SO <sub>x</sub><br>(lbs/day) | PM <sub>10</sub><br>(lbs/day) |
|-------------------------------------------------------------|-----------------|------------------|------------------------------|------------------------------|-------------------------------|
| Compressor, 250 cfm                                         | 1.86            | 0.63             | 2.54                         | 0                            | 0.27                          |
| Tractor/Loader/Backhoe, 1/2 CY                              | 3.35            | 1.00             | 6.53                         | 0.028                        | 0.66                          |
| Crane, 5 ton                                                | 2.84            | 0.69             | 8.18                         | 0.047                        | 0.42                          |
| Welder                                                      | 1.86            | 0.63             | 2.54                         | 0                            | 0.27                          |
| Vibratory Compactor                                         | 0.21            | 0.072            | 0.31                         | 0                            | 0.016                         |
| Roller, 5 ton                                               | 2.91            | 0.62             | 5.58                         | 0.033                        | 0.41                          |
| Paver                                                       | 3.48            | 0.78             | 6.42                         | 0.040                        | 0.46                          |
| <b>Maximum Construction Equipment (lbs/day)<sup>a</sup></b> | <b>16.50</b>    | <b>4.42</b>      | <b>32.10</b>                 | <b>0.15</b>                  | <b>2.51</b>                   |
| <b>Maximum Motor Vehicles (lbs/day)<sup>b</sup></b>         | <b>9.02</b>     | <b>1.12</b>      | <b>9.37</b>                  | <b>0.016</b>                 | <b>16.92</b>                  |
| <b>Combined Maximum (lbs/day)<sup>c</sup></b>               | <b>25.52</b>    | <b>12.10</b>     | <b>41.47</b>                 | <b>0.16</b>                  | <b>19.43</b>                  |
| <b>Total Offsite Construction (tons)<sup>d</sup></b>        | <b>1.68</b>     | <b>0.44</b>      | <b>2.74</b>                  | <b>0.011</b>                 | <b>1.28</b>                   |

<sup>a</sup> Assumes construction equipment operates 8 hours per day.

<sup>b</sup> Represents the maximum combined (commute plus delivery truck) vehicle emissions.

<sup>c</sup> Combined total included VOC emissions from paving.

<sup>d</sup> Conservatively assumes that peak construction occurs 22 days/month during the six month construction period, except for paving which was assumed to occur for 1 month.

**Table 8.1A.5q: Offsite VOC Emissions from Paving during Natural Gas Pipeline Construction**

|                        |      |             |
|------------------------|------|-------------|
| Emission Factor        | 2.62 | lb ROG/acre |
| VOC Emissions (lb/day) | 6.55 |             |

Reference: URBEMIS2002 version 8.7.

**Table 8.1A.5r: Offsite Motor Vehicle Usage During Natural Gas Pipeline Construction**

| Construction Activity | Number per Day        |                     | Vehicle Miles                   |                               | Construction Commuter Emissions (lbs/day) |      |        |      |                  | Delivery/Haul Truck Emissions (lbs/day) |      |        |      |                  |
|-----------------------|-----------------------|---------------------|---------------------------------|-------------------------------|-------------------------------------------|------|--------|------|------------------|-----------------------------------------|------|--------|------|------------------|
|                       | Construction Commuter | Delivery/Haul Truck | Construction Commuter Miles/Day | Delivery/Haul Truck Miles/Day | CO                                        | VOC  | SOx    | NOx  | PM <sub>10</sub> | CO                                      | VOC  | SOx    | NOx  | PM <sub>10</sub> |
| Pavement Removal      | 6                     | 5                   | 40                              | 40                            | 3.08                                      | 0.33 | 0.0022 | 0.33 | 1.05             | 1.10                                    | 0.25 | 0.0091 | 7.13 | 11.91            |
| Trenching             | 2                     | 3                   | 40                              | 40                            | 1.03                                      | 0.11 | 0.0007 | 0.11 | 0.35             | 0.66                                    | 0.15 | 0.0055 | 4.28 | 7.15             |
| Pipe Installation     | 15                    | 2                   | 40                              | 40                            | 7.69                                      | 0.83 | 0.0054 | 0.82 | 2.62             | 0.44                                    | 0.10 | 0.0037 | 2.85 | 4.76             |
| Backfilling           | 2                     | 6                   | 40                              | 40                            | 1.03                                      | 0.11 | 0.0007 | 0.11 | 0.35             | 1.32                                    | 0.29 | 0.0110 | 8.55 | 14.29            |
| Compaction            | 4                     | 6                   | 40                              | 40                            | 2.05                                      | 0.22 | 0.0014 | 0.22 | 0.70             | 1.32                                    | 0.29 | 0.0110 | 8.55 | 14.29            |
| Repaving              | 6                     | 5                   | 40                              | 40                            | 3.08                                      | 0.33 | 0.0022 | 0.33 | 1.05             | 1.10                                    | 0.25 | 0.0091 | 7.13 | 11.91            |

**Table 8.1A.5s: Offsite Potable Water Line Construction Equipment Requirements**

| Equipment                      | Peak Number |
|--------------------------------|-------------|
| Compressor, 250 cfm            | 1           |
| Tractor/Loader/Backhoe, 1/2 CY | 1           |
| Dump Truck                     | 1           |
| Grinder                        | 1           |
| Vibratory Compactor            | 1           |
| Jackhammer                     | 1           |
| Duration (months)              | 4           |

**Table 8.1A.5t: Offsite Potable Water Line Construction Equipment Emission Factors**

| Equipment                      | CO (lbs/hr) | VOC (lbs/hr) | NO <sub>x</sub> (lbs/hr) | SO <sub>x</sub> (lbs/hr) | PM <sub>10</sub> (lbs/hr) |
|--------------------------------|-------------|--------------|--------------------------|--------------------------|---------------------------|
| Compressor, 250 cfm            | 0.23        | 0.08         | 0.32                     | 0.00                     | 0.03                      |
| Tractor/Loader/Backhoe, 1/2 CY | 0.42        | 0.13         | 0.82                     | 0.0035                   | 0.08                      |
| Grinder                        | 0.23        | 0.08         | 0.32                     | 0.00                     | 0.03                      |
| Vibratory Compactor            | 0.026       | 0.009        | 0.039                    | 0.000                    | 0.002                     |
| Jackhammer                     | 0           | 0            | 0                        | 0                        | 0                         |
| Maximum Hourly (lbs/hour)      | 0.91        | 0.29         | 1.49                     | 0.003                    | 0.15                      |

Offroad mobile source emission factors from URBEMIS2002 version 8.7 for the year 2007.

**Table 8.1A.5u: Offsite Emissions from Potable Water Line Construction**

| Equipment                                                 | CO (lbs/day) | VOC (lbs/day) | NO <sub>x</sub> (lbs/day) | SO <sub>x</sub> (lbs/day) | PM <sub>10</sub> (lbs/day) |
|-----------------------------------------------------------|--------------|---------------|---------------------------|---------------------------|----------------------------|
| Compressor, 250 cfm                                       | 1.86         | 0.63          | 2.54                      | 0                         | 0.27                       |
| Tractor/Loader/Backhoe, 1/2 CY                            | 3.35         | 1.00          | 6.53                      | 0.028                     | 0.66                       |
| Grinder                                                   | 1.86         | 0.63          | 2.54                      | 0.000                     | 0.27                       |
| Vibratory Compactor                                       | 0.21         | 0.07          | 0.31                      | 0                         | 0                          |
| Jackhammer                                                | 0            | 0             | 0                         | 0                         | 0                          |
| <b>Total Construction Equipment (lbs/day)<sup>a</sup></b> | <b>7.27</b>  | <b>2.34</b>   | <b>11.93</b>              | <b>0.03</b>               | <b>1.22</b>                |
| <b>Total Motor Vehicles (lbs/day)<sup>b</sup></b>         | <b>5.86</b>  | <b>0.66</b>   | <b>2.02</b>               | <b>0.006</b>              | <b>4.31</b>                |
| <b>Combined Total (lbs/day)</b>                           | <b>13.13</b> | <b>2.99</b>   | <b>13.95</b>              | <b>0.03</b>               | <b>5.53</b>                |
| <b>Combined Total (tons)<sup>c</sup></b>                  | <b>0.58</b>  | <b>0.13</b>   | <b>0.61</b>               | <b>0.001</b>              | <b>0.24</b>                |

<sup>a</sup> Assumes construction equipment operates 8 hours per day.

<sup>b</sup> Represents the maximum combined (commute plus delivery truck) vehicle emissions.

<sup>c</sup> Conservatively assumes that peak construction occurs 22 days/month during the eight month construction period.

**Table 8.1A.5v: Offsite Motor Vehicle Usage During Potable Water Line Construction**

| Construction Activity | Number per Day                     |                     |                       |                     | Construction Commuter Emissions (lbs/day) |      |                 |                 |                  | Delivery/Haul Truck Emissions (lbs/day) |       |                 |                 |                  |
|-----------------------|------------------------------------|---------------------|-----------------------|---------------------|-------------------------------------------|------|-----------------|-----------------|------------------|-----------------------------------------|-------|-----------------|-----------------|------------------|
|                       | Construction Commuter <sup>a</sup> | Delivery/Haul Truck | Construction Commuter | Delivery/Haul Truck | CO                                        | VOC  | SO <sub>x</sub> | NO <sub>x</sub> | PM <sub>10</sub> | CO                                      | VOC   | SO <sub>x</sub> | NO <sub>x</sub> | PM <sub>10</sub> |
|                       |                                    |                     | Miles /Day            | Miles /Day          |                                           |      |                 |                 |                  |                                         |       |                 |                 |                  |
| Pavement Removal      | 11                                 | 0                   | 40                    | 40                  | 5.64                                      | 0.61 | 0.0040          | 0.60            | 1.92             | 0                                       | 0     | 0               | 0               | 0                |
| Trenching             | 11                                 | 0                   | 40                    | 40                  | 5.64                                      | 0.61 | 0.0040          | 0.60            | 1.92             | 0                                       | 0     | 0               | 0               | 0                |
| Pipe Installation     | 11                                 | 0                   | 40                    | 40                  | 5.64                                      | 0.61 | 0.0040          | 0.60            | 1.92             | 0                                       | 0     | 0               | 0               | 0                |
| Backfilling           | 11                                 | 1                   | 40                    | 40                  | 5.64                                      | 0.61 | 0.0040          | 0.60            | 1.92             | 0.22                                    | 0.049 | 0.0018          | 1.43            | 2.38             |
| Compaction            | 11                                 | 1                   | 40                    | 40                  | 5.64                                      | 0.61 | 0.0040          | 0.60            | 1.92             | 0.22                                    | 0.049 | 0.0018          | 1.43            | 2.38             |
| Repaving              | 11                                 | 1                   | 40                    | 40                  | 5.64                                      | 0.61 | 0.0040          | 0.60            | 1.92             | 0.22                                    | 0.049 | 0.0018          | 1.43            | 2.38             |

<sup>a</sup> Conservatively assumes maximum number of commuters for each construction activity.

**Table 8.1A.6. Summary of Emission Rates Used for Dispersion Modeling**

| Modeling Scenarios <sup>a</sup>                                                                  | Maximum Pollutant Emissions |       |        |                          |                           |                                         |
|--------------------------------------------------------------------------------------------------|-----------------------------|-------|--------|--------------------------|---------------------------|-----------------------------------------|
|                                                                                                  | CO                          | NOx   | SOx    | PM <sub>10</sub> Exhaust | PM <sub>10</sub> Fugitive | PM <sub>10</sub> Stockpile <sup>b</sup> |
| <b>Scenario 1: Demolition (Months 1-3)<sup>c</sup></b>                                           |                             |       |        |                          |                           |                                         |
| Maximum 1-hour Emission Rate (lb/hr)                                                             | 4.28                        | 10.83 | 0.055  | NA                       | NA                        | NA                                      |
| Daily 1-hour Emission Rate (lb/hr)                                                               | 4.24                        | NA    | 0.055  | 0.56                     | 5.33                      | 0.025                                   |
| Annual Emission Rate (tons/yr)                                                                   | NA                          | 2.20  | 0.011  | 0.12                     | 1.77                      | 0.05                                    |
| <b>Scenario 2: Power Plant Construction (Months 6-14)<sup>d</sup></b>                            |                             |       |        |                          |                           |                                         |
| Maximum 1-hour Emission Rate (lb/hr)                                                             | 7.34                        | 16.45 | 0.071  | NA                       | NA                        | NA                                      |
| Daily 1-hour Emission Rate (lb/hr)                                                               | 7.32                        | NA    | 0.071  | 1.07                     | 3.35                      | 0                                       |
| Annual Emission Rate (tons/yr)                                                                   | NA                          | 9.89  | 0.042  | 0.64                     | 2.31                      | 0                                       |
| <b>Scenario 3: Overlap (Months 4 and 5 when demolition and construction overlap)<sup>e</sup></b> |                             |       |        |                          |                           |                                         |
| Demolition Maximum 1-hour Emission Rate (lb/hr)                                                  | 0.62                        | 1.57  | 0.0085 | NA                       | NA                        | NA                                      |
| Construction Maximum 1-hour Emission Rate (lb/hr)                                                | 6.80                        | 15.84 | 0.076  | NA                       | NA                        | NA                                      |
| Demolition Daily 1-hour Emission Rate (lb/hr)                                                    | 0.59                        | NA    | 0.0084 | 0.16                     | 3.33                      | 0.025                                   |
| Construction Daily 1-hour Emission Rate (lb/hr)                                                  | 6.78                        | NA    | 0.076  | 0.85                     | 2.47                      | 0                                       |

NA = Time period not used for dispersion modeling of pollutant.

Notes:

<sup>a</sup> The maximum 1-hour emission rates were used to model the 1-hour and 3-hour concentrations. The daily 1-hour emission rates were used to model the 8-hour and 24-hour concentrations, assuming 8 hours per work day. The annual emission rates were used to model the annual concentrations.

<sup>b</sup> Stockpile fugitive emissions were only included with demolition because stockpiling would occur during months 1-5.

<sup>c</sup> For demolition, maximum emissions occur in month 1 for all pollutants.

<sup>d</sup> For power plant construction, maximum emissions occur in month 7 except for SOx where the maximum occurs in month 6.

<sup>e</sup> For the overlap of demolition and power plant construction, the maximum 1-hour emissions occur in month 5 for CO, NOx, and SOx. The maximum daily emissions occur in month 5 for CO, NOx, and SOx. The maximum daily PM<sub>10</sub> exhaust and PM<sub>10</sub> Fugitive emissions occur in month 4.

TABLE 8.1A.7: ISC Construction Model Input Summary

| Annual Demolition and Construction Impacts - Months 1 - 12 |                                 |                 |                  |          |                    |              |              |                 | Emission Rate (tpy)   |           |           |             |
|------------------------------------------------------------|---------------------------------|-----------------|------------------|----------|--------------------|--------------|--------------|-----------------|-----------------------|-----------|-----------|-------------|
| Source ID                                                  | Description                     | UTM Easting (m) | UTM Northing (m) | elev (m) | release height (m) | x length (m) | y length (m) | degree rotation | CO (tpy)              | NOx (tpy) | SOx (tpy) | PM_10 (tpy) |
| C DUST                                                     | Construction Wind Blown Dust    | 469347.44       | 3764545.5        | 286.2    | 2                  | 155          | 183          | 0.75            | 0                     | 0         | 0         | 0           |
| C FUG                                                      | Construction Equipment Fug dust | 469347.44       | 3764545.5        | 286.2    | 2                  | 155          | 183          | 0.75            | 0                     | 0         | 0         | 2.313       |
| C EXHT                                                     | Construction Equipment Exhaust  | 469347.44       | 3764545.5        | 286.2    | 4.7                | 155          | 183          | 0.75            | 0                     | 9.888     | 0.04207   | 0.645       |
| D DUST                                                     | Demolition Wind Blown Dust      | 469410.78       | 3764267.25       | 286.2    | 2                  | 86           | 269          | 0.75            | 0                     | 0         | 0         | 0.046       |
| D FUG                                                      | Demolition Equipment Fug dust   | 469410.78       | 3764267.25       | 286.2    | 2                  | 86           | 269          | 0.75            | 0                     | 0         | 0         | 1.768       |
| D EXHT                                                     | Demolition Equipment Exhaust    | 469410.78       | 3764267.25       | 286.2    | 4.7                | 86           | 269          | 0.75            | 0                     | 2.202     | 0.01147   | 0.121       |
| Demolition and Construction Overlap Impacts - Months 4 - 5 |                                 |                 |                  |          |                    |              |              |                 | Emission Rate (lb/hr) |           |           |             |
| Source ID                                                  | Description                     | UTM Easting (m) | UTM Northing (m) | elev (m) | release height (m) | x length (m) | y length (m) | degree rotation | CO                    | NOx       | SOx       | PM_10       |
| <b>Short Term - 1 and 3 Hour Impact</b>                    |                                 |                 |                  |          |                    |              |              |                 |                       |           |           |             |
| C DUST                                                     | Construction Wind Blown Dust    | 469347.44       | 3764545.5        | 286.2    | 2                  | 155          | 183          | 0.75            | 0                     | 0         | 0         | 0           |
| C FUG                                                      | Construction Equipment Fug dust | 469347.44       | 3764545.5        | 286.2    | 2                  | 155          | 183          | 0.75            | 0                     | 0         | 0         | 0           |
| C EXHT                                                     | Construction Equipment Exhaust  | 469347.44       | 3764545.5        | 286.2    | 4.7                | 155          | 183          | 0.75            | 6.796                 | 15.836    | 0.07603   | 0           |
| D DUST                                                     | Demolition Wind Blown Dust      | 469410.78       | 3764267.25       | 286.2    | 2                  | 86           | 269          | 0.75            | 0                     | 0         | 0         | 0           |
| D FUG                                                      | Demolition Equipment Fug dust   | 469410.78       | 3764267.25       | 286.2    | 2                  | 86           | 269          | 0.75            | 0                     | 0         | 0         | 0           |
| D EXHT                                                     | Demolition Equipment Exhaust    | 469410.78       | 3764267.25       | 286.2    | 4.7                | 86           | 269          | 0.75            | 0.616                 | 1.566     | 0.00847   | 0           |
| <b>Short Term - 8 and 24 Hour Impact</b>                   |                                 |                 |                  |          |                    |              |              |                 |                       |           |           |             |
| C DUST                                                     | Construction Wind Blown Dust    | 469347.44       | 3764545.5        | 286.2    | 2                  | 155          | 183          | 0.75            | 0                     | 0         | 0         | 0           |
| C FUG                                                      | Construction Equipment Fug dust | 469347.44       | 3764545.5        | 286.2    | 2                  | 155          | 183          | 0.75            | 0                     | 0         | 0         | 2.472       |
| C EXHT                                                     | Construction Equipment Exhaust  | 469347.44       | 3764545.5        | 286.2    | 4.7                | 155          | 183          | 0.75            | 6.779                 | 0         | 0.07598   | 0.849       |
| D DUST                                                     | Demolition Wind Blown Dust      | 469410.78       | 3764267.25       | 286.2    | 2                  | 86           | 269          | 0.75            | 0                     | 0         | 0         | 0.02537     |
| D FUG                                                      | Demolition Equipment Fug dust   | 469410.78       | 3764267.25       | 286.2    | 2                  | 86           | 269          | 0.75            | 0                     | 0         | 0         | 3.329       |
| D EXHT                                                     | Demolition Equipment Exhaust    | 469410.78       | 3764267.25       | 286.2    | 4.7                | 86           | 269          | 0.75            | 0.591                 | 0         | 0.00839   | 0.158       |
| Demolition Impacts Only - Months 1 - 3                     |                                 |                 |                  |          |                    |              |              |                 | Emission Rate (lb/hr) |           |           |             |
| Source ID                                                  | Description                     | UTM Easting (m) | UTM Northing (m) | elev (m) | release height (m) | x length (m) | y length (m) | degree rotation | CO                    | NOx       | SOx       | PM_10       |
| <b>Short Term - 1 and 3 Hour Impact</b>                    |                                 |                 |                  |          |                    |              |              |                 |                       |           |           |             |
| D DUST                                                     | Demolition Wind Blown Dust      | 469410.78       | 3764267.25       | 286.2    | 2                  | 86           | 269          | 0.75            | 0                     | 0         | 0         | 0           |
| D FUG                                                      | Demolition Equipment Fug dust   | 469410.78       | 3764267.25       | 286.2    | 2                  | 86           | 269          | 0.75            | 0                     | 0         | 0         | 0           |
| D EXHT                                                     | Demolition Equipment Exhaust    | 469410.78       | 3764267.25       | 286.2    | 4.7                | 86           | 269          | 0.75            | 4.277                 | 10.832    | 0.05485   | 0           |
| <b>Short Term - 8 and 24 Hour Impact</b>                   |                                 |                 |                  |          |                    |              |              |                 |                       |           |           |             |
| D DUST                                                     | Demolition Wind Blown Dust      | 469410.78       | 3764267.25       | 286.2    | 2                  | 86           | 269          | 0.75            | 0                     | 0         | 0         | 0.02537     |
| D FUG                                                      | Demolition Equipment Fug dust   | 469410.78       | 3764267.25       | 286.2    | 2                  | 86           | 269          | 0.75            | 0                     | 0         | 0         | 5.328       |
| D EXHT                                                     | Demolition Equipment Exhaust    | 469410.78       | 3764267.25       | 286.2    | 4.7                | 86           | 269          | 0.75            | 4.241                 | 0         | 0.05468   | 0.565       |
| Construction Impacts Only - Months 6 - 14                  |                                 |                 |                  |          |                    |              |              |                 | Emission Rate (lb/hr) |           |           |             |
| Source ID                                                  | Description                     | UTM Easting (m) | UTM Northing (m) | elev (m) | release height (m) | x length (m) | y length (m) | degree rotation | CO                    | NOx       | SOx       | PM_10       |
| <b>Short Term - 1 and 3 Hour Impact</b>                    |                                 |                 |                  |          |                    |              |              |                 |                       |           |           |             |
| C DUST                                                     | Construction Wind Blown Dust    | 469347.44       | 3764545.5        | 286.2    | 2                  | 155          | 183          | 0.75            | 0                     |           | 0         | 0           |
| C FUG                                                      | Construction Equipment Fug dust | 469347.44       | 3764545.5        | 286.2    | 2                  | 155          | 183          | 0.75            | 0                     | 0         | 0         | 0           |
| C EXHT                                                     | Construction Equipment Exhaust  | 469347.44       | 3764545.5        | 286.2    | 4.7                | 155          | 183          | 0.75            | 7.340                 | 16.452    | 0.07134   | 0           |
| <b>Short Term - 8 and 24 Hour Impact</b>                   |                                 |                 |                  |          |                    |              |              |                 |                       |           |           |             |
| C DUST                                                     | Construction Wind Blown Dust    | 469347.44       | 3764545.5        | 286.2    | 2                  | 155          | 183          | 0.75            | 0                     | 0         | 0         | 0           |
| C FUG                                                      | Construction Equipment Fug dust | 469347.44       | 3764545.5        | 286.2    | 2                  | 155          | 183          | 0.75            | 0                     | 0         | 0         | 3.35076     |
| C EXHT                                                     | Construction Equipment Exhaust  | 469347.44       | 3764545.5        | 286.2    | 4.7                | 155          | 183          | 0.75            | 7.321                 | 0         | 0.07129   | 1.072       |

TABLE 8.1A.8a  
AES Construction Modeling

1-hr NOx Modeled Concentration - Demolition Impacts  
Receptors distances, original NOx concentrations, adjusted NO2 concentrations

| 0-100 meters |         |         |       | 101-200 meters |         |        |       | 201-500 meters |         |        |        | 501-1000 meters |         |        |       | 1001-2000 meters |         |       |       | 2001 + meters |         |       |       |
|--------------|---------|---------|-------|----------------|---------|--------|-------|----------------|---------|--------|--------|-----------------|---------|--------|-------|------------------|---------|-------|-------|---------------|---------|-------|-------|
| x            | y       | NOx     | NO2   | x              | y       | NOx    | NO2   | x              | y       | NOx    | NO2    | x               | y       | NOx    | NO2   | x                | y       | NOx   | NO2   | x             | y       | NOx   | NO2   |
| 469491.2     | 3764249 | 1008.07 | 74.60 | 469511.1       | 3764649 | 663.16 | 75.60 | 469456.6       | 3764736 | 478.57 | 123.47 | 469450          | 3765040 | 179.11 | 83.64 | 469400           | 3765600 | 68.12 | 51.09 | 471500        | 3764400 | 28.86 | 28.86 |
| 469475.5     | 3764251 | 1005.88 | 74.44 | 469450         | 3764140 | 659.57 | 75.19 | 469484.3       | 3764735 | 473.71 | 122.22 | 469480          | 3765040 | 178.67 | 83.44 | 469500           | 3763200 | 68.11 | 51.08 | 469400        | 3766600 | 28.72 | 28.72 |
| 469450       | 3764230 | 1005.38 | 74.40 | 469480         | 3764140 | 655.00 | 74.67 | 469428.8       | 3764736 | 470.92 | 121.50 | 469510          | 3765040 | 177.33 | 82.81 | 469500           | 3765600 | 68.09 | 51.07 | 467400        | 3764300 | 28.67 | 28.67 |
| 469480       | 3764230 | 1002.70 | 74.20 | 469420         | 3764140 | 649.87 | 74.09 | 469450         | 3764740 | 468.76 | 120.94 | 469420          | 3765040 | 176.35 | 82.36 | 469400           | 3763200 | 67.98 | 50.98 | 467400        | 3764500 | 28.66 | 28.66 |
| 469420       | 3764230 | 1002.43 | 74.18 | 469510         | 3764140 | 617.12 | 70.35 | 469480         | 3764740 | 466.23 | 120.29 | 469390          | 3765040 | 176.12 | 82.25 | 469300           | 3765600 | 67.12 | 50.34 | 467400        | 3764400 | 28.63 | 28.63 |
| 469452.1     | 3764254 | 996.34  | 73.73 | 469390         | 3764140 | 604.42 | 68.90 | 469420         | 3764740 | 459.00 | 118.42 | 469450          | 3763750 | 173.49 | 81.02 | 469600           | 3765600 | 66.98 | 50.23 | 469300        | 3766600 | 28.61 | 28.61 |
| 469428.7     | 3764257 | 994.13  | 73.57 | 469511.4       | 3764678 | 581.62 | 66.30 | 469512         | 3764735 | 456.66 | 117.82 | 469480          | 3763750 | 173.48 | 81.01 | 469300           | 3763200 | 66.95 | 50.21 | 469600        | 3762200 | 28.60 | 28.60 |
| 469405.3     | 3764261 | 962.47  | 71.22 | 469540         | 3764650 | 580.33 | 66.16 | 469401.1       | 3764736 | 452.71 | 116.80 | 469420          | 3763750 | 173.39 | 80.97 | 469700           | 3765600 | 65.51 | 49.13 | 471500        | 3764200 | 28.56 | 28.56 |
| 469509.9     | 3764534 | 941.68  | 69.68 | 469450         | 3764110 | 574.12 | 65.45 | 469510         | 3764740 | 449.27 | 115.91 | 469360          | 3765040 | 173.12 | 80.85 | 469200           | 3763200 | 65.30 | 48.97 | 467400        | 3764200 | 28.56 | 28.56 |
| 469510.2     | 3764563 | 938.89  | 69.48 | 469480         | 3764110 | 570.35 | 65.02 | 469450         | 3764050 | 443.80 | 114.50 | 469570          | 3765040 | 172.01 | 80.33 | 469600           | 3763200 | 65.09 | 48.81 | 467400        | 3764600 | 28.55 | 28.55 |
| 469507       | 3764248 | 935.13  | 69.20 | 469420         | 3764110 | 565.54 | 64.47 | 469480         | 3764050 | 441.03 | 113.79 | 469510          | 3763750 | 171.92 | 80.28 | 470500           | 3764400 | 64.66 | 48.50 | 471500        | 3764700 | 28.53 | 28.53 |
| 469400.3     | 3764272 | 926.77  | 68.58 | 469540         | 3764140 | 542.97 | 61.90 | 469420         | 3764050 | 439.47 | 113.38 | 469390          | 3763750 | 171.82 | 80.24 | 469700           | 3763200 | 64.36 | 48.27 | 469700        | 3766600 | 28.47 | 28.47 |
| 469510       | 3764530 | 914.25  | 67.65 | 469510         | 3764110 | 538.16 | 61.35 | 469390         | 3764740 | 434.44 | 112.08 | 469540          | 3765040 | 171.46 | 80.07 | 469200           | 3765600 | 64.22 | 48.16 | 469600        | 3766600 | 28.45 | 28.45 |
| 469510       | 3764230 | 905.22  | 66.99 | 469360         | 3764140 | 526.66 | 60.04 | 469510         | 3764050 | 423.18 | 109.18 | 469330          | 3765040 | 169.06 | 78.95 | 470500           | 3764300 | 64.17 | 48.13 | 471500        | 3764300 | 28.45 | 28.45 |
| 469507.3     | 3764276 | 897.81  | 66.44 | 469390         | 3764110 | 526.18 | 59.98 | 469540         | 3764740 | 421.65 | 108.78 | 469540          | 3763750 | 168.68 | 78.77 | 468400           | 3764400 | 63.86 | 47.90 | 469200        | 3762200 | 28.42 | 28.42 |
| 469398.2     | 3764278 | 895.62  | 66.28 | 469511.7       | 3764706 | 514.11 | 58.61 | 469390         | 3764050 | 420.90 | 108.59 | 469360          | 3763750 | 168.27 | 78.58 | 470500           | 3764600 | 63.81 | 47.85 | 469200        | 3766600 | 28.37 | 28.37 |
| 469510       | 3764260 | 889.78  | 65.84 | 469450         | 3764080 | 503.06 | 57.35 | 469373.4       | 3764736 | 417.72 | 107.77 | 469600          | 3765040 | 167.95 | 78.43 | 468400           | 3764300 | 63.76 | 47.82 | 467400        | 3764100 | 28.35 | 28.35 |
| 469450       | 3764200 | 887.23  | 65.66 | 469540         | 3764690 | 501.10 | 57.13 | 469450         | 3764770 | 415.15 | 107.11 | 469450          | 3765070 | 166.72 | 77.86 | 468400           | 3764500 | 63.70 | 47.77 | 467400        | 3764700 | 28.35 | 28.35 |
| 469480       | 3764200 | 884.47  | 65.45 | 469480         | 3764080 | 500.10 | 57.01 | 469480         | 3764770 | 412.74 | 106.49 | 469570          | 3763750 | 166.40 | 77.71 | 470500           | 3764200 | 63.69 | 47.77 | 469500        | 3762200 | 28.35 | 28.35 |
| 469420       | 3764200 | 878.33  | 65.00 | 469420         | 3764080 | 497.02 | 56.66 | 469420         | 3764770 | 406.69 | 104.93 | 469480          | 3765070 | 166.18 | 77.61 | 468400           | 3764200 | 63.20 | 47.40 | 471500        | 3764800 | 28.31 | 28.31 |
| 469509.6     | 3764506 | 875.25  | 64.77 | 469540         | 3764110 | 489.44 | 55.80 | 469360         | 3764740 | 401.33 | 103.54 | 469330          | 3763750 | 165.78 | 77.42 | 468400           | 3764600 | 63.07 | 47.30 | 471500        | 3764000 | 28.28 | 28.28 |
| 469510.5     | 3764592 | 874.77  | 64.73 | 469570         | 3764650 | 483.23 | 55.09 | 469510         | 3764770 | 400.97 | 103.45 | 469510          | 3765070 | 165.12 | 77.11 | 469100           | 3763200 | 63.03 | 47.27 | 469800        | 3766600 | 28.21 | 28.21 |
| 469510       | 3764500 | 862.88  | 63.85 | 469360         | 3764110 | 479.43 | 54.65 | 469540         | 3764050 | 397.73 | 102.61 | 469420          | 3765070 | 164.81 | 76.96 | 469100           | 3765600 | 62.83 | 47.12 | 469300        | 3762200 | 28.16 | 28.16 |
| 469510       | 3764290 | 856.05  | 63.35 | 469510         | 3764080 | 478.21 | 54.52 | 469450         | 3764020 | 394.06 | 101.67 | 469390          | 3765070 | 163.74 | 76.47 | 469800           | 3763200 | 62.75 | 47.06 | 469100        | 3762200 | 28.12 | 28.12 |
| 469507.6     | 3764305 | 851.70  | 63.03 | 469390         | 3764080 | 471.97 | 53.80 | 469360         | 3764050 | 393.22 | 101.45 | 469300          | 3765040 | 163.59 | 76.40 | 470500           | 3764100 | 62.63 | 46.97 | 467400        | 3764800 | 28.11 | 28.11 |
| 469390       | 3764230 | 835.41  | 61.82 | 469540         | 3764710 | 466.60 | 53.19 | 469480         | 3764020 | 392.56 | 101.28 | 469630          | 3765040 | 162.77 | 76.01 | 469800           | 3765600 | 62.41 | 46.81 | 467400        | 3764000 | 27.95 | 27.95 |
| 469509.4     | 3764477 | 818.44  | 60.56 | 469570         | 3764140 | 455.59 | 51.94 | 469420         | 3764020 | 391.02 | 100.88 | 469600          | 3763750 | 162.42 | 75.85 | 468400           | 3764100 | 62.26 | 46.69 | 469500        | 3766600 | 27.92 | 27.92 |
| 469510       | 3764200 | 814.09  | 60.24 | 469570         | 3764680 | 454.42 | 51.80 | 469390         | 3764770 | 390.20 | 100.67 | 469360          | 3765070 | 162.00 | 75.65 | 468400           | 3764700 | 61.81 | 46.36 | 469100        | 3766600 | 27.91 | 27.91 |
| 469390       | 3764260 | 811.42  | 60.05 | 469330         | 3764140 | 443.16 | 50.52 | 469345.7       | 3764736 | 387.63 | 100.01 | 469480          | 3763720 | 161.78 | 75.55 | 468400           | 3764000 | 60.98 | 45.74 | 469800        | 3762200 | 27.90 | 27.90 |
| 469510       | 3764320 | 809.57  | 59.91 | 469540         | 3764080 | 438.41 | 49.98 | 469570         | 3764740 | 383.24 | 98.88  | 469450          | 3763720 | 161.76 | 75.54 | 468400           | 3764800 | 60.73 | 45.54 | 471500        | 3764100 | 27.90 | 27.90 |
| 469392.8     | 3764293 | 805.38  | 59.60 | 469360         | 3764080 | 434.28 | 49.51 | 469510         | 3764020 | 379.83 | 98.00  | 469420          | 3763720 | 161.69 | 75.51 | 469400           | 3765700 | 60.62 | 45.46 | 469000        | 3762200 | 27.80 | 27.80 |
| 469510       | 3764470 | 802.05  | 59.35 | 469570         | 3764110 | 425.07 | 48.46 | 469540         | 3764770 | 379.70 | 97.96  | 469540          | 3765070 | 161.04 | 75.20 | 469900           | 3765600 | 60.61 | 45.46 | 467400        | 3763900 | 27.60 | 27.60 |
| 469507.9     | 3764334 | 800.78  | 59.26 | 469325.5       | 3764648 | 422.40 | 48.15 | 469390         | 3764020 | 376.78 | 97.21  | 469510          | 3763720 | 160.61 | 75.01 | 469500           | 3763100 | 60.51 | 45.38 | 471500        | 3763800 | 27.60 | 27.60 |
| 469390       | 3764200 | 780.24  | 57.74 | 469570         | 3764710 | 420.47 | 47.   |                |         |        |        |                 |         |        |       |                  |         |       |       |               |         |       |       |

TABLE 8.1A.8b

AES Construction Modeling

1-hr NOx Modeled Concentration - Construction Impacts

Receptors distances, original NOx concentrations, adjusted NO2 concentrations

| 0-100 meters |         |         |       | 101-200 meters |         |        |       | 201-500 meters |         |        |        | 501-1000 meters |         |        |        | 1001-2000 meters |         |        |       | 2001 + meters |         |       |       |
|--------------|---------|---------|-------|----------------|---------|--------|-------|----------------|---------|--------|--------|-----------------|---------|--------|--------|------------------|---------|--------|-------|---------------|---------|-------|-------|
| x            | y       | NOx     | NO2   | x              | y       | NOx    | NO2   | x              | y       | NOx    | NO2    | x               | y       | NOx    | NO2    | x                | y       | NOx    | NO2   | x             | y       | NOx   | NO2   |
| 469330       | 3764530 | 1133.40 | 83.87 | 469330         | 3764830 | 783.25 | 89.29 | 469385.5       | 3764339 | 528.16 | 136.27 | 469420          | 3765250 | 240.71 | 112.41 | 470500           | 3764600 | 109.36 | 82.02 | 471500        | 3764500 | 45.37 | 45.37 |
| 469510       | 3764740 | 1125.03 | 83.25 | 469360         | 3764830 | 781.25 | 89.06 | 469507.9       | 3764334 | 517.84 | 133.60 | 469450          | 3765250 | 240.25 | 112.20 | 470500           | 3764500 | 108.36 | 81.27 | 471500        | 3764600 | 45.16 | 45.16 |
| 469510       | 3764530 | 1121.76 | 83.01 | 469510         | 3764440 | 776.54 | 88.53 | 469420         | 3764950 | 502.86 | 129.74 | 469450          | 3764020 | 239.52 | 111.86 | 470500           | 3764800 | 107.74 | 80.81 | 471500        | 3764400 | 45.04 | 45.04 |
| 469330       | 3764740 | 1121.35 | 82.98 | 469390         | 3764830 | 776.04 | 88.47 | 469390         | 3764950 | 502.63 | 129.68 | 469480          | 3765250 | 239.39 | 111.79 | 469500           | 3763500 | 104.91 | 78.68 | 471500        | 3764300 | 44.68 | 44.68 |
| 469509.9     | 3764534 | 1113.20 | 82.38 | 469510         | 3764830 | 775.55 | 88.41 | 469386.3       | 3764323 | 502.24 | 129.58 | 469390          | 3764020 | 239.20 | 111.71 | 470500           | 3764400 | 104.68 | 78.51 | 471500        | 3764900 | 44.48 | 44.48 |
| 469338.7     | 3764537 | 1112.18 | 82.30 | 469480         | 3764830 | 773.53 | 88.18 | 469450         | 3764950 | 502.15 | 129.55 | 469420          | 3764020 | 239.10 | 111.66 | 469300           | 3763500 | 104.31 | 78.23 | 469500        | 3762500 | 44.30 | 44.30 |
| 469512       | 3764735 | 1111.32 | 82.24 | 469420         | 3764830 | 772.75 | 88.09 | 469360         | 3764950 | 501.19 | 129.31 | 469360          | 3765250 | 239.02 | 111.62 | 469600           | 3763500 | 103.22 | 77.42 | 469300        | 3762500 | 44.23 | 44.23 |
| 469345.7     | 3764736 | 1097.69 | 81.23 | 469450         | 3764830 | 772.01 | 88.01 | 469480         | 3764950 | 500.52 | 129.14 | 469390          | 3765250 | 238.70 | 111.47 | 468300           | 3764600 | 102.75 | 77.07 | 469600        | 3762500 | 44.15 | 44.15 |
| 469360       | 3764740 | 1086.38 | 80.39 | 469540         | 3764830 | 768.09 | 87.56 | 469510         | 3764950 | 497.01 | 128.23 | 469480          | 3764020 | 238.46 | 111.36 | 469400           | 3763500 | 102.63 | 76.97 | 471500        | 3765000 | 44.07 | 44.07 |
| 469360       | 3764530 | 1086.01 | 80.37 | 469330         | 3764440 | 767.97 | 87.55 | 469330         | 3764950 | 496.84 | 128.19 | 469360          | 3764020 | 237.98 | 111.14 | 468300           | 3764700 | 102.55 | 76.92 | 469200        | 3762500 | 44.01 | 44.01 |
| 469509.6     | 3764506 | 1083.12 | 80.15 | 469360         | 3764440 | 767.61 | 87.51 | 469360         | 3764320 | 496.35 | 128.06 | 469330          | 3765250 | 236.73 | 110.55 | 470500           | 3764300 | 102.37 | 76.78 | 467300        | 3764700 | 44.00 | 44.00 |
| 469338.5     | 3764553 | 1074.36 | 79.50 | 469540         | 3764440 | 762.30 | 86.90 | 469510         | 3764320 | 496.05 | 127.98 | 469510          | 3764020 | 236.41 | 110.40 | 469200           | 3763500 | 102.11 | 76.58 | 469400        | 3762500 | 43.93 | 43.93 |
| 469330       | 3764770 | 1070.99 | 79.25 | 469300         | 3764830 | 759.62 | 86.60 | 469330         | 3764320 | 491.74 | 126.87 | 469540          | 3765250 | 235.75 | 110.10 | 469400           | 3765800 | 101.65 | 76.24 | 471500        | 3764200 | 43.92 | 43.92 |
| 469330       | 3764560 | 1069.44 | 79.14 | 469300         | 3764440 | 750.03 | 85.50 | 469540         | 3764320 | 488.86 | 126.13 | 469330          | 3764020 | 235.55 | 110.00 | 468300           | 3764500 | 101.58 | 76.18 | 467300        | 3764600 | 43.79 | 43.79 |
| 469330       | 3764710 | 1065.33 | 78.83 | 469386.7       | 3764433 | 742.87 | 84.69 | 469300         | 3764950 | 486.05 | 125.40 | 469510          | 3765250 | 234.69 | 109.60 | 468300           | 3764800 | 101.45 | 76.09 | 467300        | 3764400 | 43.69 | 43.69 |
| 469364       | 3764537 | 1058.98 | 78.36 | 469600         | 3764770 | 736.02 | 83.91 | 469540         | 3764950 | 485.24 | 125.19 | 469540          | 3764020 | 234.57 | 109.54 | 469700           | 3763500 | 100.97 | 75.73 | 467300        | 3764900 | 43.60 | 43.60 |
| 469339.4     | 3764715 | 1058.17 | 78.30 | 469600         | 3764740 | 731.77 | 83.42 | 469300         | 3764320 | 483.28 | 124.69 | 469300          | 3765250 | 233.84 | 109.20 | 469300           | 3765800 | 100.89 | 75.67 | 471500        | 3764100 | 43.58 | 43.58 |
| 469480       | 3764740 | 1057.37 | 78.25 | 469570         | 3764830 | 728.79 | 83.08 | 469388.9       | 3764308 | 480.90 | 124.07 | 469300          | 3764020 | 233.63 | 109.11 | 469500           | 3765800 | 100.75 | 75.57 | 469400        | 3766800 | 43.57 | 43.57 |
| 469510       | 3764500 | 1055.45 | 78.10 | 469570         | 3764440 | 724.91 | 82.64 | 469570         | 3764950 | 479.00 | 123.58 | 469570          | 3765250 | 232.89 | 108.76 | 468300           | 3764400 | 100.17 | 75.13 | 467300        | 3764800 | 43.50 | 43.50 |
| 469510       | 3764770 | 1052.19 | 77.86 | 469600         | 3764710 | 719.81 | 82.06 | 469270         | 3764950 | 474.12 | 122.32 | 469570          | 3764020 | 231.46 | 108.09 | 469600           | 3765800 | 99.78  | 74.84 | 469800        | 3762500 | 43.43 | 43.43 |
| 469484.3     | 3764735 | 1051.32 | 77.80 | 469600         | 3764530 | 719.09 | 81.98 | 469570         | 3764320 | 474.10 | 122.32 | 469270          | 3764020 | 230.09 | 107.45 | 469100           | 3763500 | 99.48  | 74.61 | 467300        | 3764300 | 43.34 | 43.34 |
| 469360       | 3764770 | 1050.42 | 77.73 | 469600         | 3764560 | 715.56 | 81.57 | 469507.6       | 3764305 | 474.10 | 122.32 | 470020          | 3764620 | 229.39 | 107.13 | 468300           | 3764900 | 99.39  | 74.54 | 469600        | 3766800 | 43.32 | 43.32 |
| 469388.6     | 3764511 | 1049.98 | 77.70 | 469600         | 3764680 | 712.53 | 81.23 | 469270         | 3764320 | 470.09 | 121.28 | 469270          | 3765250 | 229.22 | 107.05 | 469200           | 3765800 | 99.10  | 74.32 | 471500        | 3764700 | 43.25 | 43.25 |
| 469330       | 3764500 | 1047.98 | 77.55 | 469600         | 3764590 | 710.60 | 81.01 | 469600         | 3764950 | 462.54 | 119.34 | 469600          | 3765250 | 228.48 | 106.70 | 469700           | 3765800 | 97.90  | 73.43 | 467300        | 3765000 | 43.22 | 43.22 |
| 469373.4     | 3764736 | 1045.76 | 77.39 | 469600         | 3764500 | 710.53 | 81.00 | 469392.8       | 3764293 | 460.88 | 118.91 | 470020          | 3764590 | 228.48 | 106.70 | 469800           | 3763500 | 97.81  | 73.36 | 467300        | 3764500 | 43.20 | 43.20 |
| 469321.9     | 3764570 | 1040.24 | 76.98 | 469600         | 3764650 | 709.06 | 80.83 | 469420         | 3764980 | 460.84 | 118.90 | 470020          | 3764560 | 227.84 | 106.40 | 468300           | 3764300 | 97.39  | 73.04 | 469500        | 3766800 | 43.20 | 43.20 |
| 469338.3     | 3764569 | 1036.82 | 76.72 | 469508.8       | 3764420 | 708.91 | 80.82 | 469450         | 3764980 | 459.88 | 118.65 | 470020          | 3764650 | 227.63 | 106.30 | 470500           | 3764200 | 97.23  | 72.92 | 469100        | 3762500 | 43.18 | 43.18 |
| 469510.2     | 3764563 | 1035.04 | 76.59 | 469600         | 3764620 | 707.47 | 80.65 | 469390         | 3764980 | 459.73 | 118.61 | 469240          | 3765250 | 226.92 | 105.97 | 470600           | 3764600 | 97.23  | 72.92 | 469200        | 3766800 | 43.15 | 43.15 |
| 469511.7     | 3764706 | 1031.80 | 76.35 | 469600         | 3764470 | 703.35 | 80.18 | 469360         | 3764980 | 458.27 | 118.23 | 469240          | 3764020 | 226.92 | 105.97 | 470500           | 3764900 | 96.65  | 72.49 | 469000        | 3762500 | 43.00 | 43.00 |
| 469480       | 3764770 | 1031.27 | 76.31 | 469270         | 3764830 | 694.37 | 79.16 | 469480         | 3764980 | 457.86 | 118.13 | 470020          | 3764710 | 226.60 | 105.82 | 468300           | 3765000 | 96.49  | 72.37 | 469700        | 3762500 | 42.98 | 42.98 |
| 469390       | 3764740 | 1030.96 | 76.29 | 469270         | 3764440 | 692.09 | 78.90 | 469390         | 3764290 | 457.05 | 117.92 | 470020          | 3764740 | 226.42 | 105.74 | 470600           | 3764500 | 96.33  | 72.24 | 469900        | 3762500 | 42.91 | 42.91 |
| 469360       | 3764500 | 1030.20 | 76.24 | 469240         | 3764500 | 691.24 | 78.80 | 469720         | 3764710 | 455.75 | 117.58 | 469600          | 3764020 | 226.23 | 105.65 | 470600           | 3764800 | 96.15  | 72.11 | 469100        | 3766800 | 42.89 | 42.89 |
| 469540       | 3764530 | 1030.13 | 76.23 | 469240         | 3764530 | 688.83 | 78.53 | 469720         | 3764680 | 455.51 | 117.52 | 470020          | 3764530 | 226.13 | 105.60 | 469100           | 3765800 | 96.00  | 72.00 | 467300        | 3764200 | 42.84 | 42.84 |
| 469540       | 3764740 | 1025.90 | 75.92 | 469369         |         |        |       |                |         |        |        |                 |         |        |        |                  |         |        |       |               |         |       |       |

TABLE 8.1A.8c

AES Construction Modeling

1-hr NOx Modeled Concentration - Overlap Impacts  
Receptors distances, original NOx concentrations, adjusted NO2 concentrations

| 0-100 meters |         |         |       |  | 101-200 meters |         |        |        |  | 201-500 meters |         |        |        |  | 501-1000 meters |         |        |        |  | 1001-2000 meters |         |        |       |  | 2001 + meters |         |       |       |  |
|--------------|---------|---------|-------|--|----------------|---------|--------|--------|--|----------------|---------|--------|--------|--|-----------------|---------|--------|--------|--|------------------|---------|--------|-------|--|---------------|---------|-------|-------|--|
| x            | y       | NOx     | NO2   |  | x              | y       | NOx    | NO2    |  | x              | y       | NOx    | NO2    |  | x               | y       | NOx    | NO2    |  | x                | y       | NOx    | NO2   |  | x             | y       | NOx   | NO2   |  |
| 469330       | 3764530 | 1090.97 | 80.73 |  | 469300         | 3764530 | 935.53 | 106.65 |  | 469210         | 3764500 | 580.33 | 149.72 |  | 468910          | 3764620 | 258.25 | 120.60 |  | 468400           | 3764600 | 113.57 | 85.18 |  | 467400        | 3764700 | 47.10 | 47.10 |  |
| 469330       | 3764740 | 1085.62 | 80.34 |  | 469300         | 3764500 | 925.70 | 105.53 |  | 469210         | 3764530 | 579.57 | 149.53 |  | 468910          | 3764650 | 258.23 | 120.59 |  | 468400           | 3764700 | 113.50 | 85.13 |  | 467400        | 3764400 | 46.68 | 46.68 |  |
| 469510       | 3764740 | 1082.98 | 80.14 |  | 469300         | 3764770 | 919.64 | 104.84 |  | 469210         | 3764560 | 575.45 | 148.47 |  | 468910          | 3764590 | 257.82 | 120.40 |  | 468400           | 3764800 | 112.20 | 84.15 |  | 467400        | 3764600 | 46.62 | 46.62 |  |
| 469510       | 3764530 | 1079.76 | 79.90 |  | 469300         | 3764740 | 916.59 | 104.49 |  | 469210         | 3764770 | 572.86 | 147.80 |  | 468910          | 3764680 | 257.28 | 120.15 |  | 468400           | 3764500 | 111.69 | 83.77 |  | 467400        | 3764800 | 46.60 | 46.60 |  |
| 469509.9     | 3764534 | 1071.52 | 79.29 |  | 469300         | 3764560 | 911.65 | 103.93 |  | 469210         | 3764740 | 572.47 | 147.70 |  | 468910          | 3764560 | 256.85 | 119.95 |  | 468400           | 3764400 | 110.11 | 82.58 |  | 467400        | 3764900 | 46.53 | 46.53 |  |
| 469338.7     | 3764537 | 1070.53 | 79.22 |  | 469300         | 3764710 | 898.17 | 102.39 |  | 469210         | 3764590 | 571.59 | 147.47 |  | 468910          | 3764710 | 256.74 | 119.90 |  | 468400           | 3764900 | 109.81 | 82.35 |  | 467400        | 3764500 | 46.37 | 46.37 |  |
| 469512       | 3764735 | 1069.83 | 79.17 |  | 469300         | 3764590 | 888.03 | 101.24 |  | 469210         | 3764470 | 570.96 | 147.31 |  | 468910          | 3764740 | 255.00 | 119.08 |  | 470500           | 3764600 | 107.09 | 80.31 |  | 467400        | 3764300 | 46.24 | 46.24 |  |
| 469345.7     | 3764736 | 1067.87 | 79.02 |  | 469300         | 3764680 | 879.46 | 100.26 |  | 469210         | 3764710 | 570.15 | 147.10 |  | 468910          | 3764530 | 254.97 | 119.07 |  | 468400           | 3764300 | 106.95 | 80.22 |  | 467400        | 3765000 | 46.12 | 46.12 |  |
| 469360       | 3764740 | 1060.90 | 78.51 |  | 469300         | 3764620 | 866.73 | 98.81  |  | 469210         | 3764620 | 568.77 | 146.74 |  | 468910          | 3764770 | 253.21 | 118.25 |  | 468400           | 3765000 | 106.46 | 79.85 |  | 467400        | 3764200 | 45.77 | 45.77 |  |
| 469330       | 3764770 | 1047.53 | 77.52 |  | 469300         | 3764650 | 862.38 | 98.31  |  | 469210         | 3764680 | 568.36 | 146.64 |  | 468910          | 3764500 | 253.15 | 118.22 |  | 470500           | 3764500 | 106.24 | 79.68 |  | 467400        | 3765100 | 45.73 | 45.73 |  |
| 469509.6     | 3764506 | 1046.63 | 77.45 |  | 469300         | 3764800 | 844.71 | 96.30  |  | 469210         | 3764650 | 567.62 | 146.45 |  | 468910          | 3764800 | 250.58 | 117.02 |  | 469400           | 3765800 | 105.62 | 79.21 |  | 471500        | 3764500 | 45.60 | 45.60 |  |
| 469360       | 3764770 | 1045.96 | 77.40 |  | 469300         | 3764470 | 824.54 | 94.00  |  | 469210         | 3764800 | 566.20 | 146.08 |  | 468910          | 3764470 | 250.46 | 116.97 |  | 470500           | 3764800 | 105.57 | 79.18 |  | 469400        | 3766800 | 45.58 | 45.58 |  |
| 469360       | 3764530 | 1045.35 | 77.36 |  | 469360         | 3764830 | 794.11 | 90.53  |  | 469210         | 3764440 | 549.11 | 141.67 |  | 469420          | 3765250 | 247.53 | 115.60 |  | 469300           | 3765800 | 104.90 | 78.67 |  | 471500        | 3764400 | 45.43 | 45.43 |  |
| 469390       | 3764770 | 1034.85 | 76.58 |  | 469390         | 3764830 | 792.65 | 90.36  |  | 469210         | 3764830 | 548.19 | 141.43 |  | 468910          | 3764830 | 247.17 | 115.43 |  | 469500           | 3765800 | 103.99 | 78.00 |  | 469600        | 3766800 | 45.32 | 45.32 |  |
| 469338.5     | 3764553 | 1034.13 | 76.53 |  | 469420         | 3764830 | 790.09 | 90.07  |  | 469210         | 3764860 | 521.10 | 134.44 |  | 468910          | 3764440 | 246.98 | 115.34 |  | 470500           | 3764400 | 103.36 | 77.52 |  | 469200        | 3766800 | 45.19 | 45.19 |  |
| 469330       | 3764710 | 1030.08 | 76.23 |  | 469330         | 3764830 | 785.63 | 89.56  |  | 469210         | 3764410 | 517.64 | 133.55 |  | 469360          | 3765250 | 246.47 | 115.10 |  | 469200           | 3765800 | 102.99 | 77.25 |  | 467400        | 3764100 | 45.15 | 45.15 |  |
| 469330       | 3764560 | 1029.40 | 76.18 |  | 469450         | 3764830 | 785.05 | 89.50  |  | 469180         | 3764530 | 515.80 | 133.08 |  | 469390          | 3765250 | 246.28 | 115.01 |  | 469600           | 3765800 | 102.58 | 76.94 |  | 471500        | 3764600 | 45.09 | 45.09 |  |
| 469420       | 3764770 | 1027.65 | 76.05 |  | 469270         | 3764500 | 779.55 | 88.87  |  | 469390         | 3764950 | 515.64 | 133.03 |  | 469450          | 3765250 | 245.87 | 114.82 |  | 468400           | 3764200 | 102.39 | 76.79 |  | 469500        | 3766800 | 45.08 | 45.08 |  |
| 469339.4     | 3764715 | 1025.34 | 75.87 |  | 469480         | 3764830 | 777.58 | 88.64  |  | 469180         | 3764500 | 515.31 | 132.95 |  | 469480          | 3765250 | 244.68 | 114.27 |  | 468400           | 3765100 | 102.21 | 76.66 |  | 471500        | 3764900 | 45.02 | 45.02 |  |
| 469510       | 3764500 | 1023.97 | 75.77 |  | 469270         | 3764530 | 777.03 | 88.58  |  | 469420         | 3764950 | 514.44 | 132.73 |  | 469330          | 3765250 | 244.09 | 113.99 |  | 470500           | 3764300 | 101.21 | 75.91 |  | 469100        | 3766800 | 44.91 | 44.91 |  |
| 469373.4     | 3764736 | 1023.28 | 75.72 |  | 469270         | 3764770 | 767.42 | 87.49  |  | 469180         | 3764560 | 513.56 | 132.50 |  | 468910          | 3764860 | 243.52 | 113.72 |  | 468300           | 3764600 | 100.71 | 75.53 |  | 471500        | 3764300 | 44.84 | 44.84 |  |
| 469450       | 3764770 | 1022.88 | 75.69 |  | 469270         | 3764560 | 765.09 | 87.22  |  | 469360         | 3764950 | 513.51 | 132.49 |  | 468880          | 3764620 | 243.13 | 113.54 |  | 469700           | 3765800 | 100.65 | 75.49 |  | 467400        | 3765200 | 44.84 | 44.84 |  |
| 469390       | 3764740 | 1019.91 | 75.47 |  | 469270         | 3764740 | 763.24 | 87.01  |  | 469180         | 3764590 | 511.07 | 131.86 |  | 468880          | 3764650 | 243.12 | 113.54 |  | 468300           | 3764700 | 100.54 | 75.40 |  | 469300        | 3766800 | 44.83 | 44.83 |  |
| 469364       | 3764537 | 1019.33 | 75.43 |  | 469510         | 3764830 | 762.43 | 86.92  |  | 469450         | 3764950 | 510.70 | 131.76 |  | 468880          | 3764590 | 242.65 | 113.32 |  | 468300           | 3764500 | 99.74  | 74.80 |  | 471500        | 3764200 | 44.57 | 44.57 |  |
| 469480       | 3764770 | 1018.34 | 75.36 |  | 469270         | 3764710 | 755.35 | 86.11  |  | 469180         | 3764740 | 510.56 | 131.72 |  | 468910          | 3764410 | 242.62 | 113.30 |  | 468300           | 3764800 | 99.57  | 74.68 |  | 467400        | 3764000 | 44.44 | 44.44 |  |
| 469480       | 3764740 | 1017.92 | 75.33 |  | 469270         | 3764590 | 754.27 | 85.99  |  | 469180         | 3764770 | 509.91 | 131.56 |  | 468880          | 3764680 | 241.71 | 112.88 |  | 469100           | 3765800 | 99.39  | 74.54 |  | 469000        | 3766800 | 44.43 | 44.43 |  |
| 469510       | 3764770 | 1014.75 | 75.09 |  | 469300         | 3764830 | 749.30 | 85.42  |  | 469180         | 3764710 | 509.47 | 131.44 |  | 468880          | 3764710 | 241.54 | 112.80 |  | 468400           | 3764100 | 98.30  | 73.73 |  | 469700        | 3766800 | 44.33 | 44.33 |  |
| 469484.3     | 3764735 | 1012.21 | 74.90 |  | 469270         | 3764680 | 748.08 | 85.28  |  | 469180         | 3764620 | 509.32 | 131.40 |  | 468880          | 3764560 | 241.53 | 112.79 |  | 468300           | 3764400 | 98.13  | 73.60 |  | 467400        | 3765300 | 44.30 | 44.30 |  |
| 469388.6     | 3764511 | 1010.66 | 74.79 |  | 469270         | 3764620 | 745.08 | 84.94  |  | 469180         | 3764470 | 508.93 | 131.30 |  | 469300          | 3765250 | 241.07 | 112.58 |  | 468400           | 3765200 | 97.77  | 73.33 |  | 467300        | 3764700 | 44.29 | 44.29 |  |
| 469330       | 3764500 | 1008.74 | 74.65 |  | 469540         | 3764830 | 743.28 | 84.73  |  | 469180         | 3764680 | 508.71 | 131.25 |  | 468880          | 3764740 | 240.33 | 112.24 |  | 468300           | 3764900 | 97.66  | 73.24 |  | 469800        | 3766800 | 44.13 | 44.13 |  |
| 469420       | 3764740 | 1007.47 | 74.55 |  | 469270         | 3764650 | 742.46 | 84.64  |  | 469180         | 3764650 |        |        |  |                 |         |        |        |  |                  |         |        |       |  |               |         |       |       |  |

APPENDIX 8.1B

## **Calculation of Maximum Hourly, Daily, and Annual Emissions**

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# Calculation of Maximum Hourly, Daily, and Annual Emissions

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Tables presented in this Appendix are as follows:

|               |                                                                |
|---------------|----------------------------------------------------------------|
| Table 8.1B-1A | Estimated GE Performance Data for 30 F Ambient Conditions      |
| Table 8.1B-1B | Estimated GE Performance Data for 80 F Ambient Conditions      |
| Table 8.1B-1C | Estimated GE Performance Data for 97 F Ambient Conditions      |
| Table 8.1B-2  | Turbine Scenarios and Emission Calculations – Normal Operation |
| Table 8.1B-3  | Turbine Scenarios and Emission Calculations - Commissioning    |
| Table 8.1B-4  | Emission Summary – Operation and Commissioning                 |
| Table 8.1B-5  | Turbine Startup and Shutdown Emission Estimates                |
| Table 8.1B-6  | Turbine HAP Emission Estimates                                 |
| Table 8.1B-7  | Cooling Tower Emission Estimates                               |
| Table 8.1B-8  | Natural Gas Analysis and Facility Fuel Usage                   |
| Table 8.1B-9  | Mitigation Liability Calculation                               |

Table 8.1B-1A

## AES Highgrove Power Plant Turbine Performance - 30 F Ambient Temperature



GE Energy

TABLE 8.1B-1A

Performance By: JWAY  
Project Info:

Engine: LMS100 PA  
Deck Info: G0179C - 87o.scp  
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)  
Fuel: Site Gas Fuel#900-774T, 20577 Btu/lb,LHV

Date: 12/19/2005

Time: 6:52:17 AM

Version: 3.4.3

| 30 F                              | Evaporative Cooler ON                                       | Evaporative Cooler OFF |           |           |                   |
|-----------------------------------|-------------------------------------------------------------|------------------------|-----------|-----------|-------------------|
| Load (%)                          |                                                             | 100                    | 75        | 50        | 37                |
| Case #                            |                                                             | 100                    | 101       | 102       | 103               |
| Ambient Conditions                |                                                             |                        |           |           |                   |
| Dry Bulb, °F                      |                                                             | 30.0                   | 30.0      | 30.0      | 30.0              |
| Wet Bulb, °F                      |                                                             | 23.2                   | 23.2      | 23.2      | 23.2              |
| RH, %                             |                                                             | 30.0                   | 30.0      | 30.0      | 30.0              |
| Altitude, ft                      |                                                             | 945.0                  | 945.0     | 945.0     | 945.0             |
| Ambient Pressure, psia            |                                                             | 14.201                 | 14.201    | 14.201    | 14.201            |
| Engine Inlet                      | Evap Cooler Can Not Be Operated At Ambient Temps Below 59 F |                        |           |           | Unit not Operable |
| Comp Inlet Temp, °F               |                                                             | 30.0                   | 30.0      | 30.0      | 30.0              |
| RH, %                             |                                                             | 30.0                   | 30.0      | 30.0      | 30.0              |
| Conditioning                      |                                                             | NONE                   | NONE      | NONE      | NONE              |
| Tons or kBtu/hr                   |                                                             | 0                      | 0         | 0         | 0                 |
| Pressure Losses                   |                                                             |                        |           |           |                   |
| Inlet Loss, inH2O                 |                                                             | 4.50                   | 4.50      | 4.50      | 4.50              |
| Exhaust Loss, inH2O               |                                                             | 12.00                  | 12.00     | 12.00     | 12.00             |
| Partload %                        |                                                             | 100                    | 75        | 50        | 37                |
| kW, Gen Terms                     |                                                             | 102589                 | 76962     | 51325     | 37467             |
| Est. Btu/kW-hr, LHV               |                                                             | 7741                   | 8123      | 8956      | 8825              |
| Fuel Flow                         |                                                             |                        |           |           |                   |
| MMBtu/hr, LHV                     |                                                             | 794.2                  | 625.2     | 459.7     | 368.1             |
| lb/hr                             |                                                             | 38594                  | 30383     | 22339     | 17890             |
| NOx Control                       |                                                             | Water                  | Water     | Water     | Water             |
| Water Injection                   |                                                             |                        |           |           |                   |
| lb/hr                             |                                                             | 35973                  | 25473     | 16332     | 11740             |
| Temperature, °F                   |                                                             | 100.0                  | 100.0     | 100.0     | 100.0             |
| Intercooler                       |                                                             | Water-Air              | Water-Air | Water-Air | Water-Air         |
| Humidification                    |                                                             | OFF                    | OFF       | OFF       | OFF               |
| IC Heat Extraction, btu/s         |                                                             | 22008                  | 16531     | 10396     | 7411              |
| KOD Water Extraction, lb/s        |                                                             | 0.0                    | 0.0       | 0.0       | 0.0               |
| Control Parameters                |                                                             |                        |           |           |                   |
| HP Speed, RPM                     |                                                             | 9271                   | 9101      | 8931      | 8839              |
| LP Speed, RPM                     |                                                             | 5142                   | 4779      | 4560      | 4417              |
| PT Speed, RPM                     |                                                             | 3600                   | 3600      | 3600      | 3600              |
| PS3 - CDP, psia                   |                                                             | 567.0                  | 470.2     | 364.2     | 301.9             |
| T23 - Intcrl Inlet Temp, °F       |                                                             | 301.0                  | 277.1     | 240.1     | 213.8             |
| P23 - Intcrl Inlet Pressure, psia |                                                             | 56.6                   | 50.7      | 42.8      | 37.6              |
| W23 - Intcrl Inlet Flow, lb/s     |                                                             | 453.5                  | 395.8     | 347.4     | 319.9             |
| T25 - HPC Inlet Temp, °F          |                                                             | 100.0                  | 100.0     | 100.0     | 100.0             |
| T3CRF - CDT, °F                   |                                                             | 718                    | 688       | 659       | 642               |
| T48IN, °R                         |                                                             | 1996                   | 1927      | 1861      | 1814              |
| T48IN, °F                         |                                                             | 1536                   | 1467      | 1401      | 1354              |
| Exhaust Parameters                |                                                             |                        |           |           |                   |
| Temperature, °F                   |                                                             | 753.2                  | 746.7     | 765.1     | 785.4             |
| lb/sec                            |                                                             | 471.8                  | 400.3     | 316.9     | 266.5             |
| lb/hr                             |                                                             | 1698336                | 1441079   | 1141003   | 959240            |
| Energy, Btu/s- ref 0 °R           |                                                             | 147288                 | 123566    | 98896     | 84328             |
| Cp, Btu/lb-R                      |                                                             | 0.2735                 | 0.2715    | 0.2705    | 0.2702            |

Table 8.1B-1A

## AES Highgrove Power Plant Turbine Performance - 30 F Ambient Temperature



GE Energy

TABLE 8.1B-1A

Performance By: JWAY  
Project Info:

Engine: LMS100 PA  
Deck Info: G0179C - 87o.scp  
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)  
Fuel: Site Gas Fuel#900-774T, 20577 Btu/lb,LHV

Date: 12/19/2005

Time: 6:52:17 AM

Version: 3.4.3

| 30 F                                                  |  | Evaporative Cooler ON          |          | Evaporative Cooler OFF |          |  |  |
|-------------------------------------------------------|--|--------------------------------|----------|------------------------|----------|--|--|
| Load (%)                                              |  | 100                            | 75       | 50                     | 37       |  |  |
| Emissions (NOT FOR USE IN ENVIRONMENTAL PERMITS)      |  |                                |          |                        |          |  |  |
| NOx ppmvd Ref 15% O2                                  |  | 25                             | 25       | 25                     | 25       |  |  |
| NOx as NO2, lb/hr                                     |  | 80                             | 63       | 46                     | 37       |  |  |
| CO ppmvd Ref 15% O2                                   |  | 157                            | 162      | 145                    | 124      |  |  |
| CO, lb/hr                                             |  | 305.81                         | 247.79   | 162.63                 | 111.35   |  |  |
| CO2, lb/hr                                            |  | 103398.00                      | 81437.05 | 59949.70               | 48065.64 |  |  |
| HC ppmvd Ref 15% O2                                   |  | 8                              | 8        | 7                      | 5        |  |  |
| HC, lb/hr                                             |  | 8.75                           | 7.20     | 4.45                   | 2.75     |  |  |
| SOX as SO2, lb/hr                                     |  | 0.00                           | 0.00     | 0.00                   | 0.00     |  |  |
| Exh Wght % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS) |  |                                |          |                        |          |  |  |
| AR                                                    |  | 1.2301                         | 1.2368   | 1.2430                 | 1.2469   |  |  |
| N2                                                    |  | 72.1429                        | 72.5301  | 72.8964                | 73.1274  |  |  |
| O2                                                    |  | 13.4548                        | 14.1988  | 14.8827                | 15.3037  |  |  |
| CO2                                                   |  | 6.0882                         | 5.6511   | 5.2541                 | 5.0108   |  |  |
| H2O                                                   |  | 7.0622                         | 6.3625   | 5.7063                 | 5.3017   |  |  |
| SO2                                                   |  | 0.0000                         | 0.0000   | 0.0000                 | 0.0000   |  |  |
| CO                                                    |  | 0.0180                         | 0.0172   | 0.0143                 | 0.0116   |  |  |
| HC                                                    |  | 0.0005                         | 0.0005   | 0.0004                 | 0.0003   |  |  |
| NOX                                                   |  | 0.0032                         | 0.0030   | 0.0028                 | 0.0026   |  |  |
| Exh Mole % Dry (NOT FOR USE IN ENVIRONMENTAL PERMITS) |  |                                |          |                        |          |  |  |
| AR                                                    |  | 0.9727                         | 0.9696   | 0.9668                 | 0.9651   |  |  |
| N2                                                    |  | 81.3498                        | 81.0879  | 80.8525                | 80.7098  |  |  |
| O2                                                    |  | 13.2829                        | 13.8977  | 14.4518                | 14.7885  |  |  |
| CO2                                                   |  | 4.3700                         | 4.0217   | 3.7096                 | 3.5406   |  |  |
| H2O                                                   |  | 0.0000                         | 0.0000   | 0.0000                 | 0.0000   |  |  |
| SO2                                                   |  | 0.0000                         | 0.0000   | 0.0000                 | 0.0000   |  |  |
| CO                                                    |  | 0.0203                         | 0.0192   | 0.0158                 | 0.0128   |  |  |
| HC                                                    |  | 0.0010                         | 0.0010   | 0.0008                 | 0.0006   |  |  |
| NOX                                                   |  | 0.0032                         | 0.0030   | 0.0027                 | 0.0026   |  |  |
| Exh Mole % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS) |  |                                |          |                        |          |  |  |
| AR                                                    |  | 0.8655                         | 0.8730   | 0.8802                 | 0.8846   |  |  |
| N2                                                    |  | 72.3858                        | 73.0118  | 73.6080                | 73.9780  |  |  |
| O2                                                    |  | 11.8193                        | 12.5135  | 13.1569                | 13.5554  |  |  |
| CO2                                                   |  | 3.8885                         | 3.6211   | 3.3772                 | 3.2270   |  |  |
| H2O                                                   |  | 11.0190                        | 9.9596   | 8.9602                 | 8.3403   |  |  |
| SO2                                                   |  | 0.0000                         | 0.0000   | 0.0000                 | 0.0000   |  |  |
| CO                                                    |  | 0.0181                         | 0.0173   | 0.0144                 | 0.0117   |  |  |
| HC                                                    |  | 0.0009                         | 0.0009   | 0.0007                 | 0.0005   |  |  |
| NOX                                                   |  | 0.0029                         | 0.0027   | 0.0025                 | 0.0024   |  |  |
| Aero Energy Fuel Number                               |  | 900-774 (So Cal Gas Line 2001) |          |                        |          |  |  |
|                                                       |  | Volume %                       | Weight % |                        |          |  |  |
| Hydrogen                                              |  | 0.0000                         | 0.0000   |                        |          |  |  |
| Methane                                               |  | 96.1878                        | 91.6553  |                        |          |  |  |
| Ethane                                                |  | 1.6674                         | 2.9780   |                        |          |  |  |
| Ethylene                                              |  | 0.0000                         | 0.0000   |                        |          |  |  |
| Propane                                               |  | 0.2679                         | 0.7017   |                        |          |  |  |
| Propylene                                             |  | 0.0000                         | 0.0000   |                        |          |  |  |
| Butane                                                |  | 0.0976                         | 0.3369   |                        |          |  |  |
| Butylene                                              |  | 0.0000                         | 0.0000   |                        |          |  |  |
| Butadiene                                             |  | 0.0000                         | 0.0000   |                        |          |  |  |
| Pentane                                               |  | 0.0072                         | 0.0309   |                        |          |  |  |
| Cyclopentane                                          |  | 0.0000                         | 0.0000   |                        |          |  |  |
| Hexane                                                |  | 0.0223                         | 0.1141   |                        |          |  |  |
| Heptane                                               |  | 0.0000                         | 0.0000   |                        |          |  |  |
| Carbon Monoxide                                       |  | 0.0000                         | 0.0000   |                        |          |  |  |

Table 8.1B-1A

## AES Highgrove Power Plant Turbine Performance - 30 F Ambient Temperature



GE Energy

TABLE 8.1B-1A

Performance By: JWAY  
Project Info:

Engine: LMS100 PA  
Deck Info: G0179C - 87o.scp  
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)  
Fuel: Site Gas Fuel#900-774T, 20577 Btu/lb,LHV

Date: 12/19/2005

Time: 6:52:17 AM

Version: 3.4.3

| 30 F<br>Load (%)             | Evaporative Cooler ON | Evaporative Cooler OFF |        |        |        |
|------------------------------|-----------------------|------------------------|--------|--------|--------|
|                              |                       | 100                    | 75     | 50     | 37     |
| Carbon Dioxide               |                       | 1.3404                 | 3.5040 |        |        |
| Nitrogen                     |                       | 0.4081                 | 0.6791 |        |        |
| Water Vapor                  |                       | 0.0000                 | 0.0000 |        |        |
| Oxygen                       |                       | 0.0000                 | 0.0000 |        |        |
| Hydrogen Sulfide             |                       | 0.0000                 | 0.0000 |        |        |
| Ammonia                      |                       | 0.0000                 | 0.0000 |        |        |
| Btu/lb, LHV                  |                       | 20577                  |        |        |        |
| Btu/scf, LHV                 |                       | 915                    |        |        |        |
| Btu/scf, HHV                 |                       | 1015                   |        |        |        |
| Btu/lb, HHV                  |                       | 22815                  |        |        |        |
| Fuel Temp, °F                |                       | 175.0                  |        |        |        |
| NOx Scalar                   |                       | 1.016                  |        |        |        |
| Specific Gravity             |                       | 0.58                   |        |        |        |
| <b>Engine Exhaust</b>        |                       |                        |        |        |        |
| Exhaust MW                   |                       | 28.1                   | 28.2   | 28.3   | 28.3   |
| Inlet Flow Wet, pps          |                       | 453.8                  | 396.0  | 347.6  | 320.0  |
| Inlet Flow Dry, pps          |                       | 453.3                  | 395.6  | 347.2  | 319.1  |
| Shaft HP                     |                       | 139744                 | 105160 | 70622  | 51977  |
| <b>Generator Information</b> |                       |                        |        |        |        |
| Capacity kW                  |                       | 122564                 | 122564 | 122564 | 122564 |
| Efficiency                   |                       | 0.984                  | 0.981  | 0.975  | 0.967  |
| Inlet Temp, °F               |                       | 30.0                   | 30.0   | 30.0   | 30.0   |
| Gear Box Loss                |                       | N/A                    | N/A    | N/A    | N/A    |
| <b>8th Stage Bleed</b>       |                       |                        |        |        |        |
| Flow, pps                    |                       | 0.0                    | 0.0    | 0.0    | 0.0    |
| Pressure, psia               |                       | 0.000                  | 0.000  | 0.000  | 0.000  |
| Temperature, °R              |                       | 0                      | 0      | 0      | 0      |
| <b>CDP Bleed</b>             |                       |                        |        |        |        |
| Flow, pps                    |                       | 0.0                    | 0.0    | 0.0    | 0.0    |
| Pressure, psia               |                       | 0.000                  | 0.000  | 0.000  | 0.000  |
| <b>CardPack</b>              |                       | 87o                    | 87o    | 87o    | 87o    |
| <b>Intercooler Cardpack</b>  |                       | 87m                    | 87m    | 87m    | 87m    |
| NSI                          |                       | 332                    | 0      | 0      | 326    |
| NSI                          |                       | 0                      | 0      | 0      | 0      |
| NSI                          |                       | 0                      | 0      | 0      | 0      |

Table 8.1B-1B  
AES Highgrove Power Plant Turbine Performance - 80 F Ambient Temperature



GE Energy

TABLE 8.1B-1B

Performance By: JWAY  
Project Info:

Engine: LMS100 PA  
Deck Info: G0179C - 870.scp  
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)  
Fuel: Site Gas Fuel#900-774T, 20577 Btu/lb,LHV

Date: 12/19/2005  
Time: 9:18:35 AM  
Version: 3.4.3

| 80 F                              | Evaporative Cooler ON |           |           |           | Evaporative Cooler OFF |           |           |           |
|-----------------------------------|-----------------------|-----------|-----------|-----------|------------------------|-----------|-----------|-----------|
| Load (%)                          | 100                   | 75        | 50        | 36        | 100                    | 75        | 50        | 35        |
| Case #                            | 100                   | 101       | 102       | 103       | 104                    | 105       | 106       | 107       |
| <b>Ambient Conditions</b>         |                       |           |           |           |                        |           |           |           |
| Dry Bulb, °F                      | 80.0                  | 80.0      | 80.0      | 80.0      | 80.0                   | 80.0      | 80.0      | 80.0      |
| Wet Bulb, °F                      | 69.5                  | 69.5      | 69.5      | 69.5      | 69.5                   | 69.5      | 69.5      | 69.5      |
| RH, %                             | 60.0                  | 60.0      | 60.0      | 60.0      | 60.0                   | 60.0      | 60.0      | 60.0      |
| Altitude, ft                      | 945.0                 | 945.0     | 945.0     | 945.0     | 945.0                  | 945.0     | 945.0     | 945.0     |
| Ambient Pressure, psia            | 14.201                | 14.201    | 14.201    | 14.201    | 14.201                 | 14.201    | 14.201    | 14.201    |
| <b>Engine Inlet</b>               |                       |           |           |           |                        |           |           |           |
| Comp Inlet Temp, °F               | 71.1                  | 71.1      | 71.1      | 71.1      | 80.0                   | 80.0      | 80.0      | 80.0      |
| RH, %                             | 92.7                  | 92.7      | 92.7      | 92.7      | 60.0                   | 60.0      | 60.0      | 60.0      |
| Conditioning                      | EVAP                  | EVAP      | EVAP      | EVAP      | NONE                   | NONE      | NONE      | NONE      |
| Tons or kBtu/hr                   | 0                     | 0         | 0         | 0         | 0                      | 0         | 0         | 0         |
| <b>Pressure Losses</b>            |                       |           |           |           |                        |           |           |           |
| Inlet Loss, inH2O                 | 4.50                  | 4.50      | 4.50      | 4.50      | 4.50                   | 4.50      | 4.50      | 4.50      |
| Exhaust Loss, inH2O               | 12.00                 | 12.00     | 12.00     | 12.00     | 12.00                  | 12.00     | 12.00     | 12.00     |
| Partload %                        | 100                   | 75        | 50        | 36        | 100                    | 75        | 50        | 35        |
| <b>kW, Gen Terms</b>              | 97178                 | 72904     | 48621     | 34513     | 95118                  | 71360     | 47592     | 33058     |
| Est. Btu/kW-hr, LHV               | 7906                  | 8264      | 9123      | 10131     | 7950                   | 8317      | 9196      | 10306     |
| <b>Fuel Flow</b>                  |                       |           |           |           |                        |           |           |           |
| MMBtu/hr, LHV                     | 768.3                 | 602.5     | 443.6     | 349.7     | 756.1                  | 593.5     | 437.7     | 340.7     |
| lb/hr                             | 37337                 | 29281     | 21556     | 16993     | 36747                  | 28841     | 21270     | 16557     |
| <b>NOx Control</b>                | Water                 | Water     | Water     | Water     | Water                  | Water     | Water     | Water     |
| <b>Water Injection</b>            |                       |           |           |           |                        |           |           |           |
| lb/hr                             | 30168                 | 20184     | 11898     | 7929      | 29478                  | 19698     | 12102     | 8038      |
| Temperature, °F                   | 100.0                 | 100.0     | 100.0     | 100.0     | 100.0                  | 100.0     | 100.0     | 100.0     |
| <b>Intercooler</b>                | Water-Air             | Water-Air | Water-Air | Water-Air | Water-Air              | Water-Air | Water-Air | Water-Air |
| Humidification                    | OFF                   | OFF       | OFF       | OFF       | OFF                    | OFF       | OFF       | OFF       |
| IC Heat Extraction, btu/s         | 27287                 | 21289     | 13539     | 9428      | 26813                  | 20954     | 13965     | 9667      |
| KOD Water Extraction, lb/s        | 1.5                   | 1.0       | 0.1       | 0.0       | 0.6                    | 0.1       | 0.0       | 0.0       |
| <b>Control Parameters</b>         |                       |           |           |           |                        |           |           |           |
| HP Speed, RPM                     | 9359                  | 9153      | 8980      | 8875      | 9359                   | 9151      | 8973      | 8863      |
| LP Speed, RPM                     | 5282                  | 4942      | 4718      | 4567      | 5281                   | 4963      | 4739      | 4578      |
| PT Speed, RPM                     | 3600                  | 3600      | 3600      | 3600      | 3600                   | 3600      | 3600      | 3600      |
| PS3 - CDP, psia                   | 539.4                 | 450.0     | 349.2     | 285.6     | 531.1                  | 443.4     | 344.7     | 279.8     |
| T23 - Intcrl Inlet Temp, °F       | 345.0                 | 324.6     | 287.3     | 257.7     | 354.7                  | 334.5     | 297.2     | 265.7     |
| P23 - Intcrl Inlet Pressure, psia | 52.7                  | 48.3      | 40.9      | 35.6      | 51.9                   | 47.6      | 40.4      | 34.9      |
| W23 - Intcrl Inlet Flow, lb/s     | 428.2                 | 369.4     | 323.7     | 297.6     | 420.8                  | 363.2     | 318.5     | 291.9     |
| T25 - HPC Inlet Temp, °F          | 100.0                 | 100.0     | 100.0     | 100.0     | 100.0                  | 100.0     | 100.0     | 100.0     |
| T3CRF - CDT, °F                   | 722                   | 686       | 657       | 639       | 721                    | 685       | 657       | 638       |
| T48IN, °R                         | 2031                  | 1943      | 1878      | 1827      | 2031                   | 1942      | 1877      | 1824      |
| T48IN, °F                         | 1572                  | 1483      | 1418      | 1368      | 1572                   | 1483      | 1417      | 1364      |
| <b>Exhaust Parameters</b>         |                       |           |           |           |                        |           |           |           |
| Temperature, °F                   | 794.3                 | 773.4     | 790.6     | 812.9     | 798.5                  | 777.5     | 793.6     | 817.6     |
| lb/sec                            | 443.1                 | 380.1     | 301.6     | 250.4     | 436.3                  | 374.6     | 297.9     | 244.8     |
| lb/hr                             | 1595134               | 1368444   | 1085920   | 901374    | 1570549                | 1348463   | 1072402   | 881279    |
| Energy, Btu/s- ref 0 °R           | 144445                | 121005    | 97078     | 81848     | 142731                 | 119655    | 96004     | 80219     |
| Cp, Btu/lb-R                      | 0.2774                | 0.2747    | 0.2740    | 0.2739    | 0.2775                 | 0.2748    | 0.2738    | 0.2736    |

## AES Highgrove Power Plant Turbine Performance - 80 F Ambient Temperature



Performance By: **JWAY**  
Project Info:

Date: 12/19/2005  
Time: 9:18:35 AM  
Version: 3.4.3

| 80 F                                                  | Evaporative Cooler ON          |          |          |          | Evaporative Cooler OFF |          |          |          |
|-------------------------------------------------------|--------------------------------|----------|----------|----------|------------------------|----------|----------|----------|
| Load (%)                                              | 100                            | 75       | 50       | 36       | 100                    | 75       | 50       | 35       |
| Emissions (NOT FOR USE IN ENVIRONMENTAL PERMITS)      |                                |          |          |          |                        |          |          |          |
| NOx ppmvd Ref 15% O2                                  | 25                             | 25       | 25       | 25       | 25                     | 25       | 25       | 25       |
| NOx as NO2, lb/hr                                     | 77                             | 61       | 45       | 35       | 76                     | 60       | 44       | 34       |
| CO ppmvd Ref 15% O2                                   | 121                            | 114      | 87       | 68       | 120                    | 112      | 91       | 72       |
| CO, lb/hr                                             | 228.55                         | 168.15   | 94.33    | 58.33    | 222.69                 | 163.38   | 97.73    | 60.31    |
| CO2, lb/hr                                            | 100113.80                      | 78587.72 | 57941.85 | 45724.96 | 98536.16               | 77412.59 | 57167.02 | 44547.97 |
| HC ppmvd Ref 15% O2                                   | 5                              | 5        | 3        | 1        | 5                      | 5        | 3        | 1        |
| HC, lb/hr                                             | 5.57                           | 3.90     | 1.60     | 0.58     | 5.39                   | 3.74     | 1.78     | 0.71     |
| SOX as SO2, lb/hr                                     | 0.00                           | 0.00     | 0.00     | 0.00     | 0.00                   | 0.00     | 0.00     | 0.00     |
| Exh Wght % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS) |                                |          |          |          |                        |          |          |          |
| AR                                                    | 1.2188                         | 1.2255   | 1.2294   | 1.2331   | 1.2188                 | 1.2255   | 1.2312   | 1.2353   |
| N2                                                    | 71.4813                        | 71.8682  | 72.0982  | 72.3138  | 71.4813                | 71.8682  | 72.2034  | 72.4420  |
| O2                                                    | 12.9894                        | 13.8727  | 14.5303  | 14.9754  | 12.9928                | 13.8759  | 14.5690  | 15.0397  |
| CO2                                                   | 6.2762                         | 5.7429   | 5.3357   | 5.0728   | 6.2740                 | 5.7408   | 5.3307   | 5.0549   |
| H2O                                                   | 8.0163                         | 7.2752   | 6.7948   | 6.3957   | 8.0153                 | 7.2742   | 6.6535   | 6.2185   |
| SO2                                                   | 0.0000                         | 0.0000   | 0.0000   | 0.0000   | 0.0000                 | 0.0000   | 0.0000   | 0.0000   |
| CO                                                    | 0.0143                         | 0.0123   | 0.0087   | 0.0065   | 0.0142                 | 0.0121   | 0.0091   | 0.0068   |
| HC                                                    | 0.0003                         | 0.0003   | 0.0001   | 0.0001   | 0.0003                 | 0.0003   | 0.0002   | 0.0001   |
| NOX                                                   | 0.0033                         | 0.0030   | 0.0028   | 0.0027   | 0.0033                 | 0.0030   | 0.0028   | 0.0027   |
| Exh Mole % Dry (NOT FOR USE IN ENVIRONMENTAL PERMITS) |                                |          |          |          |                        |          |          |          |
| AR                                                    | 0.9744                         | 0.9706   | 0.9677   | 0.9659   | 0.9744                 | 0.9705   | 0.9676   | 0.9657   |
| N2                                                    | 81.4870                        | 81.1666  | 80.9280  | 80.7728  | 81.4857                | 81.1653  | 80.9210  | 80.7581  |
| O2                                                    | 12.9639                        | 13.7168  | 14.2791  | 14.6445  | 12.9671                | 13.7198  | 14.2950  | 14.6787  |
| CO2                                                   | 4.5543                         | 4.1286   | 3.8124   | 3.6068   | 4.5527                 | 4.1271   | 3.8030   | 3.5871   |
| H2O                                                   | 0.0000                         | 0.0000   | 0.0000   | 0.0000   | 0.0000                 | 0.0000   | 0.0000   | 0.0000   |
| SO2                                                   | 0.0000                         | 0.0000   | 0.0000   | 0.0000   | 0.0000                 | 0.0000   | 0.0000   | 0.0000   |
| CO                                                    | 0.0163                         | 0.0139   | 0.0098   | 0.0072   | 0.0162                 | 0.0137   | 0.0102   | 0.0076   |
| HC                                                    | 0.0007                         | 0.0006   | 0.0003   | 0.0001   | 0.0007                 | 0.0006   | 0.0003   | 0.0002   |
| NOX                                                   | 0.0034                         | 0.0030   | 0.0028   | 0.0027   | 0.0034                 | 0.0030   | 0.0028   | 0.0026   |
| Exh Mole % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS) |                                |          |          |          |                        |          |          |          |
| AR                                                    | 0.8531                         | 0.8606   | 0.8651   | 0.8693   | 0.8531                 | 0.8606   | 0.8671   | 0.8717   |
| N2                                                    | 71.3480                        | 71.9709  | 72.3475  | 72.6969  | 71.3482                | 71.9711  | 72.5126  | 72.8995  |
| O2                                                    | 11.3509                        | 12.1628  | 12.7651  | 13.1803  | 11.3539                | 12.1656  | 12.8097  | 13.2503  |
| CO2                                                   | 3.9877                         | 3.6608   | 3.4082   | 3.2462   | 3.9863                 | 3.6595   | 3.4078   | 3.2380   |
| H2O                                                   | 12.4424                        | 11.3294  | 10.6026  | 9.9903   | 12.4408                | 11.3278  | 10.3908  | 9.7311   |
| SO2                                                   | 0.0000                         | 0.0000   | 0.0000   | 0.0000   | 0.0000                 | 0.0000   | 0.0000   | 0.0000   |
| CO                                                    | 0.0143                         | 0.0123   | 0.0087   | 0.0065   | 0.0142                 | 0.0121   | 0.0092   | 0.0068   |
| HC                                                    | 0.0006                         | 0.0005   | 0.0003   | 0.0001   | 0.0006                 | 0.0005   | 0.0003   | 0.0001   |
| NOX                                                   | 0.0029                         | 0.0027   | 0.0025   | 0.0024   | 0.0029                 | 0.0027   | 0.0025   | 0.0024   |
| Aero Energy Fuel Number                               | 900-774 (So Cal Gas Line 2001) |          |          |          |                        |          |          |          |
|                                                       | Volume %                       | Weight % |          |          |                        |          |          |          |
| Hydrogen                                              | 0.0000                         | 0.0000   |          |          |                        |          |          |          |
| Methane                                               | 96.1878                        | 91.6553  |          |          |                        |          |          |          |
| Ethane                                                | 1.6674                         | 2.9780   |          |          |                        |          |          |          |
| Ethylene                                              | 0.0000                         | 0.0000   |          |          |                        |          |          |          |
| Propane                                               | 0.2679                         | 0.7017   |          |          |                        |          |          |          |
| Propylene                                             | 0.0000                         | 0.0000   |          |          |                        |          |          |          |
| Butane                                                | 0.0976                         | 0.3369   |          |          |                        |          |          |          |
| Butylene                                              | 0.0000                         | 0.0000   |          |          |                        |          |          |          |
| Butadiene                                             | 0.0000                         | 0.0000   |          |          |                        |          |          |          |
| Pentane                                               | 0.0072                         | 0.0309   |          |          |                        |          |          |          |
| Cyclopentane                                          | 0.0000                         | 0.0000   |          |          |                        |          |          |          |
| Hexane                                                | 0.0223                         | 0.1141   |          |          |                        |          |          |          |
| Heptane                                               | 0.0000                         | 0.0000   |          |          |                        |          |          |          |
| Carbon Monoxide                                       | 0.0000                         | 0.0000   |          |          |                        |          |          |          |
| Carbon Dioxide                                        | 1.3404                         | 3.5040   |          |          |                        |          |          |          |
| Nitrogen                                              | 0.4081                         | 0.6791   |          |          |                        |          |          |          |
| Water Vapor                                           | 0.0000                         | 0.0000   |          |          |                        |          |          |          |

Table 8.1B-1B

## AES Highgrove Power Plant Turbine Performance - 80 F Ambient Temperature



GE Energy

TABLE 8.1B-1B

Performance By: JWAY  
Project Info:

Engine: LMS100 PA  
Deck Info: G0179C - 870.scp  
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)  
Fuel: Site Gas Fuel#900-774T, 20577 Btu/lb,LHV

Date: 12/19/2005

Time: 9:18:35 AM

Version: 3.4.3

| 80 F                         | Evaporative Cooler ON |        |        |        | Evaporative Cooler OFF |        |        |        |
|------------------------------|-----------------------|--------|--------|--------|------------------------|--------|--------|--------|
| Load (%)                     | 100                   | 75     | 50     | 36     | 100                    | 75     | 50     | 35     |
| Oxygen                       | 0.0000                | 0.0000 |        |        |                        |        |        |        |
| Hydrogen Sulfide             | 0.0000                | 0.0000 |        |        |                        |        |        |        |
| Ammonia                      | 0.0000                | 0.0000 |        |        |                        |        |        |        |
| Btu/lb, LHV                  | 20577                 |        |        |        |                        |        |        |        |
| Btu/scf, LHV                 | 915                   |        |        |        |                        |        |        |        |
| Btu/scf, HHV                 | 1015                  |        |        |        |                        |        |        |        |
| Btu/lb, HHV                  | 22815                 |        |        |        |                        |        |        |        |
| Fuel Temp, °F                | 175.0                 |        |        |        |                        |        |        |        |
| NOx Scalar                   | 1.016                 |        |        |        |                        |        |        |        |
| Specific Gravity             | 0.58                  |        |        |        |                        |        |        |        |
| <b>Engine Exhaust</b>        |                       |        |        |        |                        |        |        |        |
| Exhaust MW                   | 28.0                  | 28.1   | 28.1   | 28.2   | 28.0                   | 28.1   | 28.1   | 28.2   |
| Inlet Flow Wet, pps          | 428.4                 | 369.5  | 323.9  | 297.8  | 421.0                  | 363.4  | 318.7  | 292.0  |
| Inlet Flow Dry, pps          | 421.7                 | 363.7  | 318.8  | 293.1  | 415.2                  | 358.5  | 314.3  | 288.0  |
| Shaft HP                     | 132437                | 99690  | 66983  | 48005  | 129655                 | 97608  | 65598  | 46048  |
| <b>Generator Information</b> |                       |        |        |        |                        |        |        |        |
| Capacity kW                  | 128475                | 128475 | 128475 | 128475 | 130807                 | 128475 | 128475 | 128475 |
| Efficiency                   | 0.984                 | 0.981  | 0.973  | 0.964  | 0.980                  | 0.980  | 0.973  | 0.963  |
| Inlet Temp, °F               | 80.0                  | 80.0   | 80.0   | 80.0   | 80.0                   | 80.0   | 80.0   | 80.0   |
| Gear Box Loss                | N/A                   | N/A    | N/A    | N/A    | N/A                    | N/A    | N/A    | N/A    |
| <b>8th Stage Bleed</b>       |                       |        |        |        |                        |        |        |        |
| Flow, pps                    | 0.0                   | 0.0    | 0.0    | 0.0    | 0.0                    | 0.0    | 0.0    | 0.0    |
| Pressure, psia               | 0.000                 | 0.000  | 0.000  | 0.000  | 0.000                  | 0.000  | 0.000  | 0.000  |
| Temperature, °R              | 0                     | 0      | 0      | 0      | 0                      | 0      | 0      | 0      |
| <b>CDP Bleed</b>             |                       |        |        |        |                        |        |        |        |
| Flow, pps                    | 0.0                   | 0.0    | 0.0    | 0.0    | 0.0                    | 0.0    | 0.0    | 0.0    |
| Pressure, psia               | 0.000                 | 0.000  | 0.000  | 0.000  | 0.000                  | 0.000  | 0.000  | 0.000  |
| <b>CardPack</b>              |                       |        |        |        |                        |        |        |        |
| Intercooler Cardpack         | 87o                   | 87o    | 87o    | 87o    | 87o                    | 87o    | 87o    | 87o    |
|                              | 87m                   | 87m    | 87m    | 87m    | 87m                    | 87m    | 87m    | 87m    |
| NSI                          | 334                   | 0      | 0      | 326    | 334                    | 0      | 0      | 326    |
| NSI                          | 0                     | 0      | 0      | 0      | 0                      | 0      | 0      | 0      |
| NSI                          | 0                     | 0      | 0      | 0      | 0                      | 0      | 0      | 0      |

Table 8.1B-1C  
**AES Highgrove Power Plant Turbine Performance - 97 F Ambient Temperature**



GE Energy

TABLE 8.1B-1C

Performance By: **JWAY**  
 Project Info:

Engine: **LMS100 PA**  
 Deck Info: **G0179C - 870.scp**  
 Generator: **BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)**  
 Fuel: **Site Gas Fuel#900-774T, 20577 Btu/lb,LHV**

Date: **12/19/2005**  
 Time: **9:12:48 AM**  
 Version: **3.4.3**

| 97 F                              | Evaporative Cooler ON |                  |                  |                  | Evaporative Cooler OFF |                  |                  |                  |
|-----------------------------------|-----------------------|------------------|------------------|------------------|------------------------|------------------|------------------|------------------|
| Load (%)                          | 100                   | 75               | 50               | 36               | 100                    | 75               | 50               | 34               |
| Case #                            | 100                   | 101              | 102              | 103              | 104                    | 105              | 106              | 107              |
| <b>Ambient Conditions</b>         |                       |                  |                  |                  |                        |                  |                  |                  |
| Dry Bulb, °F                      | 97.0                  | 97.0             | 97.0             | 97.0             | 97.0                   | 97.0             | 97.0             | 97.0             |
| Wet Bulb, °F                      | 66.9                  | 66.9             | 66.9             | 66.9             | 66.9                   | 66.9             | 66.9             | 66.9             |
| RH, %                             | 20.0                  | 20.0             | 20.0             | 20.0             | 20.0                   | 20.0             | 20.0             | 20.0             |
| Altitude, ft                      | 945.0                 | 945.0            | 945.0            | 945.0            | 945.0                  | 945.0            | 945.0            | 945.0            |
| Ambient Pressure, psia            | 14.201                | 14.201           | 14.201           | 14.201           | 14.201                 | 14.201           | 14.201           | 14.201           |
| <b>Engine Inlet</b>               |                       |                  |                  |                  |                        |                  |                  |                  |
| Comp Inlet Temp, °F               | 71.4                  | 71.4             | 71.4             | 71.4             | 97.0                   | 97.0             | 97.0             | 97.0             |
| RH, %                             | 79.6                  | 79.6             | 79.6             | 79.6             | 20.0                   | 20.0             | 20.0             | 20.0             |
| Conditioning                      | EVAP                  | EVAP             | EVAP             | EVAP             | NONE                   | NONE             | NONE             | NONE             |
| Tons or kBtu/hr                   | 0                     | 0                | 0                | 0                | 0                      | 0                | 0                | 0                |
| <b>Pressure Losses</b>            |                       |                  |                  |                  |                        |                  |                  |                  |
| Inlet Loss, inH2O                 | 4.50                  | 4.50             | 4.50             | 4.50             | 4.50                   | 4.50             | 4.50             | 4.50             |
| Exhaust Loss, inH2O               | 12.00                 | 12.00            | 12.00            | 12.00            | 12.00                  | 12.00            | 12.00            | 12.00            |
| Partload %                        | 100                   | 75               | 50               | 36               | 100                    | 75               | 50               | 34               |
| <b>kW, Gen Terms</b>              | <b>97614</b>          | <b>73232</b>     | <b>48839</b>     | <b>35821</b>     | <b>91476</b>           | <b>68629</b>     | <b>45772</b>     | <b>30901</b>     |
| Est. Btu/kW-hr, LHV               | 7897                  | 8254             | 9116             | 10088            | 8054                   | 8443             | 9344             | 10607            |
| <b>Fuel Flow</b>                  |                       |                  |                  |                  |                        |                  |                  |                  |
| MMBtu/hr, LHV                     | 770.8                 | 604.4            | 445.2            | 353.3            | 736.7                  | 579.4            | 427.7            | 327.8            |
| lb/hr                             | 37462                 | 29375            | 21637            | 17179            | 35803                  | 28158            | 20786            | 15929            |
| <b>NOx Control</b>                | <b>Water</b>          | <b>Water</b>     | <b>Water</b>     | <b>Water</b>     | <b>Water</b>           | <b>Water</b>     | <b>Water</b>     | <b>Water</b>     |
| <b>Water Injection</b>            |                       |                  |                  |                  |                        |                  |                  |                  |
| lb/hr                             | 30341                 | 20304            | 12439            | 8551             | 30556                  | 21044            | 13230            | 8695             |
| Temperature, °F                   | 100.0                 | 100.0            | 100.0            | 100.0            | 100.0                  | 100.0            | 100.0            | 100.0            |
| <b>Intercooler</b>                | <b>Water-Air</b>      | <b>Water-Air</b> | <b>Water-Air</b> | <b>Water-Air</b> | <b>Water-Air</b>       | <b>Water-Air</b> | <b>Water-Air</b> | <b>Water-Air</b> |
| Humidification                    | OFF                   | OFF              | OFF              | OFF              | OFF                    | OFF              | OFF              | OFF              |
| IC Heat Extraction, btu/s         | 26514                 | 20610            | 13554            | 9598             | 27185                  | 21769            | 14920            | 10236            |
| KOD Water Extraction, lb/s        | 0.7                   | 0.2              | 0.0              | 0.0              | 0.0                    | 0.0              | 0.0              | 0.0              |
| <b>Control Parameters</b>         |                       |                  |                  |                  |                        |                  |                  |                  |
| HP Speed, RPM                     | 9359                  | 9153             | 8976             | 8873             | 9352                   | 9138             | 8952             | 8841             |
| LP Speed, RPM                     | 5285                  | 4942             | 4718             | 4571             | 5290                   | 5005             | 4777             | 4618             |
| PT Speed, RPM                     | 3600                  | 3600             | 3600             | 3600             | 3600                   | 3600             | 3600             | 3600             |
| PS3 - CDP, psia                   | 541.1                 | 451.3            | 350.4            | 288.1            | 516.9                  | 432.3            | 336.9            | 268.8            |
| T23 - Intcrl Inlet Temp, °F       | 346.3                 | 325.9            | 288.4            | 259.5            | 373.2                  | 353.0            | 316.4            | 282.5            |
| P23 - Intcrl Inlet Pressure, psia | 52.8                  | 48.4             | 41.0             | 35.8             | 50.4                   | 46.4             | 39.6             | 33.9             |
| W23 - Intcrl Inlet Flow, lb/s     | 428.7                 | 369.7            | 324.2            | 298.6            | 408.7                  | 353.8            | 309.4            | 282.3            |
| T25 - HPC Inlet Temp, °F          | 100.0                 | 100.0            | 100.0            | 100.0            | 100.0                  | 100.0            | 100.0            | 100.0            |
| T3CRF - CDT, °F                   | 722                   | 686              | 658              | 640              | 722                    | 687              | 658              | 638              |
| T48IN, °R                         | 2031                  | 1943             | 1877             | 1828             | 2031                   | 1942             | 1874             | 1819             |
| T48IN, °F                         | 1572                  | 1483             | 1418             | 1369             | 1572                   | 1483             | 1414             | 1359             |
| <b>Exhaust Parameters</b>         |                       |                  |                  |                  |                        |                  |                  |                  |
| Temperature, °F                   | 793.4                 | 772.6            | 789.3            | 818.6            | 805.6                  | 784.1            | 797.6            | 825.0            |
| lb/sec                            | 444.5                 | 381.3            | 302.8            | 252.6            | 424.9                  | 365.5            | 291.7            | 236.6            |
| lb/hr                             | 1600377               | 1372634          | 1089993          | 909529           | 1529705                | 1315817          | 1050195          | 851748           |
| Energy, Btu/s- ref 0 °R           | 144808                | 121291           | 97229            | 82338            | 139505                 | 117054           | 93990            | 77702            |
| Cp, Btu/lb-R                      | 0.2773                | 0.2746           | 0.2737           | 0.2734           | 0.2771                 | 0.2741           | 0.2729           | 0.2727           |

Table 8.1B-1C  
AES Highgrove Power Plant Turbine Performance - 97 F Ambient Temperature



GE Energy

TABLE 8.1B-1C

Performance By: JWAY  
Project Info:

Engine: LMS100 PA  
Deck Info: G0179C - 870.scp  
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)  
Fuel: Site Gas Fuel#900-774T, 20577 Btu/lb,LHV

Date: 12/19/2005

Time: 9:12:48 AM

Version: 3.4.3

| 97 F                                                         | Evaporative Cooler ON |          |          |          | Evaporative Cooler OFF |          |          |          |
|--------------------------------------------------------------|-----------------------|----------|----------|----------|------------------------|----------|----------|----------|
| Load (%)                                                     | 100                   | 75       | 50       | 36       | 100                    | 75       | 50       | 34       |
| <b>Emissions (NOT FOR USE IN ENVIRONMENTAL PERMITS)</b>      |                       |          |          |          |                        |          |          |          |
| NOx ppmvd Ref 15% O2                                         | 25                    | 25       | 25       | 25       | 25                     | 25       | 25       | 25       |
| NOx as NO2, lb/hr                                            | 78                    | 61       | 45       | 35       | 74                     | 58       | 43       | 33       |
| CO ppmvd Ref 15% O2                                          | 122                   | 114      | 93       | 75       | 131                    | 130      | 111      | 87       |
| CO, lb/hr                                                    | 230.09                | 169.31   | 101.00   | 65.05    | 237.16                 | 183.68   | 115.70   | 70.19    |
| CO2, lb/hr                                                   | 100447.10             | 78838.30 | 58148.84 | 46182.14 | 95971.88               | 75540.52 | 55833.44 | 42841.20 |
| HC ppmvd Ref 15% O2                                          | 5                     | 5        | 3        | 2        | 6                      | 6        | 4        | 3        |
| HC, lb/hr                                                    | 5.63                  | 3.94     | 1.88     | 0.85     | 6.12                   | 4.69     | 2.61     | 1.29     |
| SOX as SO2, lb/hr                                            | 0.00                  | 0.00     | 0.00     | 0.00     | 0.00                   | 0.00     | 0.00     | 0.00     |
| <b>Exh Wght % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)</b> |                       |          |          |          |                        |          |          |          |
| AR                                                           | 1.2189                | 1.2255   | 1.2311   | 1.2349   | 1.2227                 | 1.2304   | 1.2368   | 1.2412   |
| N2                                                           | 71.4821               | 71.8692  | 72.1957  | 72.4174  | 71.7103                | 72.1578  | 72.5318  | 72.7919  |
| O2                                                           | 12.9892               | 13.8719  | 14.5606  | 14.9977  | 13.0611                | 13.9616  | 14.6871  | 15.1807  |
| CO2                                                          | 6.2765                | 5.7436   | 5.3348   | 5.0787   | 6.2739                 | 5.7410   | 5.3165   | 5.0298   |
| H2O                                                          | 8.0153                | 7.2743   | 6.6656   | 6.2615   | 7.7127                 | 6.8919   | 6.2138   | 5.7453   |
| SO2                                                          | 0.0000                | 0.0000   | 0.0000   | 0.0000   | 0.0000                 | 0.0000   | 0.0000   | 0.0000   |
| CO                                                           | 0.0144                | 0.0123   | 0.0093   | 0.0072   | 0.0155                 | 0.0140   | 0.0110   | 0.0082   |
| HC                                                           | 0.0004                | 0.0003   | 0.0002   | 0.0001   | 0.0004                 | 0.0004   | 0.0002   | 0.0001   |
| NOX                                                          | 0.0033                | 0.0030   | 0.0028   | 0.0027   | 0.0033                 | 0.0030   | 0.0028   | 0.0027   |
| <b>Exh Mole % Dry (NOT FOR USE IN ENVIRONMENTAL PERMITS)</b> |                       |          |          |          |                        |          |          |          |
| AR                                                           | 0.9744                | 0.9706   | 0.9677   | 0.9659   | 0.9742                 | 0.9704   | 0.9674   | 0.9654   |
| N2                                                           | 81.4871               | 81.1669  | 80.9236  | 80.7723  | 81.4747                | 81.1531  | 80.9004  | 80.7314  |
| O2                                                           | 12.9636               | 13.7159  | 14.2888  | 14.6452  | 12.9919                | 13.7470  | 14.3420  | 14.7408  |
| CO2                                                          | 4.5545                | 4.1291   | 3.8064   | 3.6058   | 4.5374                 | 4.1100   | 3.7747   | 3.5509   |
| H2O                                                          | 0.0000                | 0.0000   | 0.0000   | 0.0000   | 0.0000                 | 0.0000   | 0.0000   | 0.0000   |
| SO2                                                          | 0.0000                | 0.0000   | 0.0000   | 0.0000   | 0.0000                 | 0.0000   | 0.0000   | 0.0000   |
| CO                                                           | 0.0164                | 0.0139   | 0.0104   | 0.0080   | 0.0176                 | 0.0157   | 0.0123   | 0.0091   |
| HC                                                           | 0.0007                | 0.0006   | 0.0003   | 0.0002   | 0.0008                 | 0.0007   | 0.0005   | 0.0003   |
| NOX                                                          | 0.0034                | 0.0030   | 0.0028   | 0.0027   | 0.0034                 | 0.0030   | 0.0028   | 0.0026   |
| <b>Exh Mole % Wet (NOT FOR USE IN ENVIRONMENTAL PERMITS)</b> |                       |          |          |          |                        |          |          |          |
| AR                                                           | 0.8531                | 0.8606   | 0.8669   | 0.8712   | 0.8574                 | 0.8660   | 0.8733   | 0.8783   |
| N2                                                           | 71.3493               | 71.9724  | 72.5003  | 72.8596  | 71.7038                | 72.4238  | 73.0295  | 73.4538  |
| O2                                                           | 11.3508               | 12.1621  | 12.8015  | 13.2105  | 11.4339                | 12.2683  | 12.9467  | 13.4414  |
| CO2                                                          | 3.9879                | 3.6613   | 3.4102   | 3.2526   | 3.9933                 | 3.6679   | 3.4074   | 3.2308   |
| H2O                                                          | 12.4409               | 11.3280  | 10.4090  | 9.7953   | 11.9925                | 10.7567  | 9.7290   | 9.0153   |
| SO2                                                          | 0.0000                | 0.0000   | 0.0000   | 0.0000   | 0.0000                 | 0.0000   | 0.0000   | 0.0000   |
| CO                                                           | 0.0144                | 0.0124   | 0.0093   | 0.0072   | 0.0155                 | 0.0140   | 0.0111   | 0.0083   |
| HC                                                           | 0.0006                | 0.0005   | 0.0003   | 0.0002   | 0.0007                 | 0.0006   | 0.0004   | 0.0003   |
| NOX                                                          | 0.0029                | 0.0027   | 0.0025   | 0.0024   | 0.0029                 | 0.0027   | 0.0025   | 0.0024   |
| <b>Aero Energy Fuel Number</b>                               |                       |          |          |          |                        |          |          |          |
| <b>as Line 2001)</b>                                         |                       |          |          |          |                        |          |          |          |
|                                                              | Volume %              | Weight % |          |          |                        |          |          |          |
| Hydrogen                                                     | 0.0000                | 0.0000   |          |          |                        |          |          |          |
| Methane                                                      | 96.1878               | 91.6553  |          |          |                        |          |          |          |
| Ethane                                                       | 1.6674                | 2.9780   |          |          |                        |          |          |          |
| Ethylene                                                     | 0.0000                | 0.0000   |          |          |                        |          |          |          |
| Propane                                                      | 0.2679                | 0.7017   |          |          |                        |          |          |          |
| Propylene                                                    | 0.0000                | 0.0000   |          |          |                        |          |          |          |
| Butane                                                       | 0.0976                | 0.3369   |          |          |                        |          |          |          |
| Butylene                                                     | 0.0000                | 0.0000   |          |          |                        |          |          |          |
| Butadiene                                                    | 0.0000                | 0.0000   |          |          |                        |          |          |          |
| Pentane                                                      | 0.0072                | 0.0309   |          |          |                        |          |          |          |
| Cyclopentane                                                 | 0.0000                | 0.0000   |          |          |                        |          |          |          |
| Hexane                                                       | 0.0223                | 0.1141   |          |          |                        |          |          |          |
| Heptane                                                      | 0.0000                | 0.0000   |          |          |                        |          |          |          |
| Carbon Monoxide                                              | 0.0000                | 0.0000   |          |          |                        |          |          |          |
| Carbon Dioxide                                               | 1.3404                | 3.5040   |          |          |                        |          |          |          |
| Nitrogen                                                     | 0.4081                | 0.6791   |          |          |                        |          |          |          |
| Water Vapor                                                  | 0.0000                | 0.0000   |          |          |                        |          |          |          |

Table 8.1B-1C

## AES Highgrove Power Plant Turbine Performance - 97 F Ambient Temperature



GE Energy

TABLE 8.1B-1C

Performance By: JWAY  
Project Info:

Engine: LMS100 PA  
Deck Info: G0179C - 87o.scp  
Generator: BDAX 98-330ER 60Hz, 13.8kV, 0.9PF (35410)  
Fuel: Site Gas Fuel#900-774T, 20577 Btu/lb,LHV

Date: 12/19/2005

Time: 9:12:48 AM

Version: 3.4.3

| 97 F                         | Evaporative Cooler ON |        |        |        | Evaporative Cooler OFF |        |        |        |
|------------------------------|-----------------------|--------|--------|--------|------------------------|--------|--------|--------|
| Load (%)                     | 100                   | 75     | 50     | 36     | 100                    | 75     | 50     | 34     |
| Oxygen                       | 0.0000                | 0.0000 |        |        |                        |        |        |        |
| Hydrogen Sulfide             | 0.0000                | 0.0000 |        |        |                        |        |        |        |
| Ammonia                      | 0.0000                | 0.0000 |        |        |                        |        |        |        |
| Btu/lb, LHV                  | 20577                 |        |        |        |                        |        |        |        |
| Btu/scf, LHV                 | 915                   |        |        |        |                        |        |        |        |
| Btu/scf, HHV                 | 1015                  |        |        |        |                        |        |        |        |
| Btu/lb, HHV                  | 22815                 |        |        |        |                        |        |        |        |
| Fuel Temp, °F                | 175.0                 |        |        |        |                        |        |        |        |
| NOx Scalar                   | 1.016                 |        |        |        |                        |        |        |        |
| Specific Gravity             | 0.58                  |        |        |        |                        |        |        |        |
| <b>Engine Exhaust</b>        |                       |        |        |        |                        |        |        |        |
| Exhaust MW                   | 28.0                  | 28.1   | 28.1   | 28.2   | 28.0                   | 28.1   | 28.2   | 28.3   |
| Inlet Flow Wet, pps          | 429.0                 | 369.9  | 324.3  | 288.6  | 408.9                  | 354.0  | 309.5  | 282.4  |
| Inlet Flow Dry, pps          | 423.1                 | 364.9  | 319.9  | 294.7  | 405.8                  | 351.2  | 307.1  | 280.3  |
| Shaft HP                     | 133026                | 100131 | 67276  | 46653  | 124740                 | 93928  | 63149  | 43148  |
| <b>Generator Information</b> |                       |        |        |        |                        |        |        |        |
| Capacity kW                  | 117210                | 117210 | 117210 | 117210 | 130767                 | 117210 | 117210 | 117210 |
| Efficiency                   | 0.984                 | 0.981  | 0.974  | 0.965  | 0.980                  | 0.980  | 0.972  | 0.960  |
| Inlet Temp, °F               | 97.0                  | 97.0   | 97.0   | 97.0   | 97.0                   | 97.0   | 97.0   | 97.0   |
| Gear Box Loss                | N/A                   | N/A    | N/A    | N/A    | N/A                    | N/A    | N/A    | N/A    |
| <b>8th Stage Bleed</b>       |                       |        |        |        |                        |        |        |        |
| Flow, pps                    | 0.0                   | 0.0    | 0.0    | 0.0    | 0.0                    | 0.0    | 0.0    | 0.0    |
| Pressure, psia               | 0.000                 | 0.000  | 0.000  | 0.000  | 0.000                  | 0.000  | 0.000  | 0.000  |
| Temperature, °R              | 0                     | 0      | 0      | 0      | 0                      | 0      | 0      | 0      |
| <b>CDP Bleed</b>             |                       |        |        |        |                        |        |        |        |
| Flow, pps                    | 0.0                   | 0.0    | 0.0    | 0.0    | 0.0                    | 0.0    | 0.0    | 0.0    |
| Pressure, psia               | 0.000                 | 0.000  | 0.000  | 0.000  | 0.000                  | 0.000  | 0.000  | 0.000  |
| <b>CardPack</b>              |                       |        |        |        |                        |        |        |        |
| Intercooler Cardpack         | 87o                   | 87o    | 87o    | 87o    | 87o                    | 87o    | 87o    | 87o    |
|                              | 87m                   | 87m    | 87m    | 87m    | 87m                    | 87m    | 87m    | 87m    |
| NSI                          | 334                   | 0      | 0      | 328    | 334                    | 0      | 0      | 328    |
| NSI                          | 0                     | 0      | 0      | 0      | 0                      | 0      | 0      | 0      |
| NSI                          | 0                     | 0      | 0      | 0      | 0                      | 0      | 0      | 0      |

TABLE 8.1B-2  
AES Highgrove Power Plant Emission Scenarios - Normal Operation

| Daily Emissions Scenarios based on Maximum daily operation of   |            |         |           |           | 24 hours/day              |                 |                                 |                          |        |       |       |        |       |       |        |       |              |        |       |                              |        |       |               |               |                 |                   |                   |      |      |      |
|-----------------------------------------------------------------|------------|---------|-----------|-----------|---------------------------|-----------------|---------------------------------|--------------------------|--------|-------|-------|--------|-------|-------|--------|-------|--------------|--------|-------|------------------------------|--------|-------|---------------|---------------|-----------------|-------------------|-------------------|------|------|------|
| Annual Emissions Scenarios based on Maximum annual operation of |            |         |           |           | 5475 hours/year           |                 |                                 |                          |        |       |       |        |       |       |        |       |              |        |       |                              |        |       |               |               |                 |                   |                   |      |      |      |
| Normal Operation Scenario(1)                                    |            |         |           |           | Fuel Input <sup>1,3</sup> |                 |                                 | Emissions <sup>1,3</sup> |        |       |       |        |       |       |        |       |              |        |       | Exhaust Stack Conditions     |        |       |               |               |                 |                   |                   |      |      |      |
| Ambient<br>Temp F                                               | GE<br>Date | RH<br>% | Evap<br>% | Load<br>% | Per CT<br>MMBtu/hr (HHV)  | Per CT<br>lb/hr | Per CT<br>MMFt <sup>3</sup> /hr | NOx                      |        |       | CO    |        |       | VOC   |        |       | Particulates |        |       | SO <sub>2</sub> <sup>2</sup> |        |       | Stack<br>Temp | Stack<br>Flow | Stack<br>Height | Stack<br>Diameter | Stack<br>Velocity |      |      |      |
|                                                                 |            |         |           |           |                           |                 |                                 | lb/hr                    | lb/day | lb/yr | lb/hr | lb/day | lb/yr | lb/hr | lb/day | lb/yr | lb/hr        | lb/day | lb/yr | lb/hr                        | lb/day | lb/yr | lb/hr         | lb/day        | lb/yr           | F                 | ACFM              | Feet | Feet | ft/s |
|                                                                 |            |         |           |           |                           |                 |                                 |                          |        |       |       |        |       |       |        |       |              |        |       |                              |        |       |               |               |                 |                   |                   |      |      |      |
| 30                                                              | 12/19/2005 | 30      | Off       | Base      | 881                       | 38594           | 0.87                            | 11.2                     | 268    | 61190 | 11.7  | 280    | 63986 | 2.2   | 53     | 11977 | 6            | 144    | 32850 | 0.6                          | 14.8   | 3376  | 743           | 883683        | 80              | 12.50             | 120.01            |      |      |      |
| 30                                                              | 12/19/2005 | 30      | Off       | 75        | 694                       | 30383           | 0.68                            | 8.8                      | 211    | 48144 | 9.2   | 220    | 50246 | 1.8   | 43     | 9855  | 6            | 144    | 32850 | 0.5                          | 11.7   | 2658  | 737           | 743130        | 80              | 12.50             | 100.93            |      |      |      |
| 30                                                              | 12/19/2005 | 30      | Off       | 50        | 510                       | 22339           | 0.50                            | 6.5                      | 155    | 35382 | 6.7   | 162    | 36844 | 1.3   | 31     | 6961  | 6            | 144    | 32850 | 0.4                          | 8.6    | 1954  | 755           | 595326        | 80              | 12.50             | 80.85             |      |      |      |
| 80                                                              | 12/19/2005 | 60      | On        | Base      | 852                       | 37337           | 0.84                            | 10.8                     | 260    | 59243 | 11.3  | 272    | 62048 | 2.2   | 53     | 12198 | 6            | 144    | 32850 | 0.6                          | 14.3   | 3266  | 784           | 861409        | 80              | 12.50             | 116.99            |      |      |      |
| 80                                                              | 12/19/2005 | 60      | Off       | Base      | 839                       | 36747           | 0.83                            | 10.6                     | 256    | 58292 | 11.1  | 267    | 60961 | 2.2   | 52     | 11804 | 6            | 144    | 32850 | 0.6                          | 14.1   | 3214  | 789           | 850996        | 80              | 12.50             | 115.58            |      |      |      |
| 80                                                              | 12/19/2005 | 60      | On        | 75        | 668                       | 29281           | 0.66                            | 8.5                      | 204    | 46427 | 8.9   | 212    | 48454 | 1.6   | 37     | 8541  | 6            | 144    | 32850 | 0.5                          | 11.2   | 2561  | 763           | 723990        | 80              | 12.50             | 98.33             |      |      |      |
| 80                                                              | 12/19/2005 | 60      | On        | 50        | 492                       | 21556           | 0.49                            | 6.2                      | 150    | 34163 | 6.5   | 156    | 35618 | 1.1   | 26     | 5840  | 6            | 144    | 32850 | 0.3                          | 8.3    | 1886  | 781           | 582597        | 80              | 12.50             | 79.12             |      |      |      |
| 97                                                              | 12/19/2005 | 20      | On        | Base      | 855                       | 37462           | 0.84                            | 10.9                     | 261    | 59427 | 11.3  | 272    | 61955 | 2.3   | 54     | 12330 | 6            | 144    | 32850 | 0.6                          | 14.4   | 3277  | 783           | 863615        | 80              | 12.50             | 117.29            |      |      |      |
| 97                                                              | 12/19/2005 | 20      | Off       | Base      | 817                       | 35803           | 0.81                            | 10.4                     | 249    | 56790 | 10.9  | 261    | 59471 | 2.0   | 49     | 11169 | 6            | 144    | 32850 | 0.6                          | 13.7   | 3132  | 796           | 833580        | 80              | 12.50             | 113.21            |      |      |      |
| 97                                                              | 12/19/2005 | 20      | On        | 75        | 670                       | 29375           | 0.66                            | 8.5                      | 204    | 46573 | 8.9   | 214    | 48788 | 1.6   | 38     | 8629  | 6            | 144    | 32850 | 0.5                          | 11.3   | 2570  | 763           | 725731        | 80              | 12.50             | 98.56             |      |      |      |
| 97                                                              | 12/19/2005 | 20      | On        | 50        | 494                       | 21637           | 0.49                            | 6.3                      | 150    | 34293 | 6.5   | 156    | 35676 | 1.3   | 30     | 6862  | 6            | 144    | 32850 | 0.3                          | 8.3    | 1893  | 779           | 584169        | 80              | 12.50             | 79.34             |      |      |      |

(1) Source: GE Gas Turbine Performance Sheets for 30, 80, 97 F, all dated December 2005  
(2) SO2 Emissions using the emission factor 0.0007 lb SO2 per mmBtu natural gas - Source: 0.25 gr sulfur/100 cf natural gas.  
(3) Per CTG, assuming BACT levels of 3.5 ppm NOx, 6 ppm CO, and 2 ppm VOC. Daily emissions represent 24 hours per day per CTG. Annual emissions represent 5475 hours per CTG per year.

**TABLE 8.1B-3****AES Highgrove Commissioning Emissions**

| Commissioning Phase               | Pre- break-in<br>Checkout | Controlled Break<br>in Operation | Water Injection<br>Commissioning | Complete AVR<br>Commissioning | SCR<br>Commissioning | Full load testing<br>& checkout | Totals |
|-----------------------------------|---------------------------|----------------------------------|----------------------------------|-------------------------------|----------------------|---------------------------------|--------|
| Water Injection/% Effective       | No                        | No                               | Yes/50                           | Yes                           | Yes                  | Yes                             |        |
| SCR Installed/% Effective         | No                        | No                               | No                               | No                            | Yes/50               | Yes                             |        |
| CO Catalyst Installed/% Effective | No                        | No                               | No                               | No                            | Yes/100              | Yes/100                         |        |
| Unit Operating Hours/CT           | 20                        | 14                               | 24                               | 12                            | 24                   | 40                              | 134    |
| Units in Operation Simultaneously | 2                         | 3                                | 1                                | 3                             | 3                    | 3                               |        |
| Average Load (Percent)            | 0                         | 5                                | 50                               | 100                           | 75                   | 100                             |        |
| NOx lb/hr                         | 91                        | 99                               | 175                              | 81                            | 35                   | 8.1                             |        |
| CO lb/hr                          | 55                        | 60                               | 168                              | 255                           | 9                    | 12                              |        |
| VOC lb/hr                         | 2                         | 2                                | 3                                | 5                             | 4                    | 2                               |        |
| CT Heat Input MMBtu/hr - HHV      | 150                       | 180                              | 500                              | 900.5                         | 700                  | 900.5                           |        |
| <b>Emissions</b>                  |                           |                                  |                                  |                               |                      |                                 |        |
| NOx lb/mmscf <sup>1</sup>         | 616                       | 558                              | 355                              | 91                            | 51                   | 9                               |        |
| CO lb/mmscf <sup>1</sup>          | 372                       | 338                              | 341                              | 287                           | 13                   | 14                              |        |
| VOC lb/mmscf <sup>1</sup>         | 14                        | 11                               | 6                                | 6                             | 6                    | 2                               |        |
| Total Lb of NOx for 3 CTs         | 5,460                     | 4,158                            | 12,600                           | 2,916                         | 2,520                | 972                             | 28,626 |
| Total Lb of CO for 3 CTs          | 3,300                     | 2,520                            | 12,096                           | 9,180                         | 648                  | 1,440                           | 29,184 |
| Total Lb of VOC lbs for 3 CTs     | 120                       | 84                               | 216                              | 180                           | 288                  | 240                             | 1,128  |

Source: Sun Valley AFC

Notes: 1. Fuel heat content is 1015 MMBtu/MMSCF.

Exhaust Stack Parameters for Commissioning Modeling by Load Rate for 80F  
Temperature Case

| Load Rate<br>Percent | Stack Temp<br>F | Flow<br>ACFM | Stack Height<br>Feet | Stack Diameter<br>Feet | Velocity<br>ft/s |
|----------------------|-----------------|--------------|----------------------|------------------------|------------------|
| 35                   | 818             | 485185       | 90                   | 12.50                  | 65.89            |
| 50                   | 781             | 582597       | 90                   | 12.50                  | 79.12            |
| 75                   | 763             | 723990       | 90                   | 12.50                  | 98.33            |
| 100                  | 789             | 850996       | 90                   | 12.50                  | 115.58           |

TABLE 8.1B-4  
Modeling Emissions Summary

|         | Scenario                      | NOx<br>(lb/hr) | CO<br>(lb/hr) | PM10<br>(lb/hr) | SO2<br>(lb/hr) | Velocity<br>(m/s) (ft/s) |       | Temperature<br>F K |     |
|---------|-------------------------------|----------------|---------------|-----------------|----------------|--------------------------|-------|--------------------|-----|
| Annual  | 30F Base Load                 | 5.69           | *             | 2.93            | 0.30           | 36.6                     | 120.0 | 743                | 668 |
|         | 30F 75% Load                  | 4.68           | *             | 2.93            | 0.25           | 30.8                     | 100.9 | 737                | 665 |
|         | 30F 50% Load                  | 3.69           | *             | 2.93            | 0.19           | 24.6                     | 80.9  | 755                | 675 |
|         | 80F Base Load + Evap          | 5.54           | *             | 2.93            | 0.29           | 35.7                     | 117.0 | 784                | 691 |
|         | 80F Base Load                 | 5.47           | *             | 2.93            | 0.29           | 35.2                     | 115.6 | 789                | 693 |
|         | 80F 75% Load                  | 4.55           | *             | 2.93            | 0.24           | 30.0                     | 98.3  | 763                | 679 |
|         | 80F 50% Load                  | 3.59           | *             | 2.93            | 0.19           | 24.1                     | 79.1  | 781                | 689 |
|         | 97F Base Load + Evap          | 5.55           | *             | 2.93            | 0.29           | 35.7                     | 117.3 | 783                | 691 |
|         | 97F Base Load                 | 5.35           | *             | 2.93            | 0.28           | 34.5                     | 113.2 | 796                | 697 |
|         | 97F 75% Load                  | 4.56           | *             | 2.93            | 0.24           | 30.0                     | 98.6  | 763                | 679 |
|         | 97F 50% Load                  | 3.60           | *             | 2.93            | 0.19           | 24.2                     | 79.3  | 779                | 688 |
| 24-Hour | 30F Base Load                 | 11.37          | *             | 5.98            | 0.61           | 36.6                     | 120.0 | 743                | 668 |
|         | 30F 75% Load                  | 9.15           | *             | 5.98            | 0.49           | 30.8                     | 100.9 | 737                | 665 |
|         | 30F 50% Load                  | 6.97           | *             | 5.98            | 0.37           | 24.6                     | 80.9  | 755                | 675 |
|         | 80F Base Load + Evap          | 11.04          | *             | 5.98            | 0.60           | 35.7                     | 117.0 | 784                | 691 |
|         | 80F Base Load                 | 10.88          | *             | 5.98            | 0.59           | 35.2                     | 115.6 | 789                | 693 |
|         | 80F 75% Load                  | 8.86           | *             | 5.98            | 0.48           | 30.0                     | 98.3  | 763                | 679 |
|         | 80F 50% Load                  | 6.77           | *             | 5.98            | 0.36           | 24.1                     | 79.1  | 781                | 689 |
|         | 97F Base Load + Evap          | 11.07          | *             | 5.98            | 0.60           | 35.7                     | 117.3 | 783                | 691 |
|         | 97F Base Load                 | 10.62          | *             | 5.98            | 0.57           | 34.5                     | 113.2 | 796                | 697 |
|         | 97F 75% Load                  | 8.88           | *             | 5.98            | 0.48           | 30.0                     | 98.6  | 763                | 679 |
|         | 97F 50% Load                  | 6.79           | *             | 5.98            | 0.36           | 24.2                     | 79.3  | 779                | 688 |
|         | Pre- break-in Checkout        | 76             | *             | *               | *              | 20.1                     | 65.9  | 818                | 710 |
|         | Controlled Break-in Operation | 58             | *             | *               | *              | 20.1                     | 65.9  | 818                | 710 |
|         | Water Injection Commissioning | 175            | *             | *               | *              | 24.1                     | 79.1  | 781                | 689 |
|         | Complete AVR Commissioning    | 41             | *             | *               | *              | 35.2                     | 115.6 | 789                | 693 |
|         | SCR Commissioning             | 35             | *             | *               | *              | 30.0                     | 98.3  | 763                | 679 |
|         | Full load testing & checkout  | 8              | *             | *               | *              | 35.2                     | 115.6 | 789                | 693 |
| 8-Hour  | 30F Base Load                 | *              | 17.75         | *               | *              | 36.6                     | 120.0 | 743                | 668 |
|         | 30F 75% Load                  | *              | 15.74         | *               | *              | 30.8                     | 100.9 | 737                | 665 |
|         | 30F 50% Load                  | *              | 13.78         | *               | *              | 24.6                     | 80.9  | 755                | 675 |
|         | 80F Base Load + Evap          | *              | 17.47         | *               | *              | 35.7                     | 117.0 | 784                | 691 |
|         | 80F Base Load                 | *              | 17.31         | *               | *              | 35.2                     | 115.6 | 789                | 693 |
|         | 80F 75% Load                  | *              | 15.48         | *               | *              | 30.0                     | 98.3  | 763                | 679 |
|         | 80F 50% Load                  | *              | 13.60         | *               | *              | 24.1                     | 79.1  | 781                | 689 |
|         | 97F Base Load + Evap          | *              | 17.45         | *               | *              | 35.7                     | 117.3 | 783                | 691 |
|         | 97F Base Load                 | *              | 17.09         | *               | *              | 34.5                     | 113.2 | 796                | 697 |
|         | 97F 75% Load                  | *              | 15.53         | *               | *              | 30.0                     | 98.6  | 763                | 679 |
|         | 97F 50% Load                  | *              | 13.61         | *               | *              | 24.2                     | 79.3  | 779                | 688 |
|         | Pre- break-in Checkout        | *              | 55            | *               | *              | 20.1                     | 65.9  | 818                | 710 |
|         | Controlled Break-in Operation | *              | 60            | *               | *              | 20.1                     | 65.9  | 818                | 710 |
|         | Water Injection Commissioning | *              | 168           | *               | *              | 24.1                     | 79.1  | 781                | 689 |
|         | Complete AVR Commissioning    | *              | 255           | *               | *              | 35.2                     | 115.6 | 789                | 693 |
|         | SCR Commissioning             | *              | 9             | *               | *              | 30.0                     | 98.3  | 763                | 679 |
|         | Full load testing & checkout  | *              | 12            | *               | *              | 35.2                     | 115.6 | 789                | 693 |
| 3-Hour  | 30F Base Load                 | *              | *             | *               | 0.60           | 36.6                     | 120.0 | 743                | 668 |
|         | 30F 75% Load                  | *              | *             | *               | 0.54           | 30.8                     | 100.9 | 737                | 665 |
|         | 30F 50% Load                  | *              | *             | *               | 0.48           | 24.6                     | 80.9  | 755                | 675 |
|         | 80F Base Load + Evap          | *              | *             | *               | 0.59           | 35.7                     | 117.0 | 784                | 691 |
|         | 80F Base Load                 | *              | *             | *               | 0.59           | 35.2                     | 115.6 | 789                | 693 |
|         | 80F 75% Load                  | *              | *             | *               | 0.53           | 30.0                     | 98.3  | 763                | 679 |
|         | 80F 50% Load                  | *              | *             | *               | 0.47           | 24.1                     | 79.1  | 781                | 689 |
|         | 97F Base Load + Evap          | *              | *             | *               | 0.59           | 35.7                     | 117.3 | 783                | 691 |
|         | 97F Base Load                 | *              | *             | *               | 0.58           | 34.5                     | 113.2 | 796                | 697 |
|         | 97F 75% Load                  | *              | *             | *               | 0.53           | 30.0                     | 98.6  | 763                | 679 |
|         | 97F 50% Load                  | *              | *             | *               | 0.47           | 24.2                     | 79.3  | 779                | 688 |
|         | Pre- break-in Checkout        | *              | *             | *               | *              | 20.1                     | 65.9  | 818                | 710 |
|         | Controlled Break-in Operation | *              | *             | *               | *              | 20.1                     | 65.9  | 818                | 710 |
|         | Water Injection Commissioning | *              | *             | *               | *              | 24.1                     | 79.1  | 781                | 689 |
|         | Complete AVR Commissioning    | *              | *             | *               | *              | 35.2                     | 115.6 | 789                | 693 |
|         | SCR Commissioning             | *              | *             | *               | *              | 30.0                     | 98.3  | 763                | 679 |
|         | Full load testing & checkout  | *              | *             | *               | *              | 35.2                     | 115.6 | 789                | 693 |
| 1-Hour  | 30F Base Load                 | 13.54          | 35.94         | *               | 0.59           | 36.6                     | 120.0 | 743                | 668 |
|         | 30F 75% Load                  | 13.06          | 35.44         | *               | 0.57           | 30.8                     | 100.9 | 737                | 665 |
|         | 30F 50% Load                  | 12.59          | 34.95         | *               | 0.54           | 24.6                     | 80.9  | 755                | 675 |
|         | 80F Base Load + Evap          | 13.46          | 35.87         | *               | 0.59           | 35.7                     | 117.0 | 784                | 691 |
|         | 80F Base Load                 | 13.43          | 35.83         | *               | 0.59           | 35.2                     | 115.6 | 789                | 693 |
|         | 80F 75% Load                  | 13.00          | 35.37         | *               | 0.56           | 30.0                     | 98.3  | 763                | 679 |
|         | 80F 50% Load                  | 12.55          | 34.90         | *               | 0.54           | 24.1                     | 79.1  | 781                | 689 |
|         | 97F Base Load + Evap          | 13.47          | 35.86         | *               | 0.59           | 35.7                     | 117.3 | 783                | 691 |
|         | 97F Base Load                 | 13.37          | 35.77         | *               | 0.58           | 34.5                     | 113.2 | 796                | 697 |
|         | 97F 75% Load                  | 13.00          | 35.38         | *               | 0.56           | 30.0                     | 98.6  | 763                | 679 |
|         | 97F 50% Load                  | 12.55          | 34.90         | *               | 0.54           | 24.2                     | 79.3  | 779                | 688 |
|         | Pre- break-in Checkout        | 91             | 55            | *               | *              | 20.1                     | 65.9  | 818                | 710 |
|         | Controlled Break-in Operation | 99             | 60            | *               | *              | 20.1                     | 65.9  | 818                | 710 |
|         | Water Injection Commissioning | 175            | 168           | *               | *              | 24.1                     | 79.1  | 781                | 689 |
|         | Complete AVR Commissioning    | 81             | 255           | *               | *              | 35.2                     | 115.6 | 789                | 693 |
|         | SCR Commissioning             | 35             | 9             | *               | *              | 30.0                     | 98.3  | 763                | 679 |
|         | Full load testing & checkout  | 8              | 12            | *               | *              | 35.2                     | 115.6 | 789                | 693 |

**TABLE 8.1B-5**

AES Highgrove Startup and Shutdown Emissions

| Pollutant | Startup  | Shutdown | Startup | Shutdown |
|-----------|----------|----------|---------|----------|
|           | lb/event | lb/event | lb/hour | lb/hour  |
| NOx       | 7.0      | 4.3      | 11.1    | 13.1     |
| CO        | 15.4     | 18.2     | 19.7    | 27.5     |
| VOC       | 2.1      | 1.6      | 3.0     | 3.4      |
| PM10      | 3.5      | 1.1      | 5.8     | 6        |
| SOx       | 0.36     | 0.11     | 0.59    | 0.60     |
| NH3       | 2.86     | 0.90     | 5.2     | 5.8      |

Source: GE Energy and engineering estimates.

Start is assumed to take 37 minutes and shutdown takes 11 minutes until BACT is reached.

Exhaust Parameters for Starts and Shutdown Modeling for the 80 F Case at a 50% load

| Stack Temp | Flow   | Stack Height | Stack Diameter |
|------------|--------|--------------|----------------|
| F          | ACFM   | Feet         | Feet           |
| 781        | 582597 | 80           | 12.5           |

**TABLE 8.1B-6**  
**AESH HAP Emission Estimates**

Assume:

Assume heat input at 30 F at base load

Operating Hours for each CTG: 8760 Hours/Year

Given:

SCAQMD Rule 1401 is a permit unit evaluation - list emissions per turbine

CEC evaluation is plant wide - Combine emissions from all three turbines

Evaluate potential HAPS for Gas Turbine NESHAPS applicability, 10 tpy single HAPS

or 25 TPY all HAPS - Plantwide evaluation

|                                    |      |              |       |         |        |         |
|------------------------------------|------|--------------|-------|---------|--------|---------|
| Gas Heat Content<br>(MMBtu/MMCF) = | 1015 | MMBtu/MMSCF  | 1 CTG |         | 3 CTGs |         |
| Total Heat Input                   | 881  | MMBtu/Hr HHV | 0.868 | MMCF/Hr | 22811  | MMCF/Yr |

| Compound             | Emission Factor<br>(Lb/MMCF) <sup>a</sup> | Maximum CTG<br>Heat Input<br>(mmBtu/hr) | Gas Input<br>(MMCF/hr) | Turbine Emissions |            |          |         |            |          |
|----------------------|-------------------------------------------|-----------------------------------------|------------------------|-------------------|------------|----------|---------|------------|----------|
|                      |                                           |                                         |                        | lb/hr/CT          | lb/hr/3-CT | lb/yr/CT | TPY/CT  | lb/yr/3-CT | TPY/3-CT |
| Ammonia <sup>b</sup> | 5 ppm                                     | 881                                     | 0.868                  | 6.0               | 18.0       | 52531    | 26.3    | 157592     | 79       |
| Acetaldehyde         | 0.040600                                  | 881                                     | 0.868                  | 0.035             | 0.1        | 308.7    | 0.154   | 926        | 0.5      |
| Acrolein             | 0.003690                                  | 881                                     | 0.868                  | 0.00320           | 0.01       | 28.1     | 0.014   | 84         | 0.04     |
| Benzene              | 0.003330                                  | 881                                     | 0.868                  | 0.0029            | 0.01       | 25.3     | 0.013   | 76         | 0.04     |
| 1,3-Butadiene        | 0.000436                                  | 881                                     | 0.868                  | 0.00038           | 0.001      | 3.3      | 0.002   | 10         | 0.005    |
| Ethylbenzene         | 0.032480                                  | 881                                     | 0.868                  | 0.0282            | 0.1        | 247.0    | 0.12    | 741        | 0.4      |
| Formaldehyde         | 0.365400                                  | 881                                     | 0.868                  | 0.317             | 1.0        | 2778     | 1.4     | 8335       | 4.2      |
| Naphthalene          | 0.001320                                  | 881                                     | 0.868                  | 0.0011            | 0.003      | 10.0     | 0.005   | 30.1       | 0.015    |
| PAH <sup>c</sup>     | 0.000014                                  | 881                                     | 0.868                  | 0.00001           | 0.00004    | 0.11     | 0.00005 | 0.3        | 0.0002   |
| Propylene Oxide      | 0.029435                                  | 881                                     | 0.868                  | 0.0255            | 0.1        | 223.8    | 0.112   | 671        | 0.34     |
| Toluene              | 0.131950                                  | 881                                     | 0.868                  | 0.115             | 0.3        | 1003     | 0.5     | 3010       | 1.5      |
| Xylene               | 0.064960                                  | 881                                     | 0.868                  | 0.056             | 0.2        | 494      | 0.2     | 1482       | 0.7      |
| TOTAL HAPS           |                                           |                                         |                        |                   |            | 5122     | 2.6     | 15366      | 7.7      |

Notes:

(1) Source - GE - Estimated Performance and Emissions at 30F, dated December 19, 2005

<sup>a</sup> Obtained from AP-42 Table 3.1-3 revised 4/00 for natural gas-fired combustion turbines. Formaldehyde, Benzene, and Acrolein emission factors are from the Background document for AP-42 Section 3.1, Table 3.4-1 for a natural gas fired combustion turbine with an oxidation catalyst. PAH emission factor for uncontrolled natural gas fired turbine.

<sup>b</sup> Based on an exhaust NH<sub>3</sub> limit of 5 ppmv @ 15% O<sub>2</sub> and a F-factor of 8710. This value represents 24 hours per day and 365 days per year of operation.

<sup>c</sup> Carcinogenic PAHs only; naphthalene considered separately. Emission Factor based on two separate source tests (2002 and 2004) from the Delta Energy Center located in Pittsburg, CA.

**Exhaust Parameters for Base Load at 30 F**

|                      |        |
|----------------------|--------|
| Temperature, °F      | 743.2  |
| Stack Diameter, Feet | 12.5   |
| Exhaust Flow, ACFM   | 883683 |
| Stack Height, Feet   | 80     |

**TABLE 8.1B-7****AES Highgrove Cooling Tower Criteria Emissions Analysis****Assumed**

Cooling tower operates 15 hours/day, 365 days per year at the design recirculation rate with 10 cycles of concentration.  
2 Cooling Tower Cells per CT.

**Givens**

Cooling Tower Recirculation

Rate per Cooling Tower<sup>a</sup> 6,900 GPM 3,452,760 Pounds/Hr

Drift Eliminator Efficiency<sup>b</sup> 0.0005 Percent

Cooling Tower Cycles of  
Concentration 10

Cooling Tower Drift 17.3 Pounds/Hr

| Component <sup>c</sup>        | Design Case Cooling Tower<br>Influent (mg/L) | Max. TDS for<br>Cooling Tower<br>Discharge<br>(mg/L) | Cooling Tower<br>PM <sub>10/2.5</sub><br>Emissions Per<br>CT (lb/hr) | Annual Cooling Tower<br>PM <sub>10/2.5</sub> Emissions per<br>CT Tons/Year | Annual Cooling Tower<br>PM <sub>10/2.5</sub> Emissions for 3<br>CTs Tons/Year |
|-------------------------------|----------------------------------------------|------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| <b>Total Dissolved Solids</b> | 280                                          | 2800                                                 | 0.05                                                                 | 0.13                                                                       | 0.40                                                                          |

**Notes**

a. Niagara Blower Co Specification dated 12-10-2004

b. Cooling Tower BACT Level

c. TDS from Well #2 water sample from 12/2004

**Cooling Tower Specifications**

|                            |        |                     |
|----------------------------|--------|---------------------|
| Length (feet)              | 55.25  | Total for 2 cells   |
| Width (feet)               | 41.5   | Total for 2 cells   |
| Height to Fan Deck (feet)  | 15.5   |                     |
| Height to Fan Exit (feet)  | 6      | Exit to Atmosphere. |
| Air Exit Flow Rate (CFM)   | 365900 | Flow Rate per cell. |
| Temperature (F)            | 93.3   |                     |
| Number of Cells per CTG    | 2      |                     |
| Fan Shroud Diameter (feet) | 16     |                     |

**TABLE 8.1B-8****Fuel Gas Analysis and Maximum Facility Fuel Usage**

| <b>Constituents</b>                      | <b>Percent</b> | <b>MW</b> | <b>wt Avg</b> |
|------------------------------------------|----------------|-----------|---------------|
| CH <sub>4</sub>                          | 96.19          | 16.04     | 15.43         |
| C <sub>2</sub> H <sub>6</sub>            | 1.67           | 30.07     | 0.50          |
| C <sub>3</sub> H <sub>8</sub>            | 0.27           | 44        | 0.12          |
| IC <sub>4</sub> H <sub>10</sub>          | 0.10           | 58.12     | 0.06          |
| nC <sub>4</sub> H <sub>10</sub>          | 0.00           | 58.12     | 0             |
| iC <sub>5</sub> H <sub>12</sub>          | 0.01           | 72.15     | 0.01          |
| nC <sub>5</sub> H <sub>12</sub>          | 0.00           | 72.15     | 0             |
| C <sub>6</sub> H <sub>14</sub>           | 0.02           | 86.18     | 0.02          |
| N <sub>2</sub>                           | 0.41           | 28.01     | 0.11          |
| CO <sub>2</sub>                          | 1.34           | 44.01     | 0.59          |
| Total MW                                 |                |           | 16.83         |
| Reference: Lange's Handbook of Chemistry |                |           |               |

**Maximum Facility Fuel Use (MMBtu)<sup>a</sup>**

| <b>Period</b> | <b>Gas Turbines<br/>(each)</b> | <b>Total Fuel Use<br/>(all units)</b> |
|---------------|--------------------------------|---------------------------------------|
| Per Hour      | 881                            | 2,643                                 |
| Per Day       | 21,144                         | 63,432                                |
| Per Year      | 4,823,475                      | 14,470,425                            |

<sup>a</sup> Based on firing rates at 30 degrees F, 24 hours per day and 5,475 hours per year, per turbine.

**TABLE 8.1B-9****AESH Mitigation Liability**

| <b>Pollutant<sup>1,2</sup></b>     | <b>Daily<br/>Emissions<br/>(Pounds)</b> | <b>Monthly<br/>Emissions<br/>(Pounds)</b> | <b>Average<br/>Daily<br/>(Pounds)</b> | <b>ERCs<br/>Liability<br/>(Pounds/Day)</b> | <b>1st Year RTCs<br/>Liability<br/>(Pounds)</b> | <b>RTCs<br/>Liability<br/>(Pounds)</b> |
|------------------------------------|-----------------------------------------|-------------------------------------------|---------------------------------------|--------------------------------------------|-------------------------------------------------|----------------------------------------|
| <b>NOx</b>                         | 502.8                                   | 15,586                                    | 519.5                                 | -                                          | 212,144                                         | 183,518                                |
| <b>CO</b>                          | 657.2                                   | 20,373                                    | 679.1                                 | 814.9                                      | -                                               | -                                      |
| <b>VOC</b>                         | 111.8                                   | 3,465                                     | 115.5                                 | 138.6                                      | -                                               | -                                      |
| <b>SO2</b>                         | 26.8                                    | 831                                       | 27.7                                  | 33.2                                       | -                                               | -                                      |
| <b>PM<sub>10</sub><sup>3</sup></b> | 268.8                                   | 8,333                                     | 277.8                                 | 333.3                                      | -                                               | -                                      |

**Notes**

1. Daily emissions based on 15 hours per day per CTG, plus 2 starts/stops for 3 CTG per day.
2. Hourly emissions used are based on 80 F, base load with evaporators operating.
3. PM<sub>10</sub> emissions do not include the 3 cooling towers as they are exempt from SCAQMD ERC requirements.

APPENDIX 8.1C

# **Operational and Commissioning Dispersion Modeling**

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# Operational and Commissioning Dispersion Modeling

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In addition to the tables and figures presented below, a copy of the final “AES Highgrove HEF Dispersion Model Protocol” is attached.

Tables presented in this Appendix are as follows:

- Table 8.1C-1 Summary Table of Stack Parameters (ISCST3 Input)
- Table 8.1C-2 Summary Table of Building and Tank Parameters (ISCST3 Input)
- Table 8.1C-3 Screening Commissioning and Operational Modeling Parameters
- Table 8.1C-4 Detailed Operational Modeling Parameters (PM10 Only)
- Table 8.1C-5 Commissioning Modeling Results Summary
- Table 8.1C-6 Operational Modeling Results Summary (Screening)
- Table 8.1C-7 Operational Modeling Results Summary (Detailed)
- Table 8.1C-8 Annual and Quarterly Wind Tables
- Table 8.1C-9 Climatic Data Summaries for (Riverside, CA)
- Table 8.1C-10 AAQS Summary
- Table 8.1C-11 SCAQMD Significance Thresholds
- Table 8.1C-12 Ambient Air Quality Monitoring Summaries (SCAQMD)

Figure 8.1C-1 ISC Model Setup

AES Highgrove AFC

Table 8.1C-1 Summary Table of Stack Parameters (ISCST3 Input)

**97F**

| Source ID  | Easting<br>(X)<br>(m) | Northing<br>(Y)<br>(m) | Base Elev.<br>(m) | Stack<br>Height<br>(m) | Stack<br>Diam.<br>(m) | 97F50L       |                    | 97F75L       |                    | 97FBL        |                    | 97FBL + Evap |                    |
|------------|-----------------------|------------------------|-------------------|------------------------|-----------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|
|            |                       |                        |                   |                        |                       | Temp.<br>(K) | Exit Vel.<br>(m/s) | Temp.<br>(K) | Exit Vel.<br>(m/s) | Temp.<br>(K) | Exit Vel.<br>(m/s) | Temp.<br>(K) | Exit Vel.<br>(m/s) |
| 1 CTGSTK1  | 469396                | 3764701.5              | 286.21            | 24.38                  | 3.81                  | 688.15       | 24.18              | 679.26       | 30.04              | 697.59       | 34.51              | 690.37       | 35.75              |
| 2 CTGSTK2  | 469396                | 3764648                | 286.21            | 24.38                  | 3.81                  | 688.15       | 24.18              | 679.26       | 30.04              | 697.59       | 34.51              | 690.37       | 35.75              |
| 3 CTGSTK3  | 469396                | 3764595                | 286.21            | 24.38                  | 3.81                  | 688.15       | 24.18              | 679.26       | 30.04              | 697.59       | 34.51              | 690.37       | 35.75              |
| 4 COOLT1C1 | 469415.9              | 3764666.5              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |              |                    |
| 5 COOLT1C2 | 469421                | 3764666.3              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |              |                    |
| 6 COOLT2C1 | 469415.9              | 3764613.3              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |              |                    |
| 7 COOLT2C2 | 469421                | 3764613                | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |              |                    |
| 8 COOLT3C1 | 469415.9              | 3764560.3              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |              |                    |
| 9 COOLT3C2 | 469421                | 3764560.3              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |              |                    |

**80F**

| Source ID  | Easting<br>(X)<br>(m) | Northing<br>(Y)<br>(m) | Base Elev.<br>(m) | Stack<br>Height<br>(m) | Stack<br>Diam.<br>(m) | 80F50L       |                    | 80F75L       |                    | 80FBL        |                    | 80FBL + Evap |                    |
|------------|-----------------------|------------------------|-------------------|------------------------|-----------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|
|            |                       |                        |                   |                        |                       | Temp.<br>(K) | Exit Vel.<br>(m/s) | Temp.<br>(K) | Exit Vel.<br>(m/s) | Temp.<br>(K) | Exit Vel.<br>(m/s) | Temp.<br>(K) | Exit Vel.<br>(m/s) |
| 1 CTGSTK1  | 469396                | 3764701.5              | 286.21            | 24.38                  | 3.81                  | 689.26       | 24.12              | 679.26       | 29.97              | 693.71       | 35.23              | 690.93       | 35.66              |
| 2 CTGSTK2  | 469396                | 3764648                | 286.21            | 24.38                  | 3.81                  | 689.26       | 24.12              | 679.26       | 29.97              | 693.71       | 35.23              | 690.93       | 35.66              |
| 3 CTGSTK3  | 469396                | 3764595                | 286.21            | 24.38                  | 3.81                  | 689.26       | 24.12              | 679.26       | 29.97              | 693.71       | 35.23              | 690.93       | 35.66              |
| 4 COOLT1C1 | 469415.9              | 3764666.5              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |              |                    |
| 5 COOLT1C2 | 469421                | 3764666.3              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |              |                    |
| 6 COOLT2C1 | 469415.9              | 3764613.3              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |              |                    |
| 7 COOLT2C2 | 469421                | 3764613                | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |              |                    |
| 8 COOLT3C1 | 469415.9              | 3764560.3              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |              |                    |
| 9 COOLT3C2 | 469421                | 3764560.3              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |              |                    |

**30F**

| Source ID  | Easting<br>(X)<br>(m) | Northing<br>(Y)<br>(m) | Base Elev.<br>(m) | Stack<br>Height<br>(m) | Stack<br>Diam.<br>(m) | 30F50L       |                    | 30F75L       |                    | 30FBL        |                    |
|------------|-----------------------|------------------------|-------------------|------------------------|-----------------------|--------------|--------------------|--------------|--------------------|--------------|--------------------|
|            |                       |                        |                   |                        |                       | Temp.<br>(K) | Exit Vel.<br>(m/s) | Temp.<br>(K) | Exit Vel.<br>(m/s) | Temp.<br>(K) | Exit Vel.<br>(m/s) |
| 1 CTGSTK1  | 469396                | 3764701.5              | 286.21            | 24.38                  | 3.81                  | 674.82       | 24.64              | 664.82       | 30.76              | 668.15       | 36.58              |
| 2 CTGSTK2  | 469396                | 3764648                | 286.21            | 24.38                  | 3.81                  | 674.82       | 24.64              | 664.82       | 30.76              | 668.15       | 36.58              |
| 3 CTGSTK3  | 469396                | 3764595                | 286.21            | 24.38                  | 3.81                  | 674.82       | 24.64              | 664.82       | 30.76              | 668.15       | 36.58              |
| 4 COOLT1C1 | 469415.9              | 3764666.5              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |
| 5 COOLT1C2 | 469421                | 3764666.3              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |
| 6 COOLT2C1 | 469415.9              | 3764613.3              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |
| 7 COOLT2C2 | 469421                | 3764613                | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |
| 8 COOLT3C1 | 469415.9              | 3764560.3              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |
| 9 COOLT3C2 | 469421                | 3764560.3              | 286.21            | 6.55                   | 4.88                  | 307.21       | 9.24               |              |                    |              |                    |

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Table 8.1C-2a Summary Table of Building Parameters (ISCST3 Input)

| Building Name | Number of Tiers | Tier Number | Base Elevation | Tier Height | Number of Corners | Corner 1 East (X) | Corner 1 North (Y) | Corner 2 East (X) | Corner 2 North (Y) | Corner 3 East (X) | Corner 3 North (Y) | Corner 4 East (X) | Corner 4 North (Y) | Corner 5 East (X) | Corner 5 North (Y) | Corner 6 East (X) | Corner 6 North (Y) | Corner 7 East (X) | Corner 7 North (Y) | Corner 8 East (X) | Corner 8 North (Y) |
|---------------|-----------------|-------------|----------------|-------------|-------------------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|
|               |                 |             | (ft)           | (m)         |                   | (m)               | (m)                | (m)               | (m)                | (m)               | (m)                | (m)               | (m)                | (m)               | (m)                | (m)               | (m)                | (m)               | (m)                | (m)               | (m)                |
| AIRIN1        | 1               | 1           | 939            | 11.97       | 8                 | 469366.1          | 3764682            | 469370.5          | 3764682            | 469370.5          | 3764680            | 469384.7          | 3764680            | 469384.7          | 3764675            | 469370.5          | 3764675            | 469370.5          | 3764673            | 469366.1          | 3764673            |
| AIRIN2        | 1               | 1           | 939            | 11.97       | 8                 | 469365.3          | 3764628            | 469369.8          | 3764628            | 469369.8          | 3764627            | 469383.9          | 3764627            | 469383.9          | 3764621            | 469369.8          | 3764621            | 469369.8          | 3764619            | 469365.3          | 3764619            |
| AIRIN3        | 1               | 1           | 939            | 11.97       | 8                 | 469364.8          | 3764575            | 469369.3          | 3764575            | 469369.3          | 3764573            | 469383.4          | 3764573            | 469383.4          | 3764568            | 469369.3          | 3764568            | 469369.3          | 3764566            | 469364.8          | 3764566            |
| CONWAR        | 1               | 1           | 939            | 7.32        | 4                 | 469452            | 3764660            | 469471.8          | 3764660            | 469471.8          | 3764586            | 469452            | 3764586            |                   |                    |                   |                    |                   |                    |                   |                    |
| CAN1          | 1               | 1           | 939            | 11.58       | 6                 | 469390.9          | 3764687            | 469390.9          | 3764696            | 469395.7          | 3764700            | 469400.9          | 3764696            | 469400.9          | 3764686            | 469390.9          | 3764686            |                   |                    |                   |                    |
| CAN2          | 1               | 1           | 939            | 11.58       | 6                 | 469390.4          | 3764633            | 469390.4          | 3764643            | 469395.2          | 3764646            | 469400.4          | 3764643            | 469400.4          | 3764633            | 469390.4          | 3764633            |                   |                    |                   |                    |
| CAN3          | 1               | 1           | 939            | 11.58       | 6                 | 469389.8          | 3764581            | 469389.8          | 3764590            | 469394.6          | 3764593            | 469399.8          | 3764590            | 469399.8          | 3764580            | 469389.8          | 3764580            |                   |                    |                   |                    |
| MISC1         | 1               | 1           | 939            | 4           | 4                 | 469409.2          | 3764701            | 469416.8          | 3764701            | 469416.8          | 3764692            | 469409.2          | 3764692            |                   |                    |                   |                    |                   |                    |                   |                    |
| MISC2         | 1               | 1           | 939            | 4           | 4                 | 469408.7          | 3764648            | 469416.2          | 3764648            | 469416.2          | 3764640            | 469408.7          | 3764640            |                   |                    |                   |                    |                   |                    |                   |                    |
| MISC3         | 1               | 1           | 939            | 4           | 4                 | 469408            | 3764595            | 469415.5          | 3764595            | 469415.5          | 3764587            | 469408            | 3764587            |                   |                    |                   |                    |                   |                    |                   |                    |
| HeatEx1       | 1               | 1           | 939            | 4.88        | 4                 | 469381.8          | 3764661            | 469381.8          | 3764665            | 469393.5          | 3764665            | 469393.5          | 3764661            |                   |                    |                   |                    |                   |                    |                   |                    |
| main1         | 1               | 1           | 939            | 4.52        | 4                 | 469384.8          | 3764675            | 469384.8          | 3764679            | 469394.7          | 3764679            | 469394.7          | 3764675            |                   |                    |                   |                    |                   |                    |                   |                    |
| vent1         | 1               | 1           | 939            | 12.12       | 4                 | 469394.7          | 3764679            | 469394.7          | 3764675            | 469399.4          | 3764675            | 469399.4          | 3764679            |                   |                    |                   |                    |                   |                    |                   |                    |
| gen1          | 1               | 1           | 939            | 8.76        | 4                 | 469399.7          | 3764679            | 469407.4          | 3764679            | 469407.4          | 3764675            | 469399.7          | 3764675            |                   |                    |                   |                    |                   |                    |                   |                    |
| PWRCNTR       | 1               | 1           | 939            | 3.05        | 4                 | 469409.7          | 3764679            | 469409.7          | 3764684            | 469425            | 3764684            | 469425            | 3764679            |                   |                    |                   |                    |                   |                    |                   |                    |
| Main2         | 1               | 1           | 939            | 4.52        | 4                 | 469384            | 3764621            | 469384            | 3764626            | 469393.9          | 3764626            | 469393.9          | 3764621            |                   |                    |                   |                    |                   |                    |                   |                    |
| Vent2         | 1               | 1           | 939            | 12.12       | 4                 | 469394.1          | 3764626            | 469394.1          | 3764621            | 469398.8          | 3764621            | 469398.8          | 3764626            |                   |                    |                   |                    |                   |                    |                   |                    |
| Gen2          | 1               | 1           | 939            | 8.76        | 4                 | 469399            | 3764626            | 469406.7          | 3764626            | 469406.7          | 3764621            | 469399            | 3764621            |                   |                    |                   |                    |                   |                    |                   |                    |
| HeatEx2       | 1               | 1           | 939            | 4.88        | 4                 | 469381.3          | 3764608            | 469381.3          | 3764611            | 469393            | 3764611            | 469393            | 3764608            |                   |                    |                   |                    |                   |                    |                   |                    |
| PwrCntr2      | 1               | 1           | 939            | 3.05        | 4                 | 469409.5          | 3764626            | 469409.5          | 3764631            | 469424.7          | 3764631            | 469424.7          | 3764626            |                   |                    |                   |                    |                   |                    |                   |                    |
| Main3         | 1               | 1           | 939            | 4.52        | 4                 | 469383.6          | 3764568            | 469383.6          | 3764573            | 469393.6          | 3764573            | 469393.6          | 3764568            |                   |                    |                   |                    |                   |                    |                   |                    |
| Vent3         | 1               | 1           | 939            | 12.12       | 4                 | 469393.7          | 3764573            | 469393.7          | 3764568            | 469398.4          | 3764568            | 469398.4          | 3764573            |                   |                    |                   |                    |                   |                    |                   |                    |
| Gen3          | 1               | 1           | 939            | 8.76        | 4                 | 469398.3          | 3764573            | 469406            | 3764573            | 469406            | 3764568            | 469398.3          | 3764568            |                   |                    |                   |                    |                   |                    |                   |                    |
| HeatEx3       | 1               | 1           | 939            | 4.88        | 4                 | 469380.3          | 3764555            | 469380.3          | 3764558            | 469392            | 3764558            | 469392            | 3764555            |                   |                    |                   |                    |                   |                    |                   |                    |
| PwrCntr3      | 1               | 1           | 939            | 3.05        | 4                 | 469409            | 3764573            | 469409            | 3764578            | 469424.2          | 3764578            | 469424.2          | 3764573            |                   |                    |                   |                    |                   |                    |                   |                    |
| COOLT1        | 2               | 1           | 939            | 2.59        | 4                 | 469412.6          | 3764658            | 469412.6          | 3764675            | 469425.2          | 3764675            | 469425.2          | 3764658            |                   |                    |                   |                    |                   |                    |                   |                    |
| COOLT1 *      |                 | 2 *         |                | 4.72        | 4                 | 469412.6          | 3764671            | 469425.2          | 3764671            | 469425.2          | 3764662            | 469412.6          | 3764662            |                   |                    |                   |                    |                   |                    |                   |                    |
| COOLT2        | 2               | 1           | 939            | 2.59        | 4                 | 469412.6          | 3764605            | 469412.6          | 3764621            | 469425.2          | 3764621            | 469425.2          | 3764605            |                   |                    |                   |                    |                   |                    |                   |                    |
| COOLT2 *      |                 | 2 *         |                | 4.72        | 4                 | 469412.6          | 3764618            | 469425.2          | 3764618            | 469425.2          | 3764609            | 469412.6          | 3764609            |                   |                    |                   |                    |                   |                    |                   |                    |
| COOLT3        | 2               | 1           | 939            | 2.59        | 4                 | 469412.6          | 3764552            | 469412.6          | 3764568            | 469425.2          | 3764568            | 469425.2          | 3764552            |                   |                    |                   |                    |                   |                    |                   |                    |
| COOLT3 *      |                 | 2 *         |                | 4.72        | 4                 | 469412.6          | 3764564            | 469425.2          | 3764564            | 469425.2          | 3764555            | 469412.6          | 3764555            |                   |                    |                   |                    |                   |                    |                   |                    |

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Table 8.1C-2b Summary Table of Tank Parameters (ISCST3 Input)

|            | Number of<br>Tiers | Tier Number | Base Elevation<br>(ft) | Tank Height (m) | Tank Center UTM<br>X (m) | Tank Center UTM<br>Y (m) | Tank Diameter<br>(ft) | Comments                |
|------------|--------------------|-------------|------------------------|-----------------|--------------------------|--------------------------|-----------------------|-------------------------|
| Large Tank | 1                  | 1           | 939                    | 9.75            | 469461.4                 | 3764690                  | 44                    | 350,000 gallon capacity |
| Small Tank | 1                  | 1           | 939                    | 7.32            | 469463.6                 | 3764670.5                | 27                    | 100,000 gallon capacity |

Table 8.1C-3 Screening Commissioning and Operational Modeling Parameters (Turbines only)

|         | Scenario               | NOx     |       | CO      |       | PM10    |       | SO2     |       | Velocity |        | Temperature |       |
|---------|------------------------|---------|-------|---------|-------|---------|-------|---------|-------|----------|--------|-------------|-------|
|         |                        | (lb/hr) | (g/s) | (lb/hr) | (g/s) | (lb/hr) | (g/s) | (lb/hr) | (g/s) | (m/s)    | (ft/s) | F           | K     |
| Annual  | 30F Base Load          | 5.69    | 0.72  | *       | *     | 2.93    | 0.37  | 0.30    | 0.04  | 36.58    | 120.01 | 743         | 668.3 |
|         | 30F 75% Load           | 4.68    | 0.59  | *       | *     | 2.93    | 0.37  | 0.25    | 0.03  | 30.76    | 100.93 | 737         | 664.7 |
|         | 30F 50% Load           | 3.69    | 0.46  | *       | *     | 2.93    | 0.37  | 0.19    | 0.02  | 24.64    | 80.85  | 755         | 674.9 |
|         | 80F Base Load + Evap   | 5.54    | 0.70  | *       | *     | 2.93    | 0.37  | 0.29    | 0.04  | 35.66    | 116.99 | 784         | 691.1 |
|         | 80F Base Load          | 5.47    | 0.69  | *       | *     | 2.93    | 0.37  | 0.29    | 0.04  | 35.23    | 115.58 | 789         | 693.4 |
|         | 80F 75% Load           | 4.55    | 0.57  | *       | *     | 2.93    | 0.37  | 0.24    | 0.03  | 29.97    | 98.33  | 763         | 679.5 |
|         | 80F 50% Load           | 3.59    | 0.45  | *       | *     | 2.93    | 0.37  | 0.19    | 0.02  | 24.12    | 79.12  | 781         | 689.0 |
|         | 97F Base Load + Evap   | 5.55    | 0.70  | *       | *     | 2.93    | 0.37  | 0.29    | 0.04  | 35.75    | 117.29 | 783         | 690.6 |
|         | 97F Base Load          | 5.35    | 0.67  | *       | *     | 2.93    | 0.37  | 0.28    | 0.04  | 34.51    | 113.21 | 796         | 697.4 |
|         | 97F 75% Load           | 4.56    | 0.57  | *       | *     | 2.93    | 0.37  | 0.24    | 0.03  | 30.04    | 98.56  | 763         | 679.0 |
|         | 97F 50% Load           | 3.60    | 0.45  | *       | *     | 2.93    | 0.37  | 0.19    | 0.02  | 24.18    | 79.34  | 779         | 688.3 |
| 24-Hour | 30F Base Load          | *       | *     | *       | *     | 5.98    | 0.75  | 0.61    | 0.08  | 36.58    | 120.01 | 743.2       | 668.3 |
|         | 30F 75% Load           | *       | *     | *       | *     | 5.98    | 0.75  | 0.49    | 0.06  | 30.76    | 100.93 | 736.7       | 664.7 |
|         | 30F 50% Load           | *       | *     | *       | *     | 5.98    | 0.75  | 0.37    | 0.05  | 24.64    | 80.85  | 755.1       | 674.9 |
|         | 80F Base Load + Evap   | *       | *     | *       | *     | 5.98    | 0.75  | 0.60    | 0.08  | 35.66    | 116.99 | 784.3       | 691.1 |
|         | 80F Base Load          | *       | *     | *       | *     | 5.98    | 0.75  | 0.59    | 0.07  | 35.23    | 115.58 | 788.5       | 693.4 |
|         | 80F 75% Load           | *       | *     | *       | *     | 5.98    | 0.75  | 0.48    | 0.06  | 29.97    | 98.33  | 763.4       | 679.5 |
|         | 80F 50% Load           | *       | *     | *       | *     | 5.98    | 0.75  | 0.36    | 0.05  | 24.12    | 79.12  | 780.6       | 689.0 |
|         | 97F Base Load + Evap   | *       | *     | *       | *     | 5.98    | 0.75  | 0.60    | 0.08  | 35.75    | 117.29 | 783.4       | 690.6 |
|         | 97F Base Load          | *       | *     | *       | *     | 5.98    | 0.75  | 0.57    | 0.07  | 34.51    | 113.21 | 795.6       | 697.4 |
|         | 97F 75% Load           | *       | *     | *       | *     | 5.98    | 0.75  | 0.48    | 0.06  | 30.04    | 98.56  | 762.6       | 679.0 |
|         | 97F 50% Load           | *       | *     | *       | *     | 5.98    | 0.75  | 0.36    | 0.05  | 24.18    | 79.34  | 779.3       | 688.3 |
|         | Pre- break-in Checkout | *       | *     | *       | *     | *       | *     | *       | *     | 20.08    | 65.89  | 817.6       | 709.6 |
|         | Controlled Break-in    | *       | *     | *       | *     | *       | *     | *       | *     | 20.08    | 65.89  | 817.6       | 709.6 |
|         | Water Injection        | *       | *     | *       | *     | *       | *     | *       | *     | 24.12    | 79.12  | 780.6       | 689.0 |
|         | Complete AVR           | *       | *     | *       | *     | *       | *     | *       | *     | 35.23    | 115.58 | 788.5       | 693.4 |
|         | SCR Commissioning      | *       | *     | *       | *     | *       | *     | *       | *     | 29.97    | 98.33  | 763.4       | 679.5 |
|         | Full load testing &    | *       | *     | *       | *     | *       | *     | *       | *     | 35.23    | 115.58 | 788.5       | 693.4 |
|         | 30F Base Load          | *       | *     | 17.75   | 2.24  | *       | *     | *       | *     | 36.58    | 120.01 | 743.2       | 668.3 |
|         | 30F 75% Load           | *       | *     | 15.74   | 1.98  | *       | *     | *       | *     | 30.76    | 100.93 | 736.7       | 664.7 |
|         | 30F 50% Load           | *       | *     | 13.78   | 1.74  | *       | *     | *       | *     | 24.64    | 80.85  | 755.1       | 674.9 |
|         | 80F Base Load + Evap   | *       | *     | 17.47   | 2.20  | *       | *     | *       | *     | 35.66    | 116.99 | 784.3       | 691.1 |
| 8-Hour  | 80F Base Load          | *       | *     | 17.31   | 2.18  | *       | *     | *       | *     | 35.23    | 115.58 | 788.5       | 693.4 |
|         | 80F 75% Load           | *       | *     | 15.48   | 1.95  | *       | *     | *       | *     | 29.97    | 98.33  | 763.4       | 679.5 |
|         | 80F 50% Load           | *       | *     | 13.60   | 1.71  | *       | *     | *       | *     | 24.12    | 79.12  | 780.6       | 689.0 |
|         | 97F Base Load + Evap   | *       | *     | 17.45   | 2.20  | *       | *     | *       | *     | 35.75    | 117.29 | 783.4       | 690.6 |
|         | 97F Base Load          | *       | *     | 17.09   | 2.15  | *       | *     | *       | *     | 34.51    | 113.21 | 795.6       | 697.4 |
|         | 97F 75% Load           | *       | *     | 15.53   | 1.96  | *       | *     | *       | *     | 30.04    | 98.56  | 762.6       | 679.0 |
|         | 97F 50% Load           | *       | *     | 13.61   | 1.72  | *       | *     | *       | *     | 24.18    | 79.34  | 779.3       | 688.3 |
|         | Pre- break-in Checkout | *       | *     | 55      | 6.93  | *       | *     | *       | *     | 20.08    | 65.89  | 817.6       | 709.6 |
|         | Controlled Break-in    | *       | *     | 60      | 7.56  | *       | *     | *       | *     | 20.08    | 65.89  | 817.6       | 709.6 |
|         | Water Injection        | *       | *     | 168     | 21.17 | *       | *     | *       | *     | 24.12    | 79.12  | 780.6       | 689.0 |
|         | Complete AVR           | *       | *     | 255     | 32.13 | *       | *     | *       | *     | 35.23    | 115.58 | 788.5       | 693.4 |
|         | SCR Commissioning      | *       | *     | 9       | 1.13  | *       | *     | *       | *     | 29.97    | 98.33  | 763.4       | 679.5 |
|         | Full load testing &    | *       | *     | 12      | 1.51  | *       | *     | *       | *     | 35.23    | 115.58 | 788.5       | 693.4 |
|         | 30F Base Load          | *       | *     | *       | *     | *       | *     | 0.60    | 0.08  | 36.58    | 120.01 | 743.2       | 668.3 |
|         | 30F 75% Load           | *       | *     | *       | *     | *       | *     | 0.54    | 0.07  | 30.76    | 100.93 | 736.7       | 664.7 |
|         | 30F 50% Load           | *       | *     | *       | *     | *       | *     | 0.48    | 0.06  | 24.64    | 80.85  | 755.1       | 674.9 |
|         | 80F Base Load + Evap   | *       | *     | *       | *     | *       | *     | 0.59    | 0.07  | 35.66    | 116.99 | 784.3       | 691.1 |
| 3-Hour  | 80F Base Load          | *       | *     | *       | *     | *       | *     | 0.59    | 0.07  | 35.23    | 115.58 | 788.5       | 693.4 |
|         | 80F 75% Load           | *       | *     | *       | *     | *       | *     | 0.53    | 0.07  | 29.97    | 98.33  | 763.4       | 679.5 |
|         | 80F 50% Load           | *       | *     | *       | *     | *       | *     | 0.47    | 0.06  | 24.12    | 79.12  | 780.6       | 689.0 |
|         | 97F Base Load + Evap   | *       | *     | *       | *     | *       | *     | 0.59    | 0.07  | 35.75    | 117.29 | 783.4       | 690.6 |
|         | 97F Base Load          | *       | *     | *       | *     | *       | *     | 0.58    | 0.07  | 34.51    | 113.21 | 795.6       | 697.4 |
|         | 97F 75% Load           | *       | *     | *       | *     | *       | *     | 0.53    | 0.07  | 30.04    | 98.56  | 762.6       | 679.0 |
|         | 97F 50% Load           | *       | *     | *       | *     | *       | *     | 0.47    | 0.06  | 24.18    | 79.34  | 779.3       | 688.3 |
|         | Pre- break-in Checkout | *       | *     | *       | *     | *       | *     | *       | *     | 20.08    | 65.89  | 817.6       | 709.6 |
|         | Controlled Break-in    | *       | *     | *       | *     | *       | *     | *       | *     | 20.08    | 65.89  | 817.6       | 709.6 |
|         | Water Injection        | *       | *     | *       | *     | *       | *     | *       | *     | 24.12    | 79.12  | 780.6       | 689.0 |
|         | Complete AVR           | *       | *     | *       | *     | *       | *     | *       | *     | 35.23    | 115.58 | 788.5       | 693.4 |
|         | SCR Commissioning      | *       | *     | *       | *     | *       | *     | *       | *     | 29.97    | 98.33  | 763.4       | 679.5 |
|         | Full load testing &    | *       | *     | *       | *     | *       | *     | *       | *     | 35.23    | 115.58 | 788.5       | 693.4 |
|         | 30F Base Load          | 13.54   | 1.71  | 35.94   | 4.53  | *       | *     | 0.59    | 0.07  | 36.58    | 120.01 | 743.2       | 668.3 |
|         | 30F 75% Load           | 13.06   | 1.65  | 35.44   | 4.46  | *       | *     | 0.57    | 0.07  | 30.76    | 100.93 | 736.7       | 664.7 |
|         | 30F 50% Load           | 12.59   | 1.59  | 34.95   | 4.40  | *       | *     | 0.54    | 0.07  | 24.64    | 80.85  | 755.1       | 674.9 |
| 1-Hour  | 80F Base Load + Evap   | 13.46   | 1.70  | 35.87   | 4.52  | *       | *     | 0.59    | 0.07  | 35.66    | 116.99 | 784.3       | 691.1 |
|         | 80F Base Load          | 13.43   | 1.69  | 35.83   | 4.51  | *       | *     | 0.59    | 0.07  | 35.23    | 115.58 | 788.5       | 693.4 |
|         | 80F 75% Load           | 13.00   | 1.64  | 35.37   | 4.46  | *       | *     | 0.56    | 0.07  | 29.97    | 98.33  | 763.4       | 679.5 |
|         | 80F 50% Load           | 12.55   | 1.58  | 34.90   | 4.40  | *       | *     | 0.54    | 0.07  | 24.12    | 79.12  | 780.6       | 689.0 |
|         | 97F Base Load + Evap   | 13.47   | 1.70  | 35.86   | 4.52  | *       | *     | 0.59    | 0.07  | 35.75    | 117.29 | 783.4       | 690.6 |
|         | 97F Base Load          | 13.37   | 1.69  | 35.77   | 4.51  | *       | *     | 0.58    | 0.07  | 34.51    | 113.21 | 795.6       | 697.4 |
|         | 97F 75% Load           | 13.00   | 1.64  | 35.38   | 4.46  | *       | *     | 0.56    | 0.07  | 30.04    | 98.56  | 762.6       | 679.0 |
|         | 97F 50% Load           | 12.55   | 1.58  | 34.90   | 4.40  | *       | *     | 0.54    | 0.07  | 24.18    | 79.34  | 779.3       | 688.3 |
|         | Pre- break-in Checkout | 91      | 11.47 | 55      | 6.93  | *       | *     | *       | *     | 20.08    | 65.89  | 817.6       | 709.6 |
|         | Controlled Break-in    | 99      | 12.47 | 60      | 7.56  | *       | *     | *       | *     | 20.08    | 65.89  | 817.6       | 709.6 |
|         | Water Injection        | 175     | 22.05 | 168     | 21.17 | *       | *     | *       | *     | 24.12    | 79.12  | 780.6       | 689.0 |
|         | Complete AVR           | 81      | 10.21 | 255     | 32.13 | *       | *     | *       | *     | 35.23    | 115.58 | 788.5       | 693.4 |
|         | SCR Commissioning      | 35      | 4.41  | 9       | 1.13  | *       | *     | *       | *     | 29.97    | 98.33  | 763.4       | 679.5 |
|         | Full load testing &    | 8       | 1.02  | 12      | 1.51  | *       | *     | *       | *     | 35.23    | 115.58 | 788.5       | 693.4 |

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Table 8.1C-4 Detailed Operational Modeling Parameters (PM10 Only)

| Source ID | Source Description    | Easting (X) | Northing (Y) | Base Elevation | Stack Height | Temperature | Exit Velocity | Stack Diameter | PM10 (24-Hr) | PM10 (24-Hr) | PM10 Annual | PM10 Annual |
|-----------|-----------------------|-------------|--------------|----------------|--------------|-------------|---------------|----------------|--------------|--------------|-------------|-------------|
|           |                       | (m)         | (m)          | (m)            | (m)          | (K)         | (m/s)         | (m)            | (lb/hr)      | (g/s)        | (lb/hr)     | (g/s)       |
| CTGSTK1   | North CTG Stack       | 469396      | 3764701.5    | 286.2072       | 24.384       | 689.26      | 24.12         | 3.81           | 5.98         | 0.7535       | 2.93        | 0.3692      |
| CTGSTK2   | Middle CTG Stack      | 469396      | 3764648      | 286.2072       | 24.384       | 689.26      | 24.12         | 3.81           | 5.98         | 0.7535       | 2.93        | 0.3692      |
| CTGSTK3   | South CTG Stack       | 469396      | 3764595      | 286.2072       | 24.384       | 689.26      | 24.12         | 3.81           | 5.98         | 0.7535       | 2.93        | 0.3692      |
| COOLT1C1  | West Cell for CTGSTK1 | 469415.91   | 3764666.5    | 286.2072       | 6.5532       | 307.21      | 9.24          | 4.8768         | 0.0240       | 0.0030       | 0.0151      | 0.0019      |
| COOLT1C2  | East Cell for CTGSTK1 | 469421.03   | 3764666.25   | 286.2072       | 6.5532       | 307.21      | 9.24          | 4.8768         | 0.0240       | 0.0030       | 0.0151      | 0.0019      |
| COOLT2C1  | West Cell for CTGSTK2 | 469415.91   | 3764613.25   | 286.2072       | 6.5532       | 307.21      | 9.24          | 4.8768         | 0.0240       | 0.0030       | 0.0151      | 0.0019      |
| COOLT2C2  | East Cell for CTGSTK2 | 469421.03   | 3764613      | 286.2072       | 6.5532       | 307.21      | 9.24          | 4.8768         | 0.0240       | 0.0030       | 0.0151      | 0.0019      |
| COOLT3C1  | West Cell for CTGSTK3 | 469415.91   | 3764560.25   | 286.2072       | 6.5532       | 307.21      | 9.24          | 4.8768         | 0.0240       | 0.0030       | 0.0151      | 0.0019      |
| COOLT3C2  | East Cell for CTGSTK3 | 469421.03   | 3764560.25   | 286.2072       | 6.5532       | 307.21      | 9.24          | 4.8768         | 0.0240       | 0.0030       | 0.0151      | 0.0019      |

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Table 8.1C-5 Commissioning Modeling Results Summary (ug/m3)

|               | Scenario                      | Comments                        | NOx (ug/m3) |       |       |       | CO (ug/m3) |       |       |       |
|---------------|-------------------------------|---------------------------------|-------------|-------|-------|-------|------------|-------|-------|-------|
|               |                               |                                 | All         | STK1  | STK2  | STK3  | All        | STK1  | STK2  | STK3  |
| <b>8-Hour</b> | Pre- break-in Checkout        | Highest aggregate of two stacks |             |       |       |       | 97.3       | 50.1  | 47.7  | 41.7  |
|               | Controlled Break-in Operation | All 3 stacks                    |             |       |       |       | 138.1      | 54.7  | 52.0  | 45.5  |
|               | Water Injection Commissioning | One stack only                  |             |       |       |       | 143.3      | 143.3 | 134.2 | 112.2 |
|               | Complete AVR Commissioning    | All 3 stacks                    |             |       |       |       | 399.4      | 176.0 | 159.4 | 122.3 |
|               | SCR Commissioning             | All 3 stacks                    |             |       |       |       | 16.2       | 6.9   | 6.4   | 5.0   |
|               | Full load testing & checkout  | All 3 stacks                    |             |       |       |       | 18.8       | 8.3   | 7.5   | 5.8   |
| <b>1-Hour</b> | Pre- break-in Checkout        | Highest aggregate of two stacks | 389.5       | 199.2 | 190.4 | 182.2 | 235.4      | 120.4 | 115.1 | 110.1 |
|               | Controlled Break-in Operation | All 3 stacks                    | 622.0       | 216.7 | 207.2 | 198.2 | 377.0      | 131.3 | 125.6 | 120.1 |
|               | Water Injection Commissioning | One stack only                  | 359.0       | 359.0 | 343.7 | 329.4 | 344.6      | 344.6 | 330.0 | 316.2 |
|               | Complete AVR Commissioning    | All 3 stacks                    | 391.4       | 135.5 | 130.4 | 125.6 | 1232.1     | 426.6 | 410.5 | 395.3 |
|               | SCR Commissioning             | All 3 stacks                    | 186.8       | 64.8  | 62.2  | 59.8  | 48.0       | 16.7  | 16.0  | 15.4  |
|               | Full load testing & checkout  | All 3 stacks                    | 39.1        | 13.5  | 13.0  | 12.6  | 58.0       | 20.1  | 19.3  | 18.6  |

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Table 8.1C-6 Operational Modeling Results Summary (SCREENING)  
Concentrations DO NOT Include Background.

|         | Scenario             | NOx (ug/m3) |        |        |        | CO (ug/m3) |        |        |        | SO2 (ug/m3) |          |          |          | PM10 (ug/m3) |       |       |       |
|---------|----------------------|-------------|--------|--------|--------|------------|--------|--------|--------|-------------|----------|----------|----------|--------------|-------|-------|-------|
|         |                      | All         | STK1   | STK2   | STK3   | All        | STK1   | STK2   | STK3   | All         | STK1     | STK2     | STK3     | All          | STK1  | STK2  | STK3  |
| Annual  | 30F Base Load        | 0.5560      | 0.1891 | 0.1857 | 0.1833 |            |        |        |        | 2.94E-02    | 1.00E-02 | 9.83E-03 | 9.70E-03 | 0.2865       | 0.097 | 0.096 | 0.094 |
|         | 30F 75% Load         | 0.4868      | 0.1653 | 0.1632 | 0.1605 |            |        |        |        | 2.55E-02    | 8.67E-03 | 8.56E-03 | 8.42E-03 | 0.3052       | 0.104 | 0.102 | 0.101 |
|         | 30F 50% Load         | 0.4095      | 0.1390 | 0.1376 | 0.1346 |            |        |        |        | 2.12E-02    | 7.20E-03 | 7.12E-03 | 6.97E-03 | 0.3257       | 0.111 | 0.109 | 0.107 |
|         | 80F Base Load + Evap | 0.5411      | 0.1840 | 0.1807 | 0.1784 |            |        |        |        | 2.86E-02    | 9.72E-03 | 9.55E-03 | 9.42E-03 | 0.2865       | 0.097 | 0.096 | 0.094 |
|         | 80F Base Load        | 0.5357      | 0.1822 | 0.1789 | 0.1766 |            |        |        |        | 2.83E-02    | 9.62E-03 | 9.45E-03 | 9.33E-03 | 0.2875       | 0.098 | 0.096 | 0.095 |
|         | 80F 75% Load         | 0.4747      | 0.1612 | 0.1592 | 0.1565 |            |        |        |        | 2.49E-02    | 8.44E-03 | 8.34E-03 | 8.19E-03 | 0.3063       | 0.104 | 0.103 | 0.101 |
|         | 80F 50% Load         | 0.3996      | 0.1357 | 0.1342 | 0.1313 |            |        |        |        | 2.06E-02    | 7.01E-03 | 6.93E-03 | 6.78E-03 | 0.3262       | 0.111 | 0.110 | 0.107 |
|         | 97F Base Load + Evap | 0.5422      | 0.1844 | 0.1810 | 0.1787 |            |        |        |        | 2.87E-02    | 9.74E-03 | 9.57E-03 | 9.44E-03 | 0.2863       | 0.097 | 0.096 | 0.094 |
|         | 97F Base Load        | 0.5276      | 0.1794 | 0.1763 | 0.1739 |            |        |        |        | 2.78E-02    | 9.47E-03 | 9.30E-03 | 9.18E-03 | 0.2893       | 0.098 | 0.097 | 0.095 |
|         | 97F 75% Load         | 0.4754      | 0.1614 | 0.1594 | 0.1567 |            |        |        |        | 2.49E-02    | 8.45E-03 | 8.35E-03 | 8.21E-03 | 0.3060       | 0.104 | 0.103 | 0.101 |
| 24-Hour | 97F 50% Load         | 0.4006      | 0.1360 | 0.1346 | 0.1317 |            |        |        |        | 2.07E-02    | 7.02E-03 | 6.95E-03 | 6.80E-03 | 0.3261       | 0.111 | 0.110 | 0.107 |
|         | 30F Base Load        |             |        |        |        |            |        |        |        | 3.68E-01    | 1.40E-01 | 1.27E-01 | 1.18E-01 | 3.5863       | 1.366 | 1.236 | 1.151 |
|         | 30F 75% Load         |             |        |        |        |            |        |        |        | 3.27E-01    | 1.25E-01 | 1.15E-01 | 1.05E-01 | 3.9689       | 1.523 | 1.397 | 1.271 |
|         | 30F 50% Load         |             |        |        |        |            |        |        |        | 2.73E-01    | 1.06E-01 | 9.87E-02 | 8.71E-02 | 4.3843       | 1.696 | 1.587 | 1.399 |
|         | 80F Base Load + Evap |             |        |        |        |            |        |        |        | 3.58E-01    | 1.36E-01 | 1.23E-01 | 1.15E-01 | 3.5915       | 1.368 | 1.238 | 1.152 |
|         | 80F Base Load        |             |        |        |        |            |        |        |        | 3.54E-01    | 1.35E-01 | 1.22E-01 | 1.14E-01 | 3.6126       | 1.377 | 1.247 | 1.159 |
|         | 80F 75% Load         |             |        |        |        |            |        |        |        | 3.17E-01    | 1.22E-01 | 1.12E-01 | 1.02E-01 | 3.9914       | 1.533 | 1.407 | 1.278 |
|         | 80F 50% Load         |             |        |        |        |            |        |        |        | 2.65E-01    | 1.03E-01 | 9.60E-02 | 8.46E-02 | 4.3964       | 1.701 | 1.593 | 1.403 |
|         | 97F Base Load + Evap |             |        |        |        |            |        |        |        | 3.58E-01    | 1.37E-01 | 1.24E-01 | 1.15E-01 | 3.5871       | 1.366 | 1.237 | 1.151 |
|         | 97F Base Load        |             |        |        |        |            |        |        |        | 3.50E-01    | 1.33E-01 | 1.21E-01 | 1.12E-01 | 3.6502       | 1.392 | 1.262 | 1.171 |
| 8-Hour  | 97F 75% Load         |             |        |        |        |            |        |        |        | 3.18E-01    | 1.22E-01 | 1.12E-01 | 1.02E-01 | 3.9866       | 1.531 | 1.405 | 1.276 |
|         | 97F 50% Load         |             |        |        |        |            |        |        |        | 2.66E-01    | 1.03E-01 | 9.62E-02 | 8.48E-02 | 4.3938       | 1.700 | 1.592 | 1.402 |
|         | 30F Base Load        |             |        |        |        | 27.528     | 12.155 | 11.000 | 8.424  |             |          |          |          |              |       |       |       |
|         | 30F 75% Load         |             |        |        |        | 28.091     | 12.021 | 11.029 | 8.750  |             |          |          |          |              |       |       |       |
|         | 30F 50% Load         |             |        |        |        | 28.556     | 11.720 | 10.966 | 9.162  |             |          |          |          |              |       |       |       |
|         | 80F Base Load + Evap |             |        |        |        | 27.147     | 11.981 | 10.845 | 8.308  |             |          |          |          |              |       |       |       |
|         | 80F Base Load        |             |        |        |        | 27.112     | 11.947 | 10.822 | 8.301  |             |          |          |          |              |       |       |       |
|         | 80F 75% Load         |             |        |        |        | 27.854     | 11.895 | 10.924 | 8.678  |             |          |          |          |              |       |       |       |
|         | 80F 50% Load         |             |        |        |        | 28.313     | 11.605 | 10.865 | 9.083  |             |          |          |          |              |       |       |       |
|         | 97F Base Load + Evap |             |        |        |        | 27.081     | 11.956 | 10.821 | 8.288  |             |          |          |          |              |       |       |       |
| 3-Hour  | 97F Base Load        |             |        |        |        | 27.148     | 11.927 | 10.818 | 8.317  |             |          |          |          |              |       |       |       |
|         | 97F 75% Load         |             |        |        |        | 27.893     | 11.917 | 10.942 | 8.687  |             |          |          |          |              |       |       |       |
|         | 97F 50% Load         |             |        |        |        | 28.305     | 11.605 | 10.863 | 9.080  |             |          |          |          |              |       |       |       |
|         | 30F Base Load        |             |        |        |        |            |        |        |        | 1.914       | 0.662    | 0.638    | 0.614    |              |       |       |       |
|         | 30F 75% Load         |             |        |        |        |            |        |        |        | 1.903       | 0.660    | 0.634    | 0.609    |              |       |       |       |
|         | 30F 50% Load         |             |        |        |        |            |        |        |        | 1.875       | 0.652    | 0.624    | 0.598    |              |       |       |       |
|         | 80F Base Load + Evap |             |        |        |        |            |        |        |        | 1.885       | 0.652    | 0.628    | 0.605    |              |       |       |       |
|         | 80F Base Load        |             |        |        |        |            |        |        |        | 1.882       | 0.651    | 0.627    | 0.604    |              |       |       |       |
|         | 80F 75% Load         |             |        |        |        |            |        |        |        | 1.885       | 0.653    | 0.628    | 0.603    |              |       |       |       |
|         | 80F 50% Load         |             |        |        |        |            |        |        |        | 1.857       | 0.646    | 0.619    | 0.593    |              |       |       |       |
| 1-Hour  | 97F Base Load + Evap |             |        |        |        |            |        |        |        | 1.886       | 0.653    | 0.628    | 0.605    |              |       |       |       |
|         | 97F Base Load        |             |        |        |        |            |        |        |        | 1.879       | 0.650    | 0.626    | 0.603    |              |       |       |       |
|         | 97F 75% Load         |             |        |        |        |            |        |        |        | 1.885       | 0.653    | 0.628    | 0.603    |              |       |       |       |
|         | 97F 50% Load         |             |        |        |        |            |        |        |        | 1.858       | 0.646    | 0.619    | 0.593    |              |       |       |       |
|         | 30F Base Load        | 64.924      | 22.472 | 21.629 | 20.830 | 172.38     | 59.666 | 57.427 | 55.305 | 2.846       | 0.985    | 0.948    | 0.913    |              |       |       |       |
|         | 30F 75% Load         | 69.314      | 24.038 | 23.090 | 22.193 | 188.09     | 65.228 | 62.657 | 60.221 | 3.010       | 1.044    | 1.003    | 0.964    |              |       |       |       |
|         | 30F 50% Load         | 74.035      | 25.751 | 24.660 | 23.630 | 205.46     | 71.462 | 68.434 | 65.578 | 3.183       | 1.107    | 1.060    | 1.016    |              |       |       |       |
|         | 80F Base Load + Evap | 64.679      | 22.389 | 21.547 | 20.751 | 172.30     | 59.642 | 57.399 | 55.277 | 2.831       | 0.980    | 0.943    | 0.908    |              |       |       |       |
|         | 80F Base Load        | 64.890      | 22.465 | 21.618 | 20.816 | 173.11     | 59.932 | 57.672 | 55.533 | 2.838       | 0.983    | 0.946    | 0.911    |              |       |       |       |
|         | 80F 75% Load         | 69.375      | 24.062 | 23.110 | 22.209 | 188.81     | 65.488 | 62.898 | 60.445 | 3.008       | 1.043    | 1.002    | 0.963    |              |       |       |       |
| 1-Hour  | 80F 50% Load         | 73.993      | 25.738 | 24.646 | 23.616 | 205.81     | 71.589 | 68.550 | 65.685 | 3.178       | 1.105    | 1.058    | 1.014    |              |       |       |       |
|         | 97F Base Load + Evap | 64.631      | 22.372 | 21.532 | 20.736 | 172.07     | 59.561 | 57.323 | 55.205 | 2.829       | 0.979    | 0.943    | 0.908    |              |       |       |       |
|         | 97F Base Load        | 65.298      | 22.611 | 21.754 | 20.943 | 174.65     | 60.476 | 58.184 | 56.015 | 2.853       | 0.988    | 0.951    | 0.915    |              |       |       |       |
|         | 97F 75% Load         | 69.319      | 24.042 | 23.092 | 22.192 | 188.65     | 65.430 | 62.844 | 60.394 | 3.006       | 1.043    | 1.001    | 0.962    |              |       |       |       |
| 1-Hour  | 97F 50% Load         | 73.976      | 25.732 | 24.640 | 23.610 | 205.69     | 71.549 | 68.513 | 65.650 | 3.177       | 1.105    | 1.058    | 1.014    |              |       |       |       |

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Table 8.1C-7 Operational Modeling Results Summary (Detailed - PM10 Only)

|                | Scenario     | PM10 (ug/m3) |       |       |       |               |
|----------------|--------------|--------------|-------|-------|-------|---------------|
|                |              | All          | STK1  | STK2  | STK3  | Cooling Tower |
| <b>Annual</b>  | 80F 50% Load | 0.331        | 0.111 | 0.109 | 0.107 | 0.139         |
| <b>24-hour</b> | 80F 50% Load | 4.45         | 1.701 | 1.593 | 1.403 | 0.79          |
|                |              |              |       |       |       |               |

**TABLE 8.1C-8a: ANNUAL FREQUENCY DISTRIBUTION (COUNTS)**

Date Range: Jan 1 - Dec 31

| <b>Wind Speed (m/s)<br/>Wind Direction (from)</b> | <b>0.5-2.1</b> | <b>2.1-3.6</b> | <b>3.6-5.7</b> | <b>5.7-8.8</b> | <b>8.8-11.1</b> | <b>&gt;=11</b> | <b>Totals</b> |
|---------------------------------------------------|----------------|----------------|----------------|----------------|-----------------|----------------|---------------|
| N                                                 | 455            | 36             | 13             | 4              | 0               | 0              | 508           |
| NNE                                               | 279            | 76             | 95             | 47             | 1               | 0              | 498           |
| NE                                                | 195            | 36             | 42             | 14             | 0               | 0              | 287           |
| ENE                                               | 254            | 42             | 11             | 1              | 0               | 0              | 308           |
| E                                                 | 334            | 36             | 9              | 0              | 0               | 0              | 379           |
| ESE                                               | 259            | 40             | 8              | 0              | 0               | 0              | 307           |
| SE                                                | 151            | 8              | 0              | 0              | 0               | 0              | 159           |
| SSE                                               | 172            | 9              | 0              | 0              | 0               | 0              | 181           |
| S                                                 | 278            | 6              | 1              | 0              | 0               | 0              | 285           |
| SWS                                               | 263            | 26             | 14             | 0              | 0               | 0              | 303           |
| SW                                                | 144            | 5              | 1              | 0              | 0               | 0              | 150           |
| WSW                                               | 283            | 32             | 4              | 1              | 0               | 0              | 320           |
| W                                                 | 554            | 223            | 81             | 20             | 2               | 0              | 880           |
| WNW                                               | 793            | 904            | 520            | 59             | 0               | 0              | 2276          |
| NW                                                | 388            | 100            | 9              | 0              | 0               | 0              | 497           |
| NNW                                               | 347            | 9              | 4              | 0              | 0               | 0              | 360           |
| Totals                                            | 5149           | 1588           | 812            | 146            | 3               | 0              |               |

Source: SCAQMD 1981 Riverside Meteorological Data

**TABLE 8.1C-8b: 1<sup>ST</sup> QUARTER FREQUENCY DISTRIBUTION (COUNTS)**

Date Range: Jan 1 - Mar 31

| Wind Speed (m/s)<br>Wind Direction (from) | 0.5-2.1 | 2.1-3.6 | 3.6-5.7 | 5.7-8.8 | 8.8-11.1 | >=11 | Totals |
|-------------------------------------------|---------|---------|---------|---------|----------|------|--------|
| N                                         | 99      | 29      | 8       | 0       | 0        | 0    | 136    |
| NNE                                       | 112     | 34      | 36      | 29      | 1        | 0    | 212    |
| NE                                        | 72      | 11      | 7       | 2       | 0        | 0    | 92     |
| ENE                                       | 113     | 30      | 5       | 1       | 0        | 0    | 149    |
| E                                         | 130     | 16      | 1       | 0       | 0        | 0    | 147    |
| ESE                                       | 84      | 20      | 5       | 0       | 0        | 0    | 109    |
| SE                                        | 30      | 3       | 0       | 0       | 0        | 0    | 33     |
| SSE                                       | 57      | 5       | 0       | 0       | 0        | 0    | 62     |
| S                                         | 79      | 1       | 0       | 0       | 0        | 0    | 80     |
| SWS                                       | 63      | 9       | 1       | 0       | 0        | 0    | 73     |
| SW                                        | 39      | 2       | 0       | 0       | 0        | 0    | 41     |
| WSW                                       | 86      | 17      | 4       | 0       | 0        | 0    | 107    |
| W                                         | 135     | 77      | 25      | 7       | 2        | 0    | 246    |
| WNW                                       | 126     | 140     | 25      | 6       | 0        | 0    | 297    |
| NW                                        | 54      | 4       | 0       | 0       | 0        | 0    | 58     |
| NNW                                       | 73      | 8       | 3       | 0       | 0        | 0    | 84     |
| Totals                                    | 1352    | 406     | 120     | 45      | 3        | 0    |        |

Source: SCAQMD 1981 Riverside Meteorological Data

**TABLE 8.1C-8c: 2<sup>ND</sup> QUARTER FREQUENCY DISTRIBUTION (COUNTS)**

Date Range: Apr 1 - Jun 30

| <b>Wind Speed (m/s)<br/>Wind Direction (from)</b> | <b>0.5-2.1</b> | <b>2.1-3.6</b> | <b>3.6-5.7</b> | <b>5.7-8.8</b> | <b>8.8-11.1</b> | <b>&gt;=11</b> | <b>Totals</b> |
|---------------------------------------------------|----------------|----------------|----------------|----------------|-----------------|----------------|---------------|
| N                                                 | 86             | 0              | 3              | 0              | 0               | 0              | 89            |
| NNE                                               | 45             | 12             | 26             | 9              | 0               | 0              | 92            |
| NE                                                | 28             | 5              | 4              | 4              | 0               | 0              | 41            |
| ENE                                               | 29             | 4              | 0              | 0              | 0               | 0              | 33            |
| E                                                 | 31             | 2              | 0              | 0              | 0               | 0              | 33            |
| ESE                                               | 26             | 7              | 0              | 0              | 0               | 0              | 33            |
| SE                                                | 29             | 2              | 0              | 0              | 0               | 0              | 31            |
| SSE                                               | 36             | 2              | 0              | 0              | 0               | 0              | 38            |
| S                                                 | 66             | 4              | 0              | 0              | 0               | 0              | 70            |
| SWS                                               | 55             | 1              | 0              | 0              | 0               | 0              | 56            |
| SW                                                | 27             | 3              | 0              | 0              | 0               | 0              | 30            |
| WSW                                               | 62             | 3              | 0              | 1              | 0               | 0              | 66            |
| W                                                 | 155            | 57             | 17             | 6              | 0               | 0              | 235           |
| WNW                                               | 259            | 291            | 225            | 29             | 0               | 0              | 804           |
| NW                                                | 116            | 55             | 7              | 0              | 0               | 0              | 178           |
| NNW                                               | 72             | 1              | 1              | 0              | 0               | 0              | 74            |
| Totals                                            | 1122           | 449            | 283            | 49             | 0               | 0              |               |

Source: SCAQMD 1981 Riverside Meteorological Data

**TABLE 8.1C-8d: 3<sup>RD</sup> QUARTER FREQUENCY DISTRIBUTION (COUNTS)**

Date Range: Jul 1 - Sep 30

| <b>Wind Speed (m/s)<br/>Wind Direction (from)</b> | <b>0.5-2.1</b> | <b>2.1-3.6</b> | <b>3.6-5.7</b> | <b>5.7-8.8</b> | <b>8.8-11.1</b> | <b>&gt;=11</b> | <b>Totals</b> |
|---------------------------------------------------|----------------|----------------|----------------|----------------|-----------------|----------------|---------------|
| N                                                 | 103            | 1              | 0              | 0              | 0               | 0              | 104           |
| NNE                                               | 42             | 0              | 0              | 0              | 0               | 0              | 42            |
| NE                                                | 33             | 0              | 0              | 0              | 0               | 0              | 33            |
| ENE                                               | 30             | 0              | 0              | 0              | 0               | 0              | 30            |
| E                                                 | 37             | 0              | 0              | 0              | 0               | 0              | 37            |
| ESE                                               | 32             | 0              | 0              | 0              | 0               | 0              | 32            |
| SE                                                | 13             | 0              | 0              | 0              | 0               | 0              | 13            |
| SSE                                               | 20             | 0              | 0              | 0              | 0               | 0              | 20            |
| S                                                 | 58             | 0              | 1              | 0              | 0               | 0              | 59            |
| SWS                                               | 73             | 14             | 13             | 0              | 0               | 0              | 100           |
| SW                                                | 33             | 0              | 1              | 0              | 0               | 0              | 34            |
| WSW                                               | 77             | 5              | 0              | 0              | 0               | 0              | 82            |
| W                                                 | 179            | 65             | 23             | 7              | 0               | 0              | 274           |
| WNW                                               | 244            | 312            | 234            | 23             | 0               | 0              | 813           |
| NW                                                | 102            | 14             | 1              | 0              | 0               | 0              | 117           |
| NNW                                               | 112            | 0              | 0              | 0              | 0               | 0              | 112           |
| Totals                                            | 1188           | 411            | 273            | 30             | 0               | 0              |               |

Source: SCAQMD 1981 Riverside Meteorological Data

**TABLE 8.1C-8e: 4<sup>TH</sup> QUARTER FREQUENCY DISTRIBUTION (COUNTS)**

Date Range: Oct 1 - Dec 31

| <b>Wind Speed (m/s)<br/>Wind Direction (from)</b> | <b>0.5-2.1</b> | <b>2.1-3.6</b> | <b>3.6-5.7</b> | <b>5.7-8.8</b> | <b>8.8-11.1</b> | <b>&gt;=11</b> | <b>Totals</b> |
|---------------------------------------------------|----------------|----------------|----------------|----------------|-----------------|----------------|---------------|
| N                                                 | 167            | 6              | 2              | 4              | 0               | 0              | 179           |
| NNE                                               | 80             | 30             | 33             | 9              | 0               | 0              | 152           |
| NE                                                | 62             | 20             | 31             | 8              | 0               | 0              | 121           |
| ENE                                               | 82             | 8              | 6              | 0              | 0               | 0              | 96            |
| E                                                 | 136            | 18             | 8              | 0              | 0               | 0              | 162           |
| ESE                                               | 117            | 13             | 3              | 0              | 0               | 0              | 133           |
| SE                                                | 79             | 3              | 0              | 0              | 0               | 0              | 82            |
| SSE                                               | 59             | 2              | 0              | 0              | 0               | 0              | 61            |
| S                                                 | 75             | 1              | 0              | 0              | 0               | 0              | 76            |
| SWS                                               | 72             | 2              | 0              | 0              | 0               | 0              | 74            |
| SW                                                | 45             | 0              | 0              | 0              | 0               | 0              | 45            |
| WSW                                               | 58             | 7              | 0              | 0              | 0               | 0              | 65            |
| W                                                 | 85             | 24             | 16             | 0              | 0               | 0              | 125           |
| WNW                                               | 164            | 161            | 36             | 1              | 0               | 0              | 362           |
| NW                                                | 116            | 27             | 1              | 0              | 0               | 0              | 144           |
| NNW                                               | 90             | 0              | 0              | 0              | 0               | 0              | 90            |
| Totals                                            | 1487           | 322            | 136            | 22             | 0               | 0              |               |

Source: SCAQMD 1981 Riverside Meteorological Data

AES Highgrove AFC

Table 8.1C-9a Period of Record Monthly Climate Summary

# RIVERSIDE FIRE STN 3, CALIFORNIA (047470)

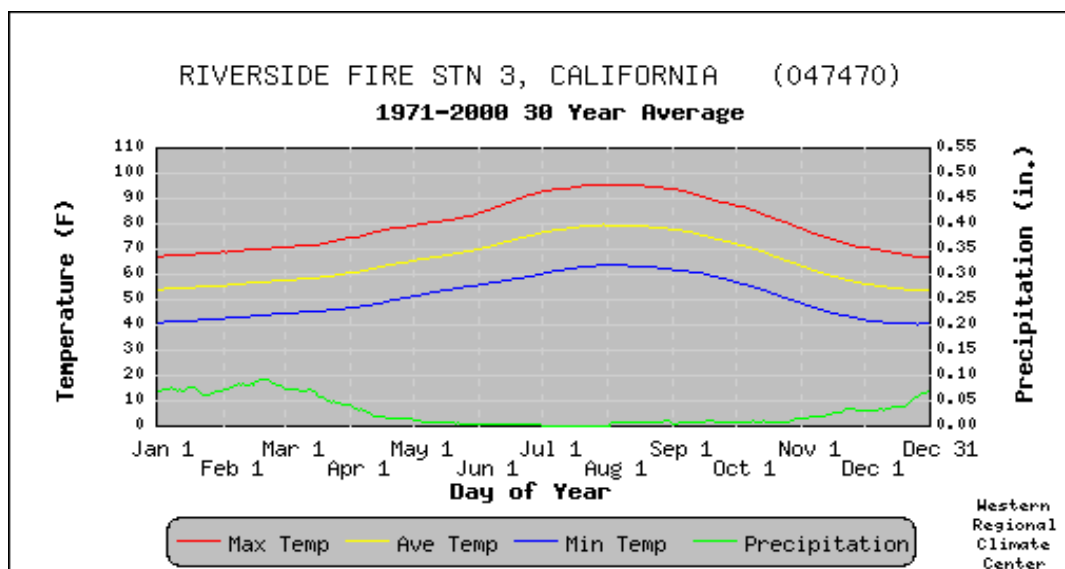
**Period of Record : 12/1/1927 to 9/30/2005**[illegible]

AES Highgrove AFC

Table 8.1C-9b Plot of Monthly Temperature and Precipitation

## RIVERSIDE FIRE STN 3, CALIFORNIA

### 1971 - 2000 Temperature and Precipitation



Data is smoothed using a 29 day running average.

- Max. Temp. is the average of all daily maximum temperatures recorded for the day of the year between the years 1971 and 2000.
- Ave. Temp. is the average of all daily average temperatures recorded for the day of the year between the years 1971 and 2000.
- Min. Temp. is the average of all daily minimum temperatures recorded for the day of the year between the years 1971 and 2000.
- Precipitation is the average of all daily total precipitation recorded for the day of the year between the years 1971 and 2000.

# Ambient Air Quality Standards

| Pollutant                                         | Averaging Time         | California Standards <sup>1</sup>                                                                                                                                                                                                                        |                                           | Federal Standards <sup>2</sup>                 |                                   |                                              |
|---------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------|-----------------------------------|----------------------------------------------|
|                                                   |                        | Concentration <sup>3</sup>                                                                                                                                                                                                                               | Method <sup>4</sup>                       | Primary <sup>3,5</sup>                         | Secondary <sup>3,6</sup>          | Method <sup>7</sup>                          |
| Ozone (O <sub>3</sub> )                           | 1 Hour                 | 0.09 ppm (180 µg/m <sup>3</sup> )                                                                                                                                                                                                                        | Ultraviolet Photometry                    | —                                              | Same as Primary Standard          | Ultraviolet Photometry                       |
|                                                   | 8 Hour                 | 0.070 ppm (137 µg/m <sup>3</sup> )*                                                                                                                                                                                                                      |                                           | 0.08 ppm (157 µg/m <sup>3</sup> ) <sup>8</sup> |                                   |                                              |
| Respirable Particulate Matter (PM <sub>10</sub> ) | 24 Hour                | 50 µg/m <sup>3</sup>                                                                                                                                                                                                                                     | Gravimetric or Beta Attenuation           | 150 µg/m <sup>3</sup>                          | Same as Primary Standard          | Inertial Separation and Gravimetric Analysis |
|                                                   | Annual Arithmetic Mean | 20 µg/m <sup>3</sup>                                                                                                                                                                                                                                     |                                           | 50 µg/m <sup>3</sup>                           |                                   |                                              |
| Fine Particulate Matter (PM <sub>2.5</sub> )      | 24 Hour                | No Separate State Standard                                                                                                                                                                                                                               |                                           | 65 µg/m <sup>3</sup>                           | Same as Primary Standard          | Inertial Separation and Gravimetric Analysis |
|                                                   | Annual Arithmetic Mean | 12 µg/m <sup>3</sup>                                                                                                                                                                                                                                     | Gravimetric or Beta Attenuation           | 15 µg/m <sup>3</sup>                           |                                   |                                              |
| Carbon Monoxide (CO)                              | 8 Hour                 | 9.0 ppm (10mg/m <sup>3</sup> )                                                                                                                                                                                                                           | Non-Dispersive Infrared Photometry (NDIR) | 9 ppm (10 mg/m <sup>3</sup> )                  | None                              | Non-Dispersive Infrared Photometry (NDIR)    |
|                                                   | 1 Hour                 | 20 ppm (23 mg/m <sup>3</sup> )                                                                                                                                                                                                                           |                                           | 35 ppm (40 mg/m <sup>3</sup> )                 |                                   |                                              |
|                                                   | 8 Hour (Lake Tahoe)    | 6 ppm (7 mg/m <sup>3</sup> )                                                                                                                                                                                                                             |                                           | —                                              | —                                 | —                                            |
| Nitrogen Dioxide (NO <sub>2</sub> )               | Annual Arithmetic Mean | —                                                                                                                                                                                                                                                        | Gas Phase Chemiluminescence               | 0.053 ppm (100 µg/m <sup>3</sup> )             | Same as Primary Standard          | Gas Phase Chemiluminescence                  |
|                                                   | 1 Hour                 | 0.25 ppm (470 µg/m <sup>3</sup> )                                                                                                                                                                                                                        |                                           | —                                              |                                   |                                              |
| Sulfur Dioxide (SO <sub>2</sub> )                 | Annual Arithmetic Mean | —                                                                                                                                                                                                                                                        | Ultraviolet Fluorescence                  | 0.030 ppm (80 µg/m <sup>3</sup> )              | —                                 | Spectrophotometry (Pararosaniline Method)    |
|                                                   | 24 Hour                | 0.04 ppm (105 µg/m <sup>3</sup> )                                                                                                                                                                                                                        |                                           | 0.14 ppm (365 µg/m <sup>3</sup> )              | —                                 |                                              |
|                                                   | 3 Hour                 | —                                                                                                                                                                                                                                                        |                                           | —                                              | 0.5 ppm (1300 µg/m <sup>3</sup> ) |                                              |
|                                                   | 1 Hour                 | 0.25 ppm (655 µg/m <sup>3</sup> )                                                                                                                                                                                                                        |                                           | —                                              | —                                 | —                                            |
| Lead <sup>9</sup>                                 | 30 Day Average         | 1.5 µg/m <sup>3</sup>                                                                                                                                                                                                                                    | Atomic Absorption                         | —                                              | —                                 | —                                            |
|                                                   | Calendar Quarter       | —                                                                                                                                                                                                                                                        |                                           | 1.5 µg/m <sup>3</sup>                          | Same as Primary Standard          | High Volume Sampler and Atomic Absorption    |
| Visibility Reducing Particles                     | 8 Hour                 | Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape. |                                           | No Federal Standards                           |                                   |                                              |
| Sulfates                                          | 24 Hour                | 25 µg/m <sup>3</sup>                                                                                                                                                                                                                                     | Ion Chromatography                        |                                                |                                   |                                              |
| Hydrogen Sulfide                                  | 1 Hour                 | 0.03 ppm (42 µg/m <sup>3</sup> )                                                                                                                                                                                                                         | Ultraviolet Fluorescence                  |                                                |                                   |                                              |
| Vinyl Chloride <sup>9</sup>                       | 24 Hour                | 0.01 ppm (26 µg/m <sup>3</sup> )                                                                                                                                                                                                                         | Gas Chromatography                        |                                                |                                   |                                              |

\*This concentration was approved by the Air Resources Board on April 28, 2005 and is expected to become effective in early 2006.

See footnotes on next page ...

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150  $\mu\text{g}/\text{m}^3$  is equal to or less than one. For PM<sub>2.5</sub>, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the EPA.
8. New federal 8-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18, 1997. Contact U.S. EPA for further clarification and current federal policies.
9. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

## SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS

| Mass Daily Thresholds                                                             |                                                                                                                                                                                  |             |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Pollutant                                                                         | Construction                                                                                                                                                                     | Operation   |
| NOx                                                                               | 100 lbs/day                                                                                                                                                                      | 55 lbs/day  |
| VOC                                                                               | 75 lbs/day                                                                                                                                                                       | 55 lbs/day  |
| PM10                                                                              | 150 lbs/day                                                                                                                                                                      | 150 lbs/day |
| SOx                                                                               | 150 lbs/day                                                                                                                                                                      | 150 lbs/day |
| CO                                                                                | 550 lbs/day                                                                                                                                                                      | 550 lbs/day |
| Lead                                                                              | 3 lbs/day                                                                                                                                                                        | 3 lbs/day   |
| Toxic Air Contaminants (TACs) and Odor Thresholds                                 |                                                                                                                                                                                  |             |
| TACs<br>(including carcinogens<br>and non-carcinogens)                            | Maximum Incremental Cancer Risk ≥ 10 in 1 million<br>Hazard Index ≥ 1.0 (project increment)<br>Hazard Index ≥ 3.0 (facility-wide)                                                |             |
| Odor                                                                              | Project creates an odor nuisance pursuant to SCAQMD Rule 402                                                                                                                     |             |
| Ambient Air Quality for Criteria Pollutants <sup>a</sup>                          |                                                                                                                                                                                  |             |
| NO2<br><br>1-hour average<br>annual average                                       | SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards:<br>0.25 ppm (state)<br>0.053 ppm (federal)   |             |
| PM10<br>24-hour average<br><br>annual geometric average<br>annual arithmetic mean | 10.4 µg/m <sup>3</sup> (recommended for construction) <sup>b</sup><br>2.5 µg/m <sup>3</sup> (operation)<br>1.0 µg/m <sup>3</sup><br>20 µg/m <sup>3</sup>                         |             |
| Sulfate<br>24-hour average                                                        | 1 ug/m <sup>3</sup>                                                                                                                                                              |             |
| CO<br><br>1-hour average<br>8-hour average                                        | SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards:<br>20 ppm (state)<br>9.0 ppm (state/federal) |             |

<sup>a</sup> Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

<sup>b</sup> Ambient air quality threshold based on SCAQMD Rule 403.

KEY:    lbs/day = pounds per day    ppm = parts per million     $\mu\text{g}/\text{m}^3$  = microgram per cubic meter     $\geq$  greater than or equal to

**2002 AIR QUALITY  
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT**

| Source/Receptor Area<br>No. Location |                                  | Station<br>No. | Carbon Monoxide                          |                   |                        |                   |        | Ozone                      |                   |                       |                                 |                      |                    |                    |                   | Nitrogen Dioxide                                    |                                                               |                  |                   | Sulfur Dioxide    |                      |                       |
|--------------------------------------|----------------------------------|----------------|------------------------------------------|-------------------|------------------------|-------------------|--------|----------------------------|-------------------|-----------------------|---------------------------------|----------------------|--------------------|--------------------|-------------------|-----------------------------------------------------|---------------------------------------------------------------|------------------|-------------------|-------------------|----------------------|-----------------------|
|                                      |                                  |                | No. Days Standard Exceeded <sup>a)</sup> |                   |                        |                   |        | No. Days Standard Exceeded |                   |                       |                                 |                      |                    |                    |                   | No. Days Standard Exceeded to Federal <sup>b)</sup> |                                                               |                  |                   |                   |                      |                       |
|                                      |                                  |                | Max. Conc. in ppm                        | Max. Conc. in ppm | Federal $\geq 9.5$ ppm | State $> 9.0$ ppm |        | Max. Conc. in ppm          | Max. Conc. in ppm | Fourth High Conc. ppm | Health Advisory $\geq 0.15$ ppm | Federal $> 0.12$ ppm | State $> 0.08$ ppm | State $> 0.09$ ppm | Max. Conc. in ppm | Exceeded $> 0.25$ ppm                               | Average Compared to Federal Standard <sup>b)</sup> AAM in ppm | No. Days of Data | Max. Conc. in ppm | Max. Conc. in ppm |                      |                       |
|                                      |                                  |                | Days of Data                             | 1-hour            | 8-hour                 | 8-hour            | 8-hour | Days of Data               | 1-hour            | 8-hour                | 8-hour                          | 1-hour               | 1-hour             | 8-hour             | 1-hour            | Days of Data                                        | 1-hour                                                        | 1-hour           | ppm               | Days of Data      | 1-hour <sup>c)</sup> | 24-hour <sup>c)</sup> |
| LOS ANGELES COUNTY                   |                                  |                |                                          |                   |                        |                   |        |                            |                   |                       |                                 |                      |                    |                    |                   |                                                     |                                                               |                  |                   |                   |                      |                       |
| 1                                    | Central LA                       | 087            | 360                                      | 5                 | 4.0                    | 0                 | 0      | 365                        | 0.122             | 0.080                 | 0.079                           | 0                    | 0                  | 0                  | 8                 | 363                                                 | 0.14                                                          | 0                | 0.0327            | 365               | 0.02                 | 0.016                 |
| 2                                    | Northwest Coastal LA County      | 091            | 365                                      | 4                 | 2.7                    | 0                 | 0      | 365                        | 0.118             | 0.078                 | 0.074                           | 0                    | 0                  | 0                  | 1                 | 360                                                 | 0.11                                                          | 0                | 0.0249            | --                | --                   | --                    |
| 3                                    | Southwest Coastal LA County      | 094            | 363                                      | 7                 | 6.1                    | 0                 | 0      | 357                        | 0.088             | 0.073                 | 0.066                           | 0                    | 0                  | 0                  | 0                 | 315*                                                | 0.10*                                                         | 0                | 0.0244*           | 360               | 0.07                 | 0.007                 |
| 4                                    | South Coastal LA County          | 072            | 365                                      | 6                 | 4.6                    | 0                 | 0      | 365                        | 0.084             | 0.065                 | 0.060                           | 0                    | 0                  | 0                  | 0                 | 350                                                 | 0.13                                                          | 0                | 0.0298            | 365               | 0.03                 | 0.008                 |
| 6                                    | West San Fernando Valley         | 074            | 365                                      | 6                 | 4.8                    | 0                 | 0      | 365                        | 0.152             | 0.122                 | 0.113                           | 1                    | 9                  | 27                 | 42                | 362                                                 | 0.09                                                          | 0                | 0.0248            | --                | --                   | --                    |
| 7                                    | East San Fernando Valley         | 069            | 365                                      | 6                 | 4.6                    | 0                 | 0      | 365                        | 0.128             | 0.097                 | 0.091                           | 0                    | 1                  | 6                  | 17                | 362                                                 | 0.26                                                          | 1                | 0.0402            | 363               | 0.01                 | 0.007                 |
| 8                                    | West San Gabriel Valley          | 088            | 365                                      | 6                 | 4.0                    | 0                 | 0      | 365                        | 0.137             | 0.103                 | 0.096                           | 0                    | 3                  | 10                 | 23                | 365                                                 | 0.15                                                          | 0                | 0.0335            | --                | --                   | --                    |
| 9                                    | East San Gabriel Valley 1        | 060            | 365                                      | 4                 | 2.4                    | 0                 | 0      | 365                        | 0.136             | 0.102                 | 0.098                           | 0                    | 5                  | 12                 | 26                | 363                                                 | 0.12                                                          | 0                | 0.0336            | --                | --                   | --                    |
| 9                                    | East San Gabriel Valley 2        | 591            | 365                                      | 5                 | 2.3                    | 0                 | 0      | 365                        | 0.152             | 0.114                 | 0.111                           | 1                    | 12                 | 23                 | 45                | 362                                                 | 0.10                                                          | 0                | 0.0272            | --                | --                   | --                    |
| 10                                   | Pomona/Walnut Valley             | 075            | 365                                      | 6                 | 3.3                    | 0                 | 0      | 365                        | 0.150             | 0.112                 | 0.100                           | 1                    | 5                  | 15                 | 28                | 365                                                 | 0.11                                                          | 0                | 0.0365            | --                | --                   | --                    |
| 11                                   | South San Gabriel Valley         | 085            | 365                                      | 5                 | 4.0                    | 0                 | 0      | 365                        | 0.111             | 0.079                 | 0.074                           | 0                    | 0                  | 0                  | 3                 | 362                                                 | 0.12                                                          | 0                | 0.0344            | --                | --                   | --                    |
| 12                                   | South Central LA County          | 084            | 363                                      | 16                | 10.1                   | 1                 | 1      | 364                        | 0.072             | 0.053                 | 0.050                           | 0                    | 0                  | 0                  | 0                 | 362                                                 | 0.14                                                          | 0                | 0.0357            | --                | --                   | --                    |
| 13                                   | Santa Clarita Valley             | 090            | 363                                      | 3                 | 1.9                    | 0                 | 0      | 362                        | 0.169             | 0.145                 | 0.131                           | 8                    | 32                 | 56                 | 81                | 355                                                 | 0.10                                                          | 0                | 0.0200            | --                | --                   | --                    |
| ORANGE COUNTY                        |                                  |                |                                          |                   |                        |                   |        |                            |                   |                       |                                 |                      |                    |                    |                   |                                                     |                                                               |                  |                   |                   |                      |                       |
| 16                                   | North Orange County              | 3177           | 365                                      | 10                | 4.4                    | 0                 | 0      | 365                        | 0.121             | 0.079                 | 0.073                           | 0                    | 0                  | 0                  | 3                 | 335                                                 | 0.12                                                          | 0                | 0.0256            | --                | --                   | --                    |
| 17                                   | Central Orange County            | 3176           | 365                                      | 7                 | 5.4                    | 0                 | 0      | 365                        | 0.103             | 0.079                 | 0.070                           | 0                    | 0                  | 0                  | 3                 | 358                                                 | 0.10                                                          | 0                | 0.0244            | --                | --                   | --                    |
| 18                                   | North Coastal Orange County      | 3195           | 357                                      | 5                 | 4.3                    | 0                 | 0      | 365                        | 0.087             | 0.071                 | 0.066                           | 0                    | 0                  | 0                  | 0                 | 364                                                 | 0.11                                                          | 0                | 0.0187            | 365               | 0.03                 | 0.016                 |
| 19                                   | Saddleback Valley                | 3812           | 365                                      | 3                 | 3.6                    | 0                 | 0      | 365                        | 0.136             | 0.095                 | 0.081                           | 0                    | 2                  | 2                  | 9                 | --                                                  | --                                                            | --               | --                | --                | --                   | --                    |
| RIVERSIDE COUNTY                     |                                  |                |                                          |                   |                        |                   |        |                            |                   |                       |                                 |                      |                    |                    |                   |                                                     |                                                               |                  |                   |                   |                      |                       |
| 22                                   | Norco/Corona                     | 4155           | --                                       | --                | --                     | --                | --     | --                         | --                | --                    | --                              | --                   | --                 | --                 | --                | --                                                  | --                                                            | --               | --                | --                | --                   | --                    |
| 23                                   | Metropolitan Riverside County 1  | 4144           | 358                                      | 8                 | 3.0                    | 0                 | 0      | 358                        | 0.155             | 0.124                 | 0.111                           | 1                    | 12                 | 38                 | 56                | 338                                                 | 0.10                                                          | 0                | 0.0237            | 351               | 0.02                 | 0.002                 |
| 23                                   | Metropolitan Riverside County 2  | 4146           | 361                                      | 7                 | 3.9                    | 0                 | 0      | --                         | --                | --                    | --                              | --                   | --                 | --                 | --                | --                                                  | --                                                            | --               | --                | --                | --                   | --                    |
| 24                                   | Perris Valley                    | 4149           | --                                       | --                | --                     | --                | --     | 365                        | 0.147             | 0.117                 | 0.107                           | 1                    | 4                  | 41                 | 59                | --                                                  | --                                                            | --               | --                | --                | --                   | --                    |
| 25                                   | Lake Elsinore                    | 4158           | 365                                      | 3                 | 2.0                    | 0                 | 0      | 365                        | 0.139             | 0.114                 | 0.104                           | 0                    | 6                  | 44                 | 52                | 364                                                 | 0.07                                                          | 0                | 0.0173            | --                | --                   | --                    |
| 29                                   | Banning Airport                  | 4164           | --                                       | --                | --                     | --                | --     | 365                        | 0.160             | 0.131                 | 0.113                           | 2                    | 13                 | 52                 | 64                | 364                                                 | 0.15                                                          | 0                | 0.0199            | --                | --                   | --                    |
| 30                                   | Coachella Valley 1**             | 4137           | 363                                      | 2                 | 1.2                    | 0                 | 0      | 365                        | 0.136             | 0.127                 | 0.110                           | 0                    | 2                  | 48                 | 49                | 356                                                 | 0.10                                                          | 0                | 0.0172            | --                | --                   | --                    |
| 30                                   | Coachella Valley 2**             | 4157           | --                                       | --                | --                     | --                | --     | 365                        | 0.114             | 0.111                 | 0.096                           | 0                    | 0                  | 16                 | 24                | --                                                  | --                                                            | --               | --                | --                | --                   | --                    |
| SAN BERNARDINO COUNTY                |                                  |                |                                          |                   |                        |                   |        |                            |                   |                       |                                 |                      |                    |                    |                   |                                                     |                                                               |                  |                   |                   |                      |                       |
| 32                                   | Northwest San Bernardino Valley  | 5175           | 363                                      | 4                 | 1.6                    | 0                 | 0      | 363                        | 0.139             | 0.118                 | 0.106                           | 0                    | 5                  | 19                 | 36                | 359                                                 | 0.12                                                          | 0                | 0.0369            | --                | --                   | --                    |
| 33                                   | Southwest San Bernardino Valley  | 5817           | --                                       | --                | --                     | --                | --     | --                         | --                | --                    | --                              | --                   | --                 | --                 | --                | --                                                  | --                                                            | --               | --                | --                | --                   | --                    |
| 34                                   | Central San Bernardino Valley 1  | 5197           | --                                       | --                | --                     | --                | --     | 335                        | 0.159             | 0.124                 | 0.115                           | 2                    | 8                  | 22                 | 37                | 303*                                                | 0.12*                                                         | 0                | 0.0334*           | 329               | 0.03*                | 0.010*                |
| 34                                   | Central San Bernardino Valley 2  | 5203           | 359                                      | 5                 | 3.3                    | 0                 | 0      | 359                        | 0.147             | 0.113                 | 0.106                           | 1                    | 6                  | 30                 | 43                | 345                                                 | 0.11                                                          | 0                | 0.0296            | --                | --                   | --                    |
| 35                                   | East San Bernardino Valley       | 5204           | --                                       | --                | --                     | --                | --     | 365                        | 0.158             | 0.123                 | 0.119                           | 2                    | 23                 | 47                 | 66                | --                                                  | --                                                            | --               | --                | --                | --                   | --                    |
| 37                                   | Central San Bernardino Mountains | 5181           | --                                       | --                | --                     | --                | --     | 365                        | 0.161             | 0.139                 | 0.132                           | 3                    | 22                 | 82                 | 91                | --                                                  | --                                                            | --               | --                | --                | --                   | --                    |
| 38                                   | East San Bernardino Mountains    | 5818           | --                                       | --                | --                     | --                | --     | --                         | --                | --                    | --                              | --                   | --                 | --                 | --                | --                                                  | --                                                            | --               | --                | --                | --                   | --                    |
| DISTRICT MAXIMUM                     |                                  |                |                                          | 16                | 10.1                   | 1                 | 1      |                            | 0.169             | 0.145                 | 0.132                           | 8                    | 32                 | 82                 | 91                |                                                     | 0.26                                                          | 1                | 0.0402            |                   | 0.07                 | 0.016                 |
| SOUTH COAST AIR BASIN                |                                  |                |                                          | 16                | 10.1                   | 1                 | 1      |                            | 0.169             | 0.145                 | 0.132                           | 18                   | 49                 | 103                | 118               |                                                     | 0.26                                                          | 1                | 0.0402            |                   | 0.07                 | 0.016                 |

ppm - Parts Per Million parts of air, by volume.

AAM = Annual Arithmetic Mean

-- Pollutant not monitored.

\* Less than 12 full months of data. May not be representative.

\*\* Salton Sea Air Basin.

a) - The federal 1-hour standard (1-hour average CO > 35 ppm) and state 1-hour standard (1-hour average CO > 20 ppm) were not exceeded.

b) - The federal standard is annual arithmetic mean NO<sub>2</sub> greater than 0.0534 ppm. No location exceeded this standard.

c) - The state standards are 1-hour average SO<sub>2</sub> > 0.25 ppm and 24-hour average SO<sub>2</sub> > 0.04 ppm. No location exceeded state standards.

The federal standards are annual arithmetic mean SO<sub>2</sub> > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm.

SO<sub>2</sub> concentrations were well below the federal standards.



**South Coast  
Air Quality Management District**  
21865 Copley Drive  
Diamond Bar, CA 91765-4182  
<http://www.aqmd.gov>

The map showing the locations of source/receptor areas can be accessed via the Internet at <http://www.aqmd.gov/smog/areamap.html>. Locations of source/receptor areas are shown on the "South Coast Air Quality Management District Air Monitoring Areas" map available free of charge from SCAQMD Public Information.

# 2002 AIR QUALITY SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

| Source/Receptor Area<br>No. Location |                                  | Station<br>No. | Suspended Particulates PM10 <sup>d),++</sup> |                                               |                                                  |                                               |                                                                       |                                   | Suspended Particulates PM2.5 <sup>e),++</sup> |                                               |                                                 |                                                                       | Particulates TSP <sup>f)</sup> |                                               | Lead <sup>g)</sup>                                     |                                                                        | Sulfate <sup>h)</sup>                                                    |                                                     |                                                               |
|--------------------------------------|----------------------------------|----------------|----------------------------------------------|-----------------------------------------------|--------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------|-----------------------------------|-----------------------------------------------|-----------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------|--------------------------------|-----------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------------|
|                                      |                                  |                | No. (%) Samples<br>Exceeding<br>Standard     |                                               |                                                  |                                               |                                                                       |                                   | No. (%) Samples<br>Exceeding<br>Standard      |                                               |                                                 |                                                                       | Max. Annual<br>Average         |                                               | Max. Monthly<br>Average                                |                                                                        | No. (%) Samples<br>Exceeding<br>Standard                                 |                                                     |                                                               |
|                                      |                                  |                | No.<br>Days<br>of                            | Max.<br>Conc.<br>µg/m <sup>3</sup><br>24-hour | Federal<br>> 150<br>µg/m <sup>3</sup><br>24-hour | State<br>> 50<br>µg/m <sup>3</sup><br>24-hour | Annual<br>Averages <sup>g)</sup><br>AAM<br>Conc.<br>µg/m <sup>3</sup> | AGM<br>Conc.<br>µg/m <sup>3</sup> | No.<br>Days<br>of                             | Max.<br>Conc.<br>µg/m <sup>3</sup><br>24-hour | Federal<br>> 65<br>µg/m <sup>3</sup><br>24-hour | Annual<br>Averages <sup>h)</sup><br>AAM<br>Conc.<br>µg/m <sup>3</sup> | No.<br>Days<br>of              | Max.<br>Conc.<br>µg/m <sup>3</sup><br>24-hour | Annual<br>Average<br>AAM<br>Conc.<br>µg/m <sup>3</sup> | Max.<br>Monthly<br>Average<br>Conc. <sup>i)</sup><br>µg/m <sup>3</sup> | Max.<br>Quarterly<br>Average<br>Conc. <sup>j)</sup><br>µg/m <sup>3</sup> | Max.<br>Conc.<br>In<br>µg/m <sup>3</sup><br>24-hour | Exceeding<br>Standard<br>≥ 25<br>µg/m <sup>3</sup><br>24-hour |
| LOS ANGELES COUNTY                   |                                  |                |                                              |                                               |                                                  |                                               |                                                                       |                                   |                                               |                                               |                                                 |                                                                       |                                |                                               |                                                        |                                                                        |                                                                          |                                                     |                                                               |
| 1                                    | Central LA                       | 087            | 55                                           | 65                                            | 0                                                | 8(14.5)                                       | 39.3                                                                  | 37.6                              | 330                                           | 66.3                                          | 1(0.3)                                          | 21.8                                                                  | 69                             | 152                                           | 77.7                                                   | 0.05                                                                   | 0.03                                                                     | 15.2                                                | 0                                                             |
| 2                                    | Northwest Coastal LA County      | 091            | --                                           | --                                            | --                                               | --                                            | --                                                                    | --                                | --                                            | --                                            | --                                              | --                                                                    | 60                             | 191                                           | 52.3                                                   | --                                                                     | --                                                                       | 14.6                                                | 0                                                             |
| 3                                    | Southwest Coastal LA County      | 094            | 61                                           | 121                                           | 0                                                | 12(19.7)                                      | 37.4                                                                  | 34.1                              | --                                            | --                                            | --                                              | --                                                                    | 60                             | 680                                           | 83.8                                                   | 0.02                                                                   | 0.02                                                                     | 15.6                                                | 0                                                             |
| 4                                    | South Coastal LA County          | 072            | 58                                           | 74                                            | 0                                                | 5(8.6)                                        | 35.9                                                                  | 34.1                              | 356                                           | 62.7                                          | 0                                               | 19.5                                                                  | 61                             | 104                                           | 65.5                                                   | 0.03                                                                   | 0.02                                                                     | 17.8                                                | 0                                                             |
| 6                                    | West San Fernando Valley         | 074            | --                                           | --                                            | --                                               | --                                            | --                                                                    | --                                | 120                                           | 48.8                                          | 0                                               | 18.9                                                                  | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 7                                    | East San Fernando Valley         | 069            | 58                                           | 71                                            | 0                                                | 7(12.1)                                       | 37.7                                                                  | 35.2                              | 122                                           | 63.0                                          | 0                                               | 24.0                                                                  | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 8                                    | West San Gabriel Valley          | 088            | --                                           | --                                            | --                                               | --                                            | --                                                                    | --                                | 121                                           | 57.8                                          | 0                                               | 20.3                                                                  | 59                             | 86                                            | 54.8                                                   | --                                                                     | --                                                                       | 10.5                                                | 0                                                             |
| 9                                    | East San Gabriel Valley 1        | 060            | 57                                           | 91                                            | 0                                                | 23(40.4)                                      | 46.1                                                                  | 42.7                              | 339                                           | 72.4                                          | 1(0.3)                                          | 20.8                                                                  | 59                             | 195                                           | 91.7                                                   | --                                                                     | --                                                                       | 11.3                                                | 0                                                             |
| 9                                    | East San Gabriel Valley 2        | 591            | --                                           | --                                            | --                                               | --                                            | --                                                                    | --                                | --                                            | --                                            | --                                              | --                                                                    | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 10                                   | Pomona/Walnut Valley             | 075            | --                                           | --                                            | --                                               | --                                            | --                                                                    | --                                | --                                            | --                                            | --                                              | --                                                                    | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 11                                   | South San Gabriel Valley         | 085            | --                                           | --                                            | --                                               | --                                            | --                                                                    | --                                | 118                                           | 61.0                                          | 0                                               | 23.9                                                                  | 60                             | 147                                           | 82.5                                                   | 0.06                                                                   | 0.05                                                                     | 11.2                                                | 0                                                             |
| 12                                   | South Central LA County          | 084            | --                                           | --                                            | --                                               | --                                            | --                                                                    | --                                | 122                                           | 64.0                                          | 0                                               | 23.3                                                                  | 59                             | 223                                           | 98.5                                                   | 0.04                                                                   | 0.04                                                                     | 15.3                                                | 0                                                             |
| 13                                   | Santa Clarita Valley             | 090            | 60                                           | 61                                            | 0                                                | 7(11.7)                                       | 33.3                                                                  | 32.5                              | --                                            | --                                            | --                                              | --                                                                    | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| ORANGE COUNTY                        |                                  |                |                                              |                                               |                                                  |                                               |                                                                       |                                   |                                               |                                               |                                                 |                                                                       |                                |                                               |                                                        |                                                                        |                                                                          |                                                     |                                                               |
| 16                                   | North Orange County              | 3177           | --                                           | --                                            | --                                               | --                                            | --                                                                    | --                                | --                                            | --                                            | --                                              | --                                                                    | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 17                                   | Central Orange County            | 3176           | 61                                           | 69                                            | 0                                                | 5(8.2)                                        | 33.6                                                                  | 31.5                              | 351                                           | 68.6                                          | 1(0.3)                                          | 18.6                                                                  | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 18                                   | North Coastal Orange County      | 3195           | --                                           | --                                            | --                                               | --                                            | --                                                                    | --                                | --                                            | --                                            | --                                              | --                                                                    | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 19                                   | Saddleback Valley                | 3812           | 60                                           | 80                                            | 0                                                | 5(8.3)                                        | 31.3                                                                  | 28.7                              | 119                                           | 58.5                                          | 0                                               | 15.5                                                                  | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| RIVERSIDE COUNTY                     |                                  |                |                                              |                                               |                                                  |                                               |                                                                       |                                   |                                               |                                               |                                                 |                                                                       |                                |                                               |                                                        |                                                                        |                                                                          |                                                     |                                                               |
| 22                                   | Norco/Corona                     | 4155           | 56                                           | 78                                            | 0                                                | 19(33.9)                                      | 44.5                                                                  | 41.5                              | --                                            | --                                            | --                                              | --                                                                    | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 23                                   | Metropolitan Riverside County 1  | 4144           | 118                                          | 130                                           | 0                                                | 81(68.6)                                      | 58.5                                                                  | 53.4                              | 327                                           | 77.6                                          | 8(2.5)                                          | 27.5                                                                  | 60                             | 200                                           | 120.1                                                  | 0.03                                                                   | 0.02                                                                     | 11.7                                                | 0                                                             |
| 23                                   | Metropolitan Riverside County 2  | 4146           | --                                           | --                                            | --                                               | --                                            | --                                                                    | --                                | 115                                           | 75.5                                          | 2(1.7)                                          | 27.1                                                                  | 62                             | 129                                           | 84.6                                                   | 0.02                                                                   | 0.02                                                                     | 10.5                                                | 0                                                             |
| 24                                   | Perris Valley                    | 4149           | 61                                           | 100                                           | 0                                                | 24(39.3)                                      | 45.2                                                                  | 41.6                              | --                                            | --                                            | --                                              | --                                                                    | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 25                                   | Lake Elsinore                    | 4158           | --                                           | --                                            | --                                               | --                                            | --                                                                    | --                                | --                                            | --                                            | --                                              | --                                                                    | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 29                                   | Banning Airport                  | 4164           | 54                                           | 70                                            | 0                                                | 6(11.1)                                       | 27.5                                                                  | 23.7                              | --                                            | --                                            | --                                              | --                                                                    | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 30                                   | Coachella Valley 1**             | 4137           | 59                                           | 75                                            | 0                                                | 3(5.1)                                        | 27.1                                                                  | 24.6                              | 119                                           | 42.3                                          | 0                                               | 10.0                                                                  | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 30                                   | Coachella Valley 2**             | 4157           | 115 <sup>+</sup>                             | 139 <sup>+</sup>                              | 0 <sup>+</sup>                                   | 52(45.2) <sup>+</sup>                         | 50.6 <sup>+</sup>                                                     | 49.1 <sup>+</sup>                 | 117                                           | 26.8                                          | 0                                               | 12.0                                                                  | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| SAN BERNARDINO COUNTY                |                                  |                |                                              |                                               |                                                  |                                               |                                                                       |                                   |                                               |                                               |                                                 |                                                                       |                                |                                               |                                                        |                                                                        |                                                                          |                                                     |                                                               |
| 32                                   | Northwest San Bernardino Valley  | 5175           | --                                           | --                                            | --                                               | --                                            | --                                                                    | --                                | --                                            | --                                            | --                                              | --                                                                    | 61                             | 122                                           | 71.9                                                   | 0.02                                                                   | 0.02                                                                     | 11.5                                                | 0                                                             |
| 33                                   | Southwest San Bernardino Valley  | 5817           | 61                                           | 91                                            | 0                                                | 25(41.0)                                      | 44.9                                                                  | 41.0                              | 111                                           | 64.8                                          | 0                                               | 25.2                                                                  | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 34                                   | Central San Bernardino Valley 1  | 5197           | 60                                           | 102                                           | 0                                                | 32(53.3)                                      | 50.2                                                                  | 45.9                              | 118                                           | 66.6                                          | 1(0.9)                                          | 24.3                                                                  | 60                             | 182                                           | 105.6                                                  | --                                                                     | --                                                                       | 13.5                                                | 0                                                             |
| 34                                   | Central San Bernardino Valley 2  | 5203           | 59                                           | 94                                            | 0                                                | 33(55.9)                                      | 50.4                                                                  | 45.9                              | 117                                           | 82.1                                          | 3(2.6)                                          | 25.7                                                                  | 60                             | 175                                           | 97.8                                                   | 0.03                                                                   | 0.02                                                                     | 10.8                                                | 0                                                             |
| 35                                   | East San Bernardino Valley       | 5204           | 57                                           | 83                                            | 0                                                | 18(31.6)                                      | 41.2                                                                  | 36.3                              | --                                            | --                                            | --                                              | --                                                                    | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 37                                   | Central San Bernardino Mountains | 5181           | 27 <sup>*</sup>                              | 52 <sup>*</sup>                               | 0                                                | 5(18.5) <sup>*</sup>                          | 36.9 <sup>*</sup>                                                     | 35.0 <sup>*</sup>                 | --                                            | --                                            | --                                              | --                                                                    | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| 38                                   | East San Bernardino Mountains    | 5818           | --                                           | --                                            | --                                               | --                                            | --                                                                    | --                                | 56                                            | 34.1                                          | 0                                               | 11.3                                                                  | --                             | --                                            | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                                            |
| DISTRICT MAXIMUM                     |                                  |                |                                              | 139                                           | 0                                                | 81                                            | 58.5                                                                  | 53.4                              |                                               | 82.1                                          | 8                                               | 27.5                                                                  |                                | 680                                           | 120.1                                                  | 0.06                                                                   | 0.05                                                                     | 17.8                                                | 0                                                             |
| SOUTH COAST AIR BASIN                |                                  |                |                                              | 130                                           | 0                                                | 90                                            | 58.5                                                                  | 53.4                              |                                               | 82.1                                          | 10                                              | 27.5                                                                  |                                | 680                                           | 120.1                                                  | 0.06                                                                   | 0.05                                                                     | 17.8                                                | 0                                                             |

µg/m<sup>3</sup> - Micrograms per cubic meter of air.

AAM - Annual Arithmetic Mean

AGM - Annual Geometric Mean

-- Pollutant not monitored.

\* Less than 12 full months of data. May not be representative.

\*\* Salton Sea Air Basin.

d) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157 where samples were collected every 3 days.

e) - PM2.5 samples were collected every 3 days at all sites except for the following sites: Station Numbers 060, 072, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every 6 days.

f) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

g) - Federal PM10 standard is annual average (AAM) > 50 µg/m<sup>3</sup>; and state standard is annual average (AAM) > 20 µg/m<sup>3</sup>++.

h) - Federal PM2.5 standard is annual average (AAM) > 15 µg/m<sup>3</sup>; and state standard is annual average (AAM) > 12 µg/m<sup>3</sup>++.

i) - Federal lead standard is quarterly average > 1.5 µg/m<sup>3</sup>; and state standard is monthly average > 1.5 µg/m<sup>3</sup>. No location exceeded lead standards.

Special monitoring immediately downwind of stationary sources of lead was carried out at four locations in 2002. The maximum monthly average concentration was 1.33 µg/m<sup>3</sup>, and the maximum quarterly average concentration was 0.49 µg/m<sup>3</sup>, both recorded in Southeast Los Angeles County area.

+ - The data for the samples collected on high-wind-days (177 µg/m<sup>3</sup> on 5/8/02 and 276 µg/m<sup>3</sup> on 11/25/02) were excluded in accordance with EPA's Natural Events Policy.

++ - The new PM2.5 annual average state standard of 12 µg/m<sup>3</sup> and revised PM10 annual average state standard of 20 µg/m<sup>3</sup> (to replace AGM 30 µg/m<sup>3</sup>) recommended by the California Air Resources Board have been approved by the state Office of Administrative Law and will become effective on July 5, 2003.



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# 2003 AIR QUALITY SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

| Source/Receptor Area<br>No. Location |                                  | Station<br>No. | Carbon Monoxide               |                          |                          |                          |                        | Ozone                      |                          |                          |                              |                                   |                           |                   |                         | Nitrogen Dioxide |                             |                                 | Sulfur Dioxide   |                             |                              |
|--------------------------------------|----------------------------------|----------------|-------------------------------|--------------------------|--------------------------|--------------------------|------------------------|----------------------------|--------------------------|--------------------------|------------------------------|-----------------------------------|---------------------------|-------------------|-------------------------|------------------|-----------------------------|---------------------------------|------------------|-----------------------------|------------------------------|
|                                      |                                  |                | No. Days Standard Exceeded a) |                          |                          |                          |                        | No. Days Standard Exceeded |                          |                          |                              |                                   |                           |                   |                         |                  |                             |                                 |                  |                             |                              |
|                                      |                                  |                | No. Days of Data              | Max. Conc. in ppm 1-hour | Max. Conc. in ppm 8-hour | Federal ≥ 9.5 ppm 8-hour | State > 9.0 ppm 8-hour | No. Days of Data           | Max. Conc. in ppm 1-hour | Max. Conc. in ppm 8-hour | Fourth High Conc. ppm 8-hour | Health Advisory ≥ 0.15 ppm 1-hour | Federal > 0.12 ppm 1-hour | > 0.08 ppm 8-hour | State > 0.09 ppm 1-hour | No. Days of Data | Max. Conc. in ppm 1-hour b) | Annual Average b) AAM Conc. ppm | No. Days of Data | Max. Conc. in ppm 1-hour c) | Max. Conc. in ppm 24-hour c) |
|                                      |                                  |                |                               |                          |                          |                          |                        |                            |                          |                          |                              |                                   |                           |                   |                         |                  |                             |                                 |                  |                             |                              |
| LOS ANGELES COUNTY                   |                                  |                |                               |                          |                          |                          |                        |                            |                          |                          |                              |                                   |                           |                   |                         |                  |                             |                                 |                  |                             |                              |
| 1                                    | Central LA                       | 087            | 365                           | 6                        | 4.6                      | 0                        | 0                      | 365                        | 0.152                    | 0.088                    | 0.083                        | 1                                 | 1                         | 2                 | 11                      | 361              | 0.16                        | 0.0338                          | 349              | 0.05*                       | 0.006*                       |
| 2                                    | Northwest Coastal LA County      | 091            | 365                           | 5                        | 2.7                      | 0                        | 0                      | 365                        | 0.134                    | 0.105                    | 0.083                        | 0                                 | 1                         | 1                 | 11                      | 352              | 0.12                        | 0.0231                          | --               | --                          | --                           |
| 3                                    | Southwest Coastal LA County      | 094            | 361                           | 7                        | 5.0                      | 0                        | 0                      | 365                        | 0.110                    | 0.078                    | 0.073                        | 0                                 | 0                         | 0                 | 2                       | 363              | 0.12                        | 0.0238                          | 365              | 0.03                        | 0.006                        |
| 4                                    | South Coastal LA County          | 072            | 363                           | 6                        | 4.7                      | 0                        | 0                      | 365                        | 0.099                    | 0.071                    | 0.063                        | 0                                 | 0                         | 0                 | 1                       | 341              | 0.14*                       | 0.0288*                         | 361              | 0.03                        | 0.008                        |
| 6                                    | West San Fernando Valley         | 074            | 365                           | 6                        | 4.1                      | 0                        | 0                      | 365                        | 0.179                    | 0.129                    | 0.119                        | 1                                 | 14                        | 49                | 68                      | 364              | 0.13*                       | 0.0260*                         | --               | --                          | --                           |
| 7                                    | East San Fernando Valley         | 069            | 349                           | 5*                       | 4.7*                     | 0*                       | 0*                     | 341                        | 0.134*                   | 0.108*                   | 0.097*                       | 0*                                | 4*                        | 20*               | 37*                     | 344              | 0.14*                       | 0.0356*                         | 338              | 0.01*                       | 0.005*                       |
| 8                                    | West San Gabriel Valley          | 088            | 365                           | 5                        | 3.8                      | 0                        | 0                      | 365                        | 0.152                    | 0.108                    | 0.103                        | 1                                 | 7                         | 28                | 44                      | 356              | 0.14                        | 0.0322                          | --               | --                          | --                           |
| 9                                    | East San Gabriel Valley 1        | 060            | 365                           | 5                        | 2.6                      | 0                        | 0                      | 365                        | 0.150                    | 0.124                    | 0.107                        | 1                                 | 11                        | 21                | 40                      | 347              | 0.12*                       | 0.0296*                         | --               | --                          | --                           |
| 9                                    | East San Gabriel Valley 2        | 591            | 357                           | 3                        | 2.1                      | 0                        | 0                      | 365                        | 0.162                    | 0.134                    | 0.123                        | 7                                 | 22                        | 41                | 61                      | 361              | 0.12                        | 0.0271                          | --               | --                          | --                           |
| 10                                   | Pomona/Walnut Valley             | 075            | 365                           | 6                        | 4.4                      | 0                        | 0                      | 365                        | 0.161                    | 0.123                    | 0.109                        | 3                                 | 13                        | 24                | 39                      | 365              | 0.12                        | 0.0352                          | --               | --                          | --                           |
| 11                                   | South San Gabriel Valley         | 085            | 365                           | 5                        | 4.0                      | 0                        | 0                      | 364                        | 0.128                    | 0.097                    | 0.084                        | 0                                 | 1                         | 2                 | 18                      | 360              | 0.14                        | 0.0353                          | --               | --                          | --                           |
| 12                                   | South Central LA County          | 084            | 362                           | 12                       | 7.3                      | 0                        | 0                      | 361                        | 0.081                    | 0.063                    | 0.059                        | 0                                 | 0                         | 0                 | 0                       | 356              | 0.13                        | 0.0312                          | --               | --                          | --                           |
| 13                                   | Santa Clarita Valley             | 090            | 363                           | 3                        | 1.7                      | 0                        | 0                      | 363                        | 0.194                    | 0.152                    | 0.137                        | 15                                | 35                        | 69                | 89                      | 363              | 0.12                        | 0.0221                          | --               | --                          | --                           |
| ORANGE COUNTY                        |                                  |                |                               |                          |                          |                          |                        |                            |                          |                          |                              |                                   |                           |                   |                         |                  |                             |                                 |                  |                             |                              |
| 16                                   | North Orange County              | 3177           | 365                           | 8                        | 4.1                      | 0                        | 0                      | 365                        | 0.165                    | 0.087                    | 0.082                        | 1                                 | 1                         | 2                 | 7                       | 361              | 0.16                        | 0.0284                          | --               | --                          | --                           |
| 17                                   | Central Orange County            | 3176           | 365                           | 6                        | 3.9                      | 0                        | 0                      | 365                        | 0.136                    | 0.087                    | 0.082                        | 0                                 | 2                         | 1                 | 11                      | 362              | 0.13                        | 0.0240                          | --               | --                          | --                           |
| 18                                   | North Coastal Orange County      | 3195           | 365                           | 7                        | 5.8                      | 0                        | 0                      | 364                        | 0.107                    | 0.088                    | 0.080                        | 0                                 | 0                         | 1                 | 4                       | 362              | 0.11                        | 0.0199                          | 354              | 0.02                        | 0.012                        |
| 19                                   | Saddleback Valley                | 3812           | 362                           | 3                        | 1.8                      | 0                        | 0                      | 362                        | 0.153                    | 0.105                    | 0.097                        | 1                                 | 4                         | 8                 | 16                      | --               | --                          | --                              | --               | --                          | --                           |
| RIVERSIDE COUNTY                     |                                  |                |                               |                          |                          |                          |                        |                            |                          |                          |                              |                                   |                           |                   |                         |                  |                             |                                 |                  |                             |                              |
| 22                                   | Norco/Corona                     | 4155           | --                            | --                       | --                       | --                       | --                     | --                         | --                       | --                       | --                           | --                                | --                        | --                | --                      | --               | --                          | --                              | --               | --                          | --                           |
| 23                                   | Metropolitan Riverside County 1  | 4144           | 365                           | 5                        | 3.7                      | 0                        | 0                      | 365                        | 0.169                    | 0.140                    | 0.123                        | 4                                 | 18                        | 62                | 80                      | 360              | 0.09                        | 0.0217                          | 363              | 0.02                        | 0.012                        |
| 23                                   | Metropolitan Riverside County 2  | 4146           | 360                           | 5                        | 3.4                      | 0                        | 0                      | --                         | --                       | --                       | --                           | --                                | --                        | --                | --                      | --               | --                          | --                              | --               | --                          | --                           |
| 24                                   | Perris Valley                    | 4149           | --                            | --                       | --                       | --                       | --                     | 357                        | 0.155                    | 0.121                    | 0.119                        | 1                                 | 7                         | 47                | 67                      | --               | --                          | --                              | --               | --                          | --                           |
| 25                                   | Lake Elsinore                    | 4158           | 345                           | 4*                       | 1.3*                     | 0*                       | 0*                     | 345                        | 0.154*                   | 0.137*                   | 0.113*                       | 2*                                | 7*                        | 35*               | 50*                     | 328              | 0.08*                       | 0.0182*                         | --               | --                          | --                           |
| 29                                   | Banning Airport                  | 4164           | --                            | --                       | --                       | --                       | --                     | 365                        | 0.166                    | 0.146                    | 0.127                        | 3                                 | 27                        | 63                | 75                      | 346              | 0.09*                       | 0.0193*                         | --               | --                          | --                           |
| 30                                   | Coachella Valley 1**             | 4137           | 339                           | 3*                       | 1.3*                     | 0*                       | 0*                     | 359                        | 0.141                    | 0.111                    | 0.108                        | 0                                 | 4                         | 44                | 54                      | 347              | 0.06*                       | 0.0173*                         | --               | --                          | --                           |
| 30                                   | Coachella Valley 2**             | 4157           | --                            | --                       | --                       | --                       | --                     | 365                        | 0.123                    | 0.105                    | 0.102                        | 0                                 | 0                         | 19                | 24                      | --               | --                          | --                              | --               | --                          | --                           |
| SAN BERNARDINO COUNTY                |                                  |                |                               |                          |                          |                          |                        |                            |                          |                          |                              |                                   |                           |                   |                         |                  |                             |                                 |                  |                             |                              |
| 32                                   | Northwest San Bernardino Valley  | 5175           | 363                           | 4                        | 2.9                      | 0                        | 0                      | 365                        | 0.155                    | 0.134                    | 0.116                        | 2                                 | 15                        | 35                | 48                      | 363              | 0.11                        | 0.0349                          | --               | --                          | --                           |
| 33                                   | Southwest San Bernardino Valley  | 5817           | --                            | --                       | --                       | --                       | --                     | --                         | --                       | --                       | --                           | --                                | --                        | --                | --                      | --               | --                          | --                              | --               | --                          | --                           |
| 34                                   | Central San Bernardino Valley 1  | 5197           | --                            | --                       | --                       | --                       | --                     | 351                        | 0.176                    | 0.148                    | 0.134                        | 7                                 | 26                        | 48                | 65                      | 355              | 0.12                        | 0.0307                          | 361              | 0.01                        | 0.004                        |
| 34                                   | Central San Bernardino Valley 2  | 5203           | 365                           | 5                        | 4.6                      | 0                        | 0                      | 358                        | 0.160                    | 0.137                    | 0.123                        | 4                                 | 19                        | 45                | 59                      | 362              | 0.10                        | 0.0270                          | --               | --                          | --                           |
| 35                                   | East San Bernardino Valley       | 5204           | --                            | --                       | --                       | --                       | --                     | 365                        | 0.174                    | 0.153                    | 0.138                        | 12                                | 38                        | 72                | 91                      | --               | --                          | --                              | --               | --                          | --                           |
| 37                                   | Central San Bernardino Mountains | 5181           | --                            | --                       | --                       | --                       | --                     | 341                        | 0.163*                   | 0.142*                   | 0.130*                       | 6*                                | 34*                       | 74*               | 84*                     | --               | --                          | --                              | --               | --                          | --                           |
| 38                                   | East San Bernardino Mountains    | 5818           | --                            | --                       | --                       | --                       | --                     | --                         | --                       | --                       | --                           | --                                | --                        | --                | --                      | --               | --                          | --                              | --               | --                          | --                           |
| DISTRICT MAXIMUM                     |                                  |                | 12                            | 7.3                      | 0                        | 0                        | 0                      | 0.194                      | 0.153                    | 0.138                    | 15                           | 38                                | 74                        | 91                | 0.16                    | 0.0356           | 0.05                        | 0.012                           |                  |                             |                              |
| SOUTH COAST AIR BASIN                |                                  |                | 12                            | 7.3                      | 0                        | 0                        | 0                      | 0.194                      | 0.153                    | 0.138                    | 36                           | 68                                | 119                       | 133               | 0.16                    | 0.0356           | 0.05                        | 0.012                           |                  |                             |                              |

ppm - Parts Per Million parts of air, by volume.

AAM = Annual Arithmetic Mean

--- Pollutant not monitored.

\* Less than 12 full months of data. May not be representative.

\*\* Salton Sea Air Basin.

a) - The federal 1-hour standard (1-hour average CO > 35 ppm) and state 1-hour standard (1-hour average CO > 20 ppm) were not exceeded.

b) - The state standard is 1-hour average NO<sub>2</sub> > 0.25 ppm. The federal standard is annual arithmetic mean NO<sub>2</sub> > 0.0534 ppm. No location exceeded the standards.

c) - The state standards are 1-hour average SO<sub>2</sub> > 0.25 ppm and 24-hour average SO<sub>2</sub> > 0.04 ppm. No location exceeded state standards.

The federal standards are annual arithmetic mean SO<sub>2</sub> > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm. SO<sub>2</sub> concentrations were well below the federal standards.



**South Coast  
Air Quality Management District**  
21865 Copley Drive  
Diamond Bar, CA 91765-4182  
www.aqmd.gov

The map showing the locations of source/receptor areas can be accessed via the Internet at <http://www.aqmd.gov/telemweb/areamap.aspx>. Locations of source/receptor areas are shown on the "South Coast Air Quality Management District Air Monitoring Areas" map available free of charge from SCAQMD Public Information.

# 2003 AIR QUALITY SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

| 2003                                |         | Suspended Particulates PM10 <sup>d)</sup> |                                                |                                                |                                             |                                                                 | Suspended Particulates PM2.5 <sup>e)</sup> |                                                |                                               |                                                                  | Particulates TSP <sup>f)</sup> |                                                |                                                   | Lead <sup>g)</sup>                                                |                                                                     | Sulfate <sup>h)</sup>                          |                                                                   |
|-------------------------------------|---------|-------------------------------------------|------------------------------------------------|------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------|--------------------------------------------|------------------------------------------------|-----------------------------------------------|------------------------------------------------------------------|--------------------------------|------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------|-------------------------------------------------------------------|
|                                     |         | No. (%) Samples Exceeding Standard        |                                                |                                                |                                             |                                                                 | No. (%) Samples Exceeding Standard         |                                                |                                               |                                                                  |                                |                                                |                                                   |                                                                   |                                                                     | No. (%) Samples Exceeding Standard             |                                                                   |
|                                     |         | No. Days of Data                          | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | Federal > 150 $\mu\text{g}/\text{m}^3$ 24-hour | State > 50 $\mu\text{g}/\text{m}^3$ 24-hour | Annual Average <sup>g)</sup> AAM Conc. $\mu\text{g}/\text{m}^3$ | No. Days of Data                           | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | Federal > 65 $\mu\text{g}/\text{m}^3$ 24-hour | Annual Averages <sup>h)</sup> AAM Conc. $\mu\text{g}/\text{m}^3$ | No. Days of Data               | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | Annual Average AAM Conc. $\mu\text{g}/\text{m}^3$ | Max. Monthly Average Conc. <sup>i)</sup> $\mu\text{g}/\text{m}^3$ | Max. Quarterly Average Conc. <sup>i)</sup> $\mu\text{g}/\text{m}^3$ | Max. Conc. in $\mu\text{g}/\text{m}^3$ 24-hour | Exceeding Standard State $\geq 25 \mu\text{g}/\text{m}^3$ 24-hour |
|                                     |         |                                           |                                                |                                                |                                             |                                                                 |                                            |                                                |                                               |                                                                  |                                |                                                |                                                   |                                                                   |                                                                     |                                                |                                                                   |
| Source/Receptor Area                | Station |                                           |                                                |                                                |                                             |                                                                 |                                            |                                                |                                               |                                                                  |                                |                                                |                                                   |                                                                   |                                                                     |                                                |                                                                   |
| No. Location                        | No.     |                                           |                                                |                                                |                                             |                                                                 |                                            |                                                |                                               |                                                                  |                                |                                                |                                                   |                                                                   |                                                                     |                                                |                                                                   |
| LOS ANGELES COUNTY                  |         |                                           |                                                |                                                |                                             |                                                                 |                                            |                                                |                                               |                                                                  |                                |                                                |                                                   |                                                                   |                                                                     |                                                |                                                                   |
| 1 Central LA                        | 087     | 61                                        | 81                                             | 0                                              | 6(9.8)                                      | 34.6                                                            | 330                                        | 83.7                                           | 5(1.5)                                        | 21.3                                                             | 61                             | 157                                            | 73.5                                              | 0.15                                                              | 0.15                                                                | 14.6                                           | 0                                                                 |
| 2 Northwest Coastal LA County       | 091     | --                                        | --                                             | --                                             | --                                          | --                                                              | --                                         | --                                             | --                                            | --                                                               | 59                             | 114                                            | 49.4                                              | --                                                                | --                                                                  | 14.3                                           | 0                                                                 |
| 3 Southwest Coastal LA County       | 094     | 61                                        | 58                                             | 0                                              | 3(4.9)                                      | 29.7                                                            | --                                         | --                                             | --                                            | --                                                               | 61                             | 122                                            | 56.7                                              | 0.17                                                              | 0.10                                                                | 16.4                                           | 0                                                                 |
| 4 South Coastal LA County           | 072     | 61                                        | 63                                             | 0                                              | 4(6.6)                                      | 32.8                                                            | 324                                        | 115.2                                          | 3(0.9)                                        | 18.0                                                             | 64                             | 159                                            | 63.9                                              | 0.10                                                              | 0.05                                                                | 17.8                                           | 0                                                                 |
| 6 West San Fernando Valley          | 074     | --                                        | --                                             | --                                             | --                                          | --                                                              | 115                                        | 47.5                                           | 0                                             | 16.4                                                             | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 7 East San Fernando Valley          | 069     | 50                                        | 81*                                            | 0*                                             | 7(14.0)*                                    | 38.1*                                                           | 92                                         | 120.6                                          | 1(1.1)                                        | 20.9                                                             | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 8 West San Gabriel Valley           | 088     | --                                        | --                                             | --                                             | --                                          | --                                                              | 110                                        | 89.0                                           | 1(0.9)                                        | 18.6                                                             | 59                             | 111                                            | 54.3                                              | --                                                                | --                                                                  | 12.7                                           | 0                                                                 |
| 9 East San Gabriel Valley 1         | 060     | 60                                        | 119                                            | 0                                              | 21(35.0)                                    | 44.4                                                            | 314                                        | 121.2                                          | 3(1.0)                                        | 19.2                                                             | 55                             | 176                                            | 83.9                                              | --                                                                | --                                                                  | 11.7                                           | 0                                                                 |
| 9 East San Gabriel Valley 2         | 591     | --                                        | --                                             | --                                             | --                                          | --                                                              | --                                         | --                                             | --                                            | --                                                               | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 10 Pomona/Walnut Valley             | 075     | --                                        | --                                             | --                                             | --                                          | --                                                              | --                                         | --                                             | --                                            | --                                                               | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 11 South San Gabriel Valley         | 085     | --                                        | --                                             | --                                             | --                                          | --                                                              | 111                                        | 90.3                                           | 1(0.9)                                        | 20.6                                                             | 60                             | 160                                            | 75.4                                              | 0.05                                                              | 0.04                                                                | 14.4                                           | 0                                                                 |
| 12 South Central LA County          | 084     | --                                        | --                                             | --                                             | --                                          | --                                                              | 117                                        | 54.8                                           | 0                                             | 20.2                                                             | 60                             | 449                                            | 105.2                                             | 0.04                                                              | 0.04                                                                | 14.9                                           | 0                                                                 |
| 13 Santa Clarita Valley             | 090     | 61                                        | 72                                             | 0                                              | 10(16.4)                                    | 31.8                                                            | --                                         | --                                             | --                                            | --                                                               | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| ORANGE COUNTY                       |         |                                           |                                                |                                                |                                             |                                                                 |                                            |                                                |                                               |                                                                  |                                |                                                |                                                   |                                                                   |                                                                     |                                                |                                                                   |
| 16 North Orange County              | 3177    | --                                        | --                                             | --                                             | --                                          | --                                                              | --                                         | --                                             | --                                            | --                                                               | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 17 Central Orange County            | 3176    | 61                                        | 96                                             | 0                                              | 6(9.8)                                      | 32.7                                                            | 340                                        | 115.5                                          | 3(0.9)                                        | 17.3                                                             | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 18 North Coastal Orange County      | 3195    | --                                        | --                                             | --                                             | --                                          | --                                                              | --                                         | --                                             | --                                            | --                                                               | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 19 Saddleback Valley                | 3812    | 57                                        | 64                                             | 0                                              | 2(3.5)                                      | 26.7                                                            | 109                                        | 50.6                                           | 0                                             | 13.1                                                             | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| RIVERSIDE COUNTY                    |         |                                           |                                                |                                                |                                             |                                                                 |                                            |                                                |                                               |                                                                  |                                |                                                |                                                   |                                                                   |                                                                     |                                                |                                                                   |
| 22 Norco/Corona                     | 4155    | 58                                        | 116                                            | 0                                              | 15(25.9)                                    | 40.5                                                            | --                                         | --                                             | --                                            | --                                                               | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 23 Metropolitan Riverside County 1  | 4144    | 109                                       | 164                                            | 2(1.8)                                         | 62(56.9)                                    | 56.9                                                            | 350                                        | 104.3                                          | 8(2.3)                                        | 24.9                                                             | 58                             | 283                                            | 105.6                                             | 0.02                                                              | 0.02                                                                | 10.1                                           | 0                                                                 |
| 23 Metropolitan Riverside County 2  | 4146    | --                                        | --                                             | --                                             | --                                          | --                                                              | 116                                        | 73.3                                           | 1(0.9)                                        | 22.6                                                             | 60                             | 225                                            | 85.0                                              | 0.02                                                              | 0.01                                                                | 10.0                                           | 0                                                                 |
| 24 Perris Valley                    | 4149    | 58                                        | 142                                            | 0                                              | 19(32.8)                                    | 43.9                                                            | --                                         | --                                             | --                                            | --                                                               | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 25 Lake Elsinore                    | 4158    | --                                        | --                                             | --                                             | --                                          | --                                                              | --                                         | --                                             | --                                            | --                                                               | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 29 Banning Airport                  | 4164    | 60                                        | 79                                             | 0                                              | 9(15.0)                                     | 29.0                                                            | --                                         | --                                             | --                                            | --                                                               | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 30 Coachella Valley 1**             | 4137    | 60                                        | 108                                            | 0                                              | 4(6.7)                                      | 27.1                                                            | 112                                        | 21.2                                           | 0                                             | 9.0                                                              | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 30 Coachella Valley 2**             | 4157    | 112                                       | 124*                                           | 0*                                             | 47(42.0)*                                   | 50.2*                                                           | 118                                        | 26.8                                           | 0                                             | 11.4                                                             | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| SAN BERNARDINO COUNTY               |         |                                           |                                                |                                                |                                             |                                                                 |                                            |                                                |                                               |                                                                  |                                |                                                |                                                   |                                                                   |                                                                     |                                                |                                                                   |
| 32 Northwest San Bernardino Valley  | 5175    | --                                        | --                                             | --                                             | --                                          | --                                                              | --                                         | --                                             | --                                            | --                                                               | 60                             | 269                                            | 69.6                                              | 0.02                                                              | 0.02                                                                | 11.8                                           | 0                                                                 |
| 33 Southwest San Bernardino Valley  | 5817    | 62                                        | 149                                            | 0                                              | 18(29.0)                                    | 42.9                                                            | 118                                        | 88.9                                           | 3(2.5)                                        | 23.8                                                             | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 34 Central San Bernardino Valley 1  | 5197    | 50                                        | 101*                                           | 0*                                             | 27(54.0)*                                   | 47.2*                                                           | 111                                        | 98.1                                           | 1(0.9)                                        | 21.8                                                             | 59                             | 335                                            | 119.8                                             | --                                                                | --                                                                  | 11.9                                           | 0                                                                 |
| 34 Central San Bernardino Valley 2  | 5203    | 59                                        | 98                                             | 0                                              | 23(39.0)                                    | 44.9                                                            | 119                                        | 73.9                                           | 1(0.8)                                        | 22.2                                                             | 60                             | 242                                            | 97.8                                              | 0.14                                                              | 0.08                                                                | 12.1                                           | 0                                                                 |
| 35 East San Bernardino Valley       | 5204    | 58                                        | 92                                             | 0                                              | 15(25.9)                                    | 37.0                                                            | --                                         | --                                             | --                                            | --                                                               | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 37 Central San Bernardino Mountains | 5181    | 50                                        | 47*                                            | 0*                                             | 0*                                          | 25.6*                                                           | --                                         | --                                             | --                                            | --                                                               | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| 38 East San Bernardino Mountains    | 5818    | --                                        | --                                             | --                                             | --                                          | --                                                              | 55                                         | 35.0                                           | 0                                             | 10.5                                                             | --                             | --                                             | --                                                | --                                                                | --                                                                  | --                                             | --                                                                |
| DISTRICT MAXIMUM                    |         |                                           | 164                                            | 2                                              | 62                                          | 56.9                                                            |                                            | 121.2                                          | 8                                             | 24.9                                                             |                                | 449                                            | 119.8                                             | 0.17                                                              | 0.15                                                                | 17.8                                           | 0                                                                 |
| SOUTH COAST AIR BASIN               |         |                                           | 164                                            | 2                                              | 69                                          | 56.9                                                            |                                            | 121.2                                          | 14                                            | 24.9                                                             |                                | 449                                            | 119.8                                             | 0.17                                                              | 0.15                                                                | 17.8                                           | 0                                                                 |

$\mu\text{g}/\text{m}^3$  - Micrograms per cubic meter of air.

AAM - Annual Arithmetic Mean

-- Pollutant not monitored.

\* Less than 12 full months of data. May not be representative.

\*\* Salton Sea Air Basin.

d) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157 where samples were collected every 3 days.

e) - PM2.5 samples were collected every 3 days at all sites except for the following sites: Station Numbers 060, 072, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every 6 days.

f) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

g) - Federal PM10 standard is annual average (AAM) > 50  $\mu\text{g}/\text{m}^3$ . State standard is annual average (AAM) > 20  $\mu\text{g}/\text{m}^3$  (changed from AGM > 30  $\mu\text{g}/\text{m}^3$ , effective July 5, 2003).

h) - Federal PM2.5 standard is annual average (AAM) > 15  $\mu\text{g}/\text{m}^3$ . State standard is annual average (AAM) > 12  $\mu\text{g}/\text{m}^3$  (new standard, established July 5, 2003).

i) - Federal lead standard is quarterly average > 1.5  $\mu\text{g}/\text{m}^3$ , and state standard is monthly average > 1.5  $\mu\text{g}/\text{m}^3$ . No location exceeded lead standards.

Special monitoring immediately downwind of stationary sources of lead was carried out at four locations in 2003. The maximum monthly average concentration was 0.35  $\mu\text{g}/\text{m}^3$ , and the maximum quarterly average concentration was 0.29  $\mu\text{g}/\text{m}^3$ , both recorded in Central Los Angeles.

+ - The data for five samples collected on high-wind days (178  $\mu\text{g}/\text{m}^3$  on 1/6/03, 132  $\mu\text{g}/\text{m}^3$  on 2/2/03, 227  $\mu\text{g}/\text{m}^3$  on 5/15/03, 148  $\mu\text{g}/\text{m}^3$  on 6/20/03 and 309  $\mu\text{g}/\text{m}^3$  on 6/23/03) were excluded in accordance with EPA's Natural Events Policy.



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Paper

# 2004 AIR QUALITY SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

| Source/Receptor Area<br>No. Location |  | Station<br>No. | Carbon Monoxide               |                            |                            |               |              | Ozone                      |                            |                            |                                |                                     |                  |               |               | Nitrogen Dioxide          |                                             |                            | Sulfur Dioxide             |               |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|                                      |  |                | No. Days Standard Exceeded a) |                            |                            |               |              | No. Days Standard Exceeded |                            |                            |                                |                                     |                  |               |               | Max<br>Conc.<br>in<br>ppm | Annual<br>Average c)<br>AAM<br>Conc.<br>ppm | Max.<br>Conc.<br>in<br>ppm | Max.<br>Conc.<br>in<br>ppm |               |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                      |  |                | No.<br>Days<br>of<br>Data     | Max.<br>Conc.<br>in<br>ppm | Max.<br>Conc.<br>in<br>ppm | Federal State |              | No.<br>Days<br>of<br>Data  | Max.<br>Conc.<br>in<br>ppm | Max.<br>Conc.<br>in<br>ppm | Fourth<br>High<br>Conc.<br>ppm | Health<br>Advisory<br>≥ 0.15<br>ppm | Federal State b) |               |               |                           |                                             |                            |                            |               |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                      |  |                |                               |                            |                            | ≥ 9.5<br>ppm  | > 9.0<br>ppm |                            |                            |                            |                                |                                     | ≥ 0.15<br>ppm    | > 0.12<br>ppm | > 0.08<br>ppm |                           |                                             |                            |                            | > 0.09<br>ppm | > 0.07<br>ppm |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LOS ANGELES COUNTY                   |  |                |                               |                            |                            |               |              |                            |                            |                            |                                |                                     |                  |               |               |                           |                                             |                            |                            |               |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

ppm - Parts Per Million parts of air, by volume.

AAM = Annual Arithmetic Mean

-- - Pollutant not monitored.

\* Less than 12 full months of data. May not be representative.

\*\* Salton Sea Air Basin.

a) - The federal 1-hour standard (1-hour average CO > 35 ppm) and state 1-hour standard (1-hour average CO > 20 ppm) were not exceeded.

b) - On April 28, 2005, Air Resources Board has approved revising the California Ozone standard to establish a new 8-hour average standard of 0.07 ppm. The new 8-hour standard is expected to take effect by December 2005.

c) - The state standard is 1-hour average NO<sub>2</sub> > 0.25 ppm. The federal standard is annual arithmetic mean NO<sub>2</sub> > 0.0534 ppm. No location exceeded the standards.

d) - The state standards are 1-hour average SO<sub>2</sub> > 0.25 ppm and 24-hour average SO<sub>2</sub> > 0.04 ppm. The federal standards are annual arithmetic mean SO<sub>2</sub> > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm. No location exceeded SO<sub>2</sub> standards.



**South Coast  
Air Quality Management District**  
21865 Copley Drive  
Diamond Bar, CA 91765-4182  
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The map showing the locations of source/receptor areas can be accessed via the Internet at <http://www.aqmd.gov/telemweb/areamap.aspx>. Locations of source/receptor areas are shown on the "South Coast Air Quality Management District Air Monitoring Areas" map available free of charge from SCAQMD Public Information.

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| Source/Receptor Area<br>No. Location |                                  | Station<br>No. | Suspended Particulates PM10 <sup>e)</sup> |                                                     |                                                  |                                               |                                                                      | Suspended Particulates PM2.5 <sup>f)</sup> |                                                     |                                                 |                                                                       | Particulates TSP <sup>g)</sup> |                                                     |                                                        | Lead <sup>g)</sup>                                                     |                                                                          | Sulfate <sup>g)</sup>                               |                                               |
|--------------------------------------|----------------------------------|----------------|-------------------------------------------|-----------------------------------------------------|--------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------|--------------------------------------------|-----------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------|--------------------------------|-----------------------------------------------------|--------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------|
|                                      |                                  |                | No. (%) Samples<br>Exceeding<br>Standard  |                                                     |                                                  |                                               |                                                                      | No. (%) Samples<br>Exceeding<br>Standard   |                                                     |                                                 |                                                                       |                                |                                                     |                                                        |                                                                        |                                                                          | No. (%) Samples<br>Exceeding<br>Standard            |                                               |
|                                      |                                  |                | No.<br>Days<br>of<br>Data                 | Max.<br>Conc.<br>in<br>µg/m <sup>3</sup><br>24-hour | Federal<br>> 150<br>µg/m <sup>3</sup><br>24-hour | State<br>> 50<br>µg/m <sup>3</sup><br>24-hour | Annual<br>Average <sup>h)</sup><br>AAM<br>Conc.<br>µg/m <sup>3</sup> | No.<br>Days<br>of<br>Data                  | Max.<br>Conc.<br>in<br>µg/m <sup>3</sup><br>24-hour | Federal<br>> 65<br>µg/m <sup>3</sup><br>24-hour | Annual<br>Averages <sup>i)</sup><br>AAM<br>Conc.<br>µg/m <sup>3</sup> | No.<br>Days<br>of<br>Data      | Max.<br>Conc.<br>in<br>µg/m <sup>3</sup><br>24-hour | Annual<br>Average<br>AAM<br>Conc.<br>µg/m <sup>3</sup> | Max.<br>Monthly<br>Average<br>Conc. <sup>i)</sup><br>µg/m <sup>3</sup> | Max.<br>Quarterly<br>Average<br>Conc. <sup>i)</sup><br>µg/m <sup>3</sup> | Max.<br>Conc.<br>in<br>µg/m <sup>3</sup><br>24-hour | State<br>≥ 25<br>µg/m <sup>3</sup><br>24-hour |
| LOS ANGELES COUNTY                   |                                  |                |                                           |                                                     |                                                  |                                               |                                                                      |                                            |                                                     |                                                 |                                                                       |                                |                                                     |                                                        |                                                                        |                                                                          |                                                     |                                               |
| 1                                    | Central LA                       | 087            | 61                                        | 72                                                  | 0                                                | 5(8.2)                                        | 32.7                                                                 | 318                                        | 75.0                                                | 2(0.6)                                          | 19.6                                                                  | 62                             | 115                                                 | 66.4                                                   | 0.03                                                                   | 0.03                                                                     | 12.7                                                | 0                                             |
| 2                                    | Northwest Coastal LA County      | 091            | --                                        | --                                                  | --                                               | --                                            | --                                                                   | --                                         | --                                                  | --                                              | --                                                                    | 59                             | 79                                                  | 46.8                                                   | --                                                                     | --                                                                       | 11.4                                                | 0                                             |
| 3                                    | Southwest Coastal LA County 1    | 094            | 15*                                       | 52*                                                 | 0*                                               | 2(13.3)*                                      | 30.9*                                                                | --                                         | --                                                  | --                                              | --                                                                    | 15*                            | 71*                                                 | 50.5*                                                  | 0.01                                                                   | 0.01                                                                     | 13.1                                                | 0                                             |
| 3                                    | Southwest Coastal LA County 2    | 820            | 37*                                       | 47*                                                 | 0*                                               | 0*                                            | 25.1                                                                 | --                                         | --                                                  | --                                              | --                                                                    | 45*                            | 77*                                                 | 43.8*                                                  | 0.01                                                                   | 0.01                                                                     | 14.3                                                | 0                                             |
| 4                                    | South Coastal LA County 1        | 072            | 60                                        | 72                                                  | 0                                                | 4(6.7)                                        | 33.1                                                                 | 323                                        | 86.6                                                | 1(0.3)                                          | 17.6                                                                  | 62                             | 103                                                 | 59.1                                                   | 0.02                                                                   | 0.01                                                                     | 15.9                                                | 0                                             |
| 4                                    | South Coastal LA County 2        | 077            | 59                                        | 83                                                  | 0                                                | 12(20.3)                                      | 38.1                                                                 | 327                                        | 59.7                                                | 0                                               | 16.6                                                                  | 59                             | 112                                                 | 64.2                                                   | 0.02                                                                   | 0.01                                                                     | 16.4                                                | 0                                             |
| 6                                    | West San Fernando Valley         | 074            | --                                        | --                                                  | --                                               | --                                            | --                                                                   | 106                                        | 56.2                                                | 0                                               | 15.6                                                                  | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 7                                    | East San Fernando Valley         | 069            | 80                                        | 74                                                  | 0                                                | 7(11.7)                                       | 37.5                                                                 | 109                                        | 60.1                                                | 0                                               | 19.2                                                                  | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 8                                    | West San Gabriel Valley          | 088            | --                                        | --                                                  | --                                               | --                                            | --                                                                   | 113                                        | 59.4                                                | 0                                               | 16.6                                                                  | 58                             | 95                                                  | 49.5                                                   | --                                                                     | --                                                                       | 11.2                                                | 0                                             |
| 9                                    | East San Gabriel Valley 1        | 060            | 55                                        | 83                                                  | 0                                                | 8(14.5)                                       | 35.4                                                                 | 279                                        | 75.6                                                | 1(0.4)                                          | 18.4                                                                  | 59                             | 156                                                 | 75.2                                                   | --                                                                     | --                                                                       | 10.6                                                | 0                                             |
| 9                                    | East San Gabriel Valley 2        | 591            | --                                        | --                                                  | --                                               | --                                            | --                                                                   | --                                         | --                                                  | --                                              | --                                                                    | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 10                                   | Pomona/Walnut Valley             | 075            | --                                        | --                                                  | --                                               | --                                            | --                                                                   | --                                         | --                                                  | --                                              | --                                                                    | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 11                                   | South San Gabriel Valley         | 085            | --                                        | --                                                  | --                                               | --                                            | --                                                                   | 108                                        | 60.7                                                | 0                                               | 19.9                                                                  | 55                             | 140                                                 | 73.0                                                   | 0.03                                                                   | 0.02                                                                     | 12.4                                                | 0                                             |
| 12                                   | South Central LA County          | 084            | --                                        | --                                                  | --                                               | --                                            | --                                                                   | 115                                        | 55.8                                                | 0                                               | 18.5                                                                  | 58                             | 128                                                 | 78.6                                                   | 0.03                                                                   | 0.03                                                                     | 14.7                                                | 0                                             |
| 13                                   | Santa Clarita Valley             | 090            | 60                                        | 54                                                  | 0                                                | 2(3.3)                                        | 28.1                                                                 | --                                         | --                                                  | --                                              | --                                                                    | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| ORANGE COUNTY                        |                                  |                |                                           |                                                     |                                                  |                                               |                                                                      |                                            |                                                     |                                                 |                                                                       |                                |                                                     |                                                        |                                                                        |                                                                          |                                                     |                                               |
| 16                                   | North Orange County              | 3177           | --                                        | --                                                  | --                                               | --                                            | --                                                                   | --                                         | --                                                  | --                                              | --                                                                    | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 17                                   | Central Orange County            | 3176           | 61                                        | 74                                                  | 0                                                | 7(11.5)                                       | 34.1                                                                 | 319                                        | 58.9                                                | 0                                               | 16.8                                                                  | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 18                                   | North Coastal Orange County      | 3195           | --                                        | --                                                  | --                                               | --                                            | --                                                                   | --                                         | --                                                  | --                                              | --                                                                    | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 19                                   | Saddleback Valley                | 3812           | 57                                        | 47                                                  | 0                                                | 0                                             | 23.7                                                                 | 111                                        | 49.4                                                | 0                                               | 12.1                                                                  | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| RIVERSIDE COUNTY                     |                                  |                |                                           |                                                     |                                                  |                                               |                                                                      |                                            |                                                     |                                                 |                                                                       |                                |                                                     |                                                        |                                                                        |                                                                          |                                                     |                                               |
| 22                                   | Norco/Corona                     | 4155           | 57                                        | 76                                                  | 0                                                | 11(19.3)                                      | 38.0                                                                 | --                                         | --                                                  | --                                              | --                                                                    | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 23                                   | Metropolitan Riverside County 1  | 4144           | 119                                       | 137                                                 | 0                                                | 72(60.5)                                      | 55.5                                                                 | 342                                        | 91.7                                                | 5(1.5)                                          | 22.1                                                                  | 60                             | 199                                                 | 100.5                                                  | 0.02                                                                   | 0.01                                                                     | 9.8                                                 | 0                                             |
| 23                                   | Metropolitan Riverside County 2  | 4146           | --                                        | --                                                  | --                                               | --                                            | --                                                                   | 110                                        | 93.8                                                | 2(1.8)                                          | 20.8                                                                  | 59                             | 244                                                 | 81.9                                                   | 0.01                                                                   | 0.01                                                                     | 9.1                                                 | 0                                             |
| 24                                   | Perris Valley                    | 4149           | 59                                        | 83                                                  | 0                                                | 15(25.4)                                      | 41.4                                                                 | --                                         | --                                                  | --                                              | --                                                                    | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 25                                   | Lake Elsinore                    | 4158           | --                                        | --                                                  | --                                               | --                                            | --                                                                   | --                                         | --                                                  | --                                              | --                                                                    | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 29                                   | Banning Airport                  | 4164           | 61                                        | 82                                                  | 0                                                | 7(11.5)                                       | 29.3                                                                 | --                                         | --                                                  | --                                              | --                                                                    | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 30                                   | Coachella Valley 1**             | 4137           | 59                                        | 79                                                  | 0                                                | 2(3.4)                                        | 26.4                                                                 | 112                                        | 27.1                                                | 0                                               | 9.0                                                                   | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 30                                   | Coachella Valley 2**             | 4157           | 118+                                      | 83+                                                 | 0+                                               | 23(19.5)+                                     | 39.3+                                                                | 110                                        | 28.5                                                | 0                                               | 10.7                                                                  | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| SAN BERNARDINO COUNTY                |                                  |                |                                           |                                                     |                                                  |                                               |                                                                      |                                            |                                                     |                                                 |                                                                       |                                |                                                     |                                                        |                                                                        |                                                                          |                                                     |                                               |
| 32                                   | Northwest San Bernardino Valley  | 5175           | --                                        | --                                                  | --                                               | --                                            | --                                                                   | --                                         | --                                                  | --                                              | --                                                                    | 55                             | 127                                                 | 63.5                                                   | 0.02                                                                   | 0.01                                                                     | 9.2                                                 | 0                                             |
| 33                                   | Southwest San Bernardino Valley  | 5817           | 58                                        | 93                                                  | 0                                                | 17(29.3)                                      | 42.8                                                                 | 112                                        | 86.1                                                | 2(1.8)                                          | 20.9                                                                  | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 34                                   | Central San Bernardino Valley 1  | 5197           | 61                                        | 106                                                 | 0                                                | 29(47.5)                                      | 47.7                                                                 | 104                                        | 71.4                                                | 1(1.0)                                          | 20.0                                                                  | 59                             | 235                                                 | 113.4                                                  | --                                                                     | --                                                                       | 10.8                                                | 0                                             |
| 34                                   | Central San Bernardino Valley 2  | 5203           | 58                                        | 118                                                 | 0                                                | 28(48.3)                                      | 48.6                                                                 | 106                                        | 93.4                                                | 4(3.8)                                          | 22.0                                                                  | 58                             | 179                                                 | 92.7                                                   | 0.02                                                                   | 0.01                                                                     | 9.6                                                 | 0                                             |
| 35                                   | East San Bernardino Valley       | 5204           | 60                                        | 88                                                  | 0                                                | 20(33.3)                                      | 38.6                                                                 | --                                         | --                                                  | --                                              | --                                                                    | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 37                                   | Central San Bernardino Mountains | 5181           | 57                                        | 52                                                  | 0                                                | 1(1.8)                                        | 26.4                                                                 | --                                         | --                                                  | --                                              | --                                                                    | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| 38                                   | East San Bernardino Mountains    | 5818           | --                                        | --                                                  | --                                               | --                                            | --                                                                   | 52                                         | 28.6                                                | 0                                               | 9.5                                                                   | --                             | --                                                  | --                                                     | --                                                                     | --                                                                       | --                                                  | --                                            |
| DISTRICT MAXIMUM                     |                                  |                | 137                                       | 0                                                   | 72                                               | 55.5                                          | 55.5                                                                 | 93.8                                       | 5                                                   | 22.1                                            | 22.1                                                                  | 244                            | 113.4                                               | 113.4                                                  | 0.03                                                                   | 0.03                                                                     | 16.4                                                | 0                                             |
| SOUTH COAST AIR BASIN                |                                  |                | 137                                       | 0                                                   | 81                                               | 55.5                                          | 55.5                                                                 | 93.8                                       | 7                                                   | 22.1                                            | 22.1                                                                  | 244                            | 113.4                                               | 113.4                                                  | 0.03                                                                   | 0.03                                                                     | 16.4                                                | 0                                             |

µg/m<sup>3</sup> - Micrograms per cubic meter of air.

AAM - Annual Arithmetic Mean

-- - Pollutant not monitored.

\* Less than 12 full months of data. May not be representative.

\*\* Salton Sea Air Basin.

e) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157 where samples were collected every 3 days.

f) - PM2.5 samples were collected every 3 days at all sites except for the following sites: Station Numbers 060, 072, 077, 087, 3176, and 4144 where samples were taken every day, and Station Number 5818 where samples were taken every 6 days.

g) - Total suspended particulates, lead, and sulfate were determined from samples collected every 6 days by the high volume sampler method, on glass fiber filter media.

h) - Federal PM10 standard is annual average (AAM) > 50 µg/m<sup>3</sup>. State standard is annual average (AAM) > 20 µg/m<sup>3</sup> (changed from AGM > 30 µg/m<sup>3</sup>, effective July 5, 2003).

i) - Federal PM2.5 standard is annual average (AAM) > 15 µg/m<sup>3</sup>. State standard is annual average (AAM) > 12 µg/m<sup>3</sup> (state standard was established on July 5, 2003).

j) - Federal lead standard is quarterly average > 1.5 µg/m<sup>3</sup>; and state standard is monthly average ≥ 1.5 µg/m<sup>3</sup>. No location exceeded lead standards.

Maximum monthly and quarterly lead concentrations at special monitoring sites immediately downwind of stationary lead sources were 0.59 µg/m<sup>3</sup> and 0.30 µg/m<sup>3</sup>, respectively, both recorded at Southeast Los Angeles County.

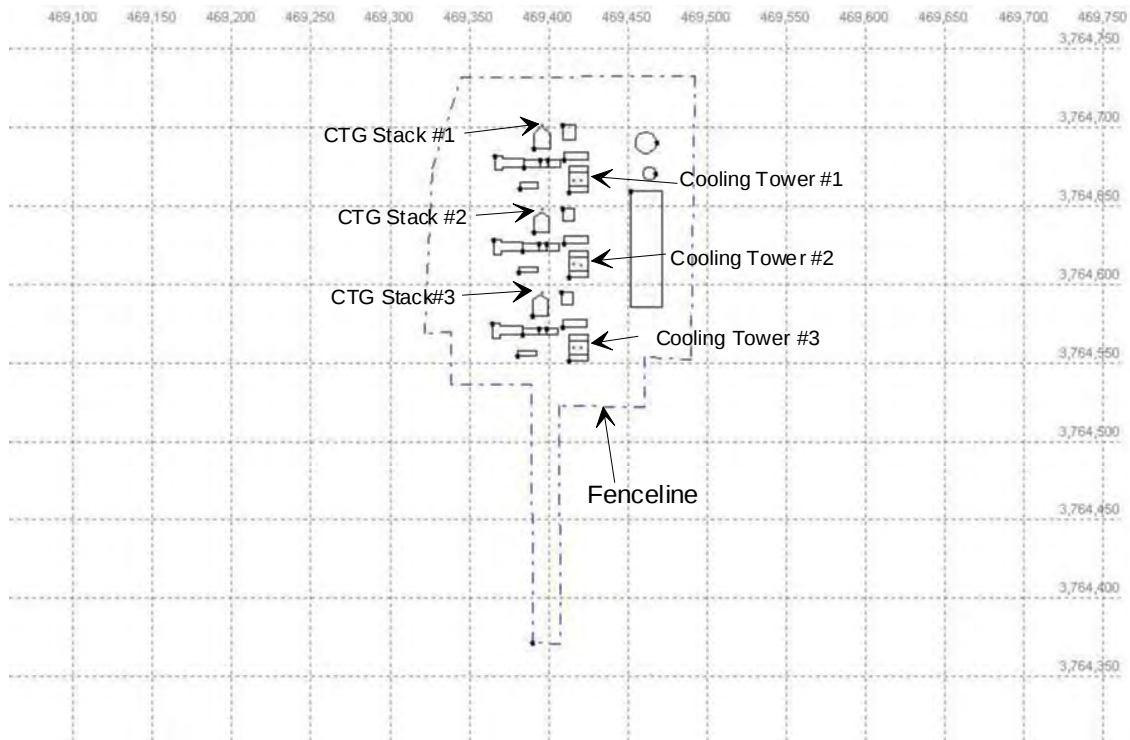
+ - The data for the sample collected on a high-wind day (161 µg/m<sup>3</sup> on 10/9/04) was excluded in accordance with EPA's Natural Events Policy.



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Figure 8.1C-1

AESH Facility Layout used for ISCST3 Modeling



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*Final Protocol*

# **AES Highgrove HEF Dispersion Model Protocol**

Prepared for  
**AES Highgrove, LLC**

February 2006

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|                                                                  |            |
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## SECTION 1

# Introduction

AES Highgrove, LLC plans to construct and operate a simple-cycle merchant power plant in the City of Grand Terrace, California. The site is located at 12700 Taylor Street, north of the intersection of Taylor and Main streets, on a parcel which once constituted part of Southern California Edison's (SCE) former Highgrove Generating Station. The proposed project, called the AES Highgrove facility, will be a nominal 300 megawatt (MW) peaking facility consisting of three GE LMS100 natural-gas-fired turbines and associated equipment. The LMS100 is based on a new, highly efficient, integrated technology, where the low pressure compressor is derived from the heavy duty frame engine, and the high pressure compressor, combustor and power turbine are derived from the aeroderivative technology. Each combustion turbine generator (CTG) system consists of a stationary CTG, supporting systems, and associated auxiliary equipment. The CTGs will be equipped with water injection capability to control oxides of nitrogen (NO<sub>x</sub>) emissions generated in the combustion process. A two-cell wet cooling tower will be installed with each CTG and, in conjunction with an air to water heat exchanger ("intercooler"), will cool a stream of compressed air from the gas turbine, and increase its efficiency. To further reduce NO<sub>x</sub>, CO, and VOC emissions, post-combustor selective catalytic reduction (SCR) and oxidation catalyst control systems will also be used.

The PTE for the proposed power plant is less than 250 tons per year for each of the Prevention of Significant Deterioration (PSD) regulated pollutants and the facility is not considered one of the 28 major source categories (40 CFR 52.21(b)(1)(i)). Therefore, for PSD purposes, the project is not considered a major stationary source in accordance with South Coast Air Quality Management District (SCAQMD) Rule 1702<sup>1</sup> or the PSD regulations. However, emissions from the proposed project are expected to exceed one or more of the SCAQMD thresholds defining a major polluting facility shown in Table 1-1. Therefore, in accordance with the New Source Review (NSR) requirements outlined in the SCAQMD Regulation XIII (VOC, CO, PM<sub>10</sub>, PM<sub>2.5</sub>, and SO<sub>x</sub>) and Regulation XX (NO<sub>x</sub>), modeling will be conducted to demonstrate that the project will not cause a new violation of a state or federal ambient air quality standard nor make an existing violation significantly worse.

For modeled pollutants with background concentrations above the state or federal ambient air quality standards (AAQS), model concentrations will be compared to both the significant change in air quality concentration levels listed in Appendix A of Rule 1303 and excerpted in Table 1-2 and the AAQS.

---

<sup>1</sup> SCAQMD Rule 1702 is listed for completeness. However, the SCAQMD has relinquished authority to conduct PSD review back to USEPA and Rule 1702 will no longer be applicable to new or modified projects until such time as USEPA redelegates PSD authority back to the SCAQMD.

**TABLE 1-1**  
SCAQMD Major Polluting Facility Potential to Emit (PTE) Thresholds

| <b>Pollutant</b>     | <b>PTE Threshold (tons/yr)</b> |
|----------------------|--------------------------------|
| NO <sub>x</sub> /VOC | 10                             |
| SO <sub>2</sub>      | 100                            |
| CO                   | 50                             |
| PM <sub>10</sub>     | 70                             |

Reference: Definition of Major Polluting Facility, SCAQMD Rule 1302, December 6, 2002.

**TABLE 1-2**  
SCAQMD Rule 1303 Allowable Change in Concentration Thresholds

| <b>Pollutant</b>       | <b>Averaging Period</b>      | <b>Significant Change in Air Quality Concentration</b> |                         |
|------------------------|------------------------------|--------------------------------------------------------|-------------------------|
|                        |                              | <b>ppm</b>                                             | <b>µg/m<sup>3</sup></b> |
| <b>NO<sub>2</sub></b>  | <b>1-hour</b>                | 0.01                                                   | 20                      |
|                        | <b>Annual</b>                | 0.0005                                                 | 1                       |
| <b>CO</b>              | <b>1-hour</b>                | 1                                                      | 1100                    |
|                        | <b>8-hour</b>                | 0.45                                                   | 500                     |
| <b>PM<sub>10</sub></b> | <b>24-hour</b>               | --                                                     | 2.5                     |
|                        | <b>Annual Geometric Mean</b> |                                                        | 1                       |

Reference: Table A-2, Appendix A, SCAQMD Rule 1303, December 6, 2002.

Because of the regulatory requirements for conducting an air quality impact analysis, the Applicant intends to submit an air quality impact analyses to both the SCAQMD and the California Energy Commission (CEC). In addition, a cumulative impacts analysis will be performed. The results of the analyses will be presented in detail in the Application for Certification (AFC) and the Permit to Construct/Title V Operating Permit Application in accordance with Regulation XIII, Rule 2005 and Regulation XXX. The project will be required to evaluate construction-based impacts per the CEC regulations. This modeling protocol outlines the proposed use of air dispersion modeling techniques, which will be used to assess impacts from the proposed source to meet the SCAQMD and CEC air quality modeling requirements. This protocol also follows modeling guidance provided in the U.S. Environmental Protection Agency's (USEPA) *Guideline on Air Quality Models* (40 CFR Part 51, Appendix W, November 9, 2005) and SCAQMD modeling guidance. Impacts from operation of the facility will be compared to the criteria in Table 1-3.

**TABLE 1-3**  
Criteria for Estimating Air Quality Impacts

| Air Quality Criteria                     | NO <sub>2</sub> | PM <sub>10/2.5</sub> | CO | SO <sub>2</sub> |
|------------------------------------------|-----------------|----------------------|----|-----------------|
| Ambient Air Quality Standards            | ✓               | ✓                    | ✓  | ✓               |
| Class I Visibility                       | ✓               | ✓                    |    | ✓               |
| SCAQMD Allowable Change in Concentration |                 | ✓                    |    |                 |

## SECTION 2

## Project Location and Emissions Sources

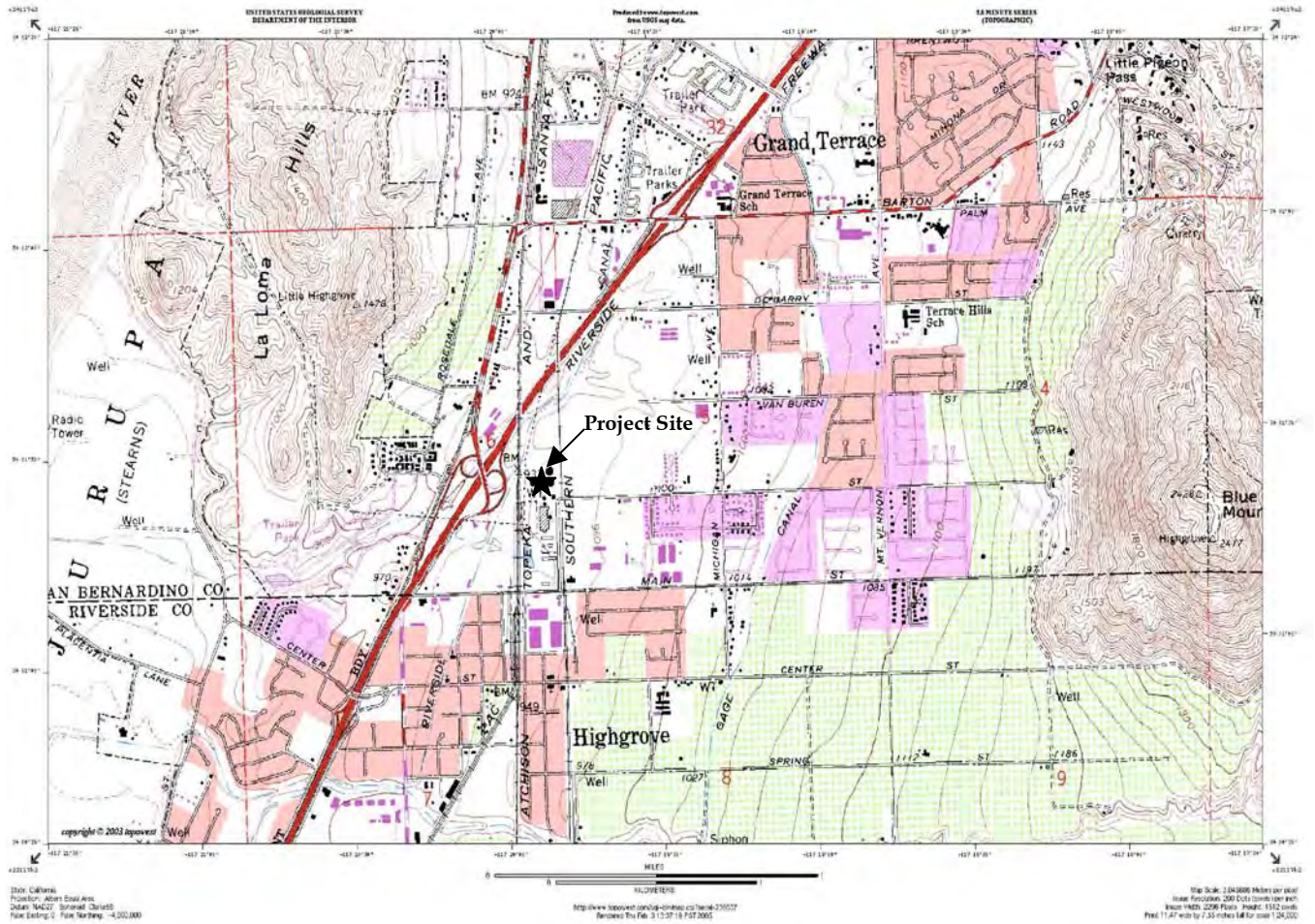
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The project site is located in an industrially zoned area of the City of Grand Terrace, San Bernardino County. The site is located at 12700 Taylor Street, north of the intersection of Taylor and Main streets. The new facility will be located on the property which was once part of the former SCE Highgrove Generating Station. At the time of divestiture in late 1998, SCE's property consisted of four electric generating units, with a combined nominal capacity of 154 MW, cooling towers, boilers, tanks, and associated equipment, and several large oil storage tanks, which served the facility when the units used oil as a primary fuel. The AES Highgrove facility will be located on the former tank farm site, located north of the old generating equipment.

The project site is relatively flat, at an elevation of approximately 940 feet above sea level. Elevated terrain exists to the west and east of the project site. La Loma Hills are located approximately 0.5 mile to the west and rise to an elevation of approximately 1,400 feet. Blue Mountain lies approximately 1.5 miles to the east of the project site, rising to an elevation of 2,428 feet above sea level. The Box Springs Mountains are 1.7 miles to the southeast of the project site and rise to a height of 2,843 feet above sea level. Figure 2-1 shows the terrain surrounding the project site.

### 2.1 Proposed Emission Sources

The primary emission sources at the facility will be three combustion turbine generators. Natural gas will be the only fuel for the turbines. The turbines will use advanced combustion controls, combined with SCR, to limit emissions of NO<sub>x</sub> to 3.5 parts per million by volume (ppmv), while emissions of CO will be limited to 6 ppmv and VOC to 2 ppmv through the use of the advanced combustion controls, combined with the use of an oxidation catalyst. Emissions of PM<sub>10</sub> and SO<sub>2</sub> will be kept to a minimum through the exclusive use of natural gas and the oxidation catalyst system. In addition, a two-cell wet cooling tower will be installed with each combustion turbine generator. High-efficiency drift eliminators will minimize emissions of PM<sub>10</sub> from the cooling towers. The proposed project will not include the installation of backup diesel emergency engines or diesel fire pumps. Therefore, only emissions of NO<sub>x</sub>, SO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions from the three combustion turbine generators and PM<sub>10</sub> emissions from the three, 2-cell cooling towers will be modeled. A complete summary of the emission calculation methods will be included in the Appendix of the AFC application, and will include emission rates in pounds/hour, pounds per day, pounds/year, and grams/second for each pollutant and AAQS averaging period, and exhaust temperatures and velocity.



**FIGURE 2-1**  
Site Location and Surrounding Terrain

## SECTION 3

# Existing Meteorological and Air Quality Data

The CEC requires one year of meteorological data approved by the California Air Resources Board (CARB) or the local air pollution control district to be used in the air modeling. For dispersion modeling analyses in the area of the proposed site, the SCAQMD requires the use of the 1981 Riverside meteorological data file, which has been pre-formatted for use with the Industrial Source Complex – Short Term (ISCST3) model. Therefore, the SCAQMD 1981 meteorological data collected at Riverside station will fulfill both requirements and will be used for this dispersion modeling analysis.

Appendix B (g)(8)(G) of the CEC data adequacy checklist requires a summary of the previous 3 years of ambient concentrations of all criteria pollutants from the closest certified CARB monitoring stations. After evaluating the list of monitoring stations in the vicinity of the proposed project, it was determined the Riverside-Rubidoux monitoring station at 5888 Mission Blvd (USEPA AIRS No. 060658001) is the closest to the proposed project site. Therefore, the background air quality data at the Riverside-Rubidoux station for the previous 3 years are summarized in Table 3-1. The annual SCAQMD ambient air quality data summaries were used as the primary reference and the USEPA AIRS database was used when data were unavailable in the SCAQMD summaries. The maximum concentrations reported in Table 3-1 will be combined with the modeled concentrations and used for comparison to the ambient air quality standards.

**TABLE 3-1**  
Background Air Concentrations for the Highgrove Facility <sup>a, b</sup> 2002 – 2004

| Pollutant         | Averaging Time         | CAAQS                   | NAAQS                   | 2002  |                   | 2003  |                   | 2004  |                   | Maximum           |
|-------------------|------------------------|-------------------------|-------------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------------------|
|                   |                        | ppm / µg/m <sup>3</sup> | ppm / µg/m <sup>3</sup> | ppm   | µg/m <sup>3</sup> | ppm   | µg/m <sup>3</sup> | ppm   | µg/m <sup>3</sup> | µg/m <sup>3</sup> |
| NO <sub>2</sub>   | 1-hour <sup>c</sup>    | <b>0.25 / 470</b>       | -                       | 0.10  | 188               | 0.09  | 169               | 0.09  | 169               | <b>188</b>        |
|                   | Annual <sup>c</sup>    | -                       | <b>0.053 / 100</b>      | 0.024 | 44.6              | 0.022 | 40.8              | 0.017 | 32.4              | <b>44.6</b>       |
| SO <sub>2</sub>   | 1-hour <sup>c</sup>    | <b>0.25 / 655</b>       | -                       | 0.02  | 52.4              | 0.02  | 52.4              | 0.02  | 52.4              | <b>52.4</b>       |
|                   | 3-hour <sup>d</sup>    | -                       | <b>0.5 / 1300</b>       | 0.010 | 26.2              | 0.015 | 39.3              | 0.016 | 41.9              | <b>41.9</b>       |
|                   | 24-hour <sup>c</sup>   | <b>0.04 / 105</b>       | <b>0.14 / 365</b>       | 0.002 | 5.2               | 0.012 | 31.4              | 0.015 | 39.3              | <b>39.3</b>       |
|                   | Annual <sup>d</sup>    | -                       | <b>0.030 / 80</b>       | 0.001 | 2.6               | 0.003 | 7.9               | 0.004 | 10.5              | <b>10.5</b>       |
| CO                | 1-hour <sup>c</sup>    | <b>20 / 23,000</b>      | <b>35 / 40,000</b>      | 8     | 9162              | 5     | 5726              | 4     | 4581              | <b>9162</b>       |
|                   | 8-hour <sup>c</sup>    | <b>9.0 / 10,000</b>     | <b>9 / 10,000</b>       | 3.0   | 3436              | 3.7   | 4237              | 3.0   | 3436              | <b>4237</b>       |
| PM <sub>10</sub>  | 24-hour <sup>c</sup>   | - / <b>50</b>           | - / <b>150</b>          | -     | 130               | -     | 164               | -     | 137               | <b>164</b>        |
|                   | Annual <sup>c, e</sup> | - / <b>20</b>           | - / <b>50</b>           | -     | 58.5              | -     | 56.9              | -     | 55.5              | <b>58.5</b>       |
| PM <sub>2.5</sub> | 24-hour <sup>c</sup>   | - / -                   | - / <b>65</b>           | -     | 77.6              | -     | 104.3             | -     | 91.7              | <b>104.3</b>      |
|                   | Annual <sup>c, e</sup> | - / <b>12</b>           | - / <b>15</b>           | -     | 27.5              | -     | 24.9              | -     | 22.1              | <b>27.5</b>       |

<sup>a</sup> Data reported for the SCAQMD Metropolitan Riverside County 1 Station (a.k.a. 5888 Mission Blvd, Riverside-Rubidoux Monitoring Station – AIRS No. 060658001)

<sup>b</sup> Conversion from ppm to µg/m<sup>3</sup> at 25° Celsius and 760 torr.

<sup>c</sup> Source of data: <http://www.aqmd.gov/smog/historicaldata.htm>

<sup>d</sup> Source of data: <http://www.epa.gov/air/data/monvals.html>

<sup>e</sup> Annual Arithmetic Mean

## SECTION 4

## Air Quality Dispersion Models

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Several USEPA dispersion models are proposed for use to quantify pollutant impacts on the surrounding environment based on the multiple emission source operating parameters and their locations. The models proposed for use are the Building Profile Input Program (BPIP, dated 04112), the Industrial Source Complex – Short Term model (ISCST3, Version 02035), CTSCREEN (Version 94111), SCREEN3 (Version dated 96043), and the VISCREEN visibility model (Version 88341). These models will be used for evaluating:

- Compliance with state and federal ambient air quality standards,
- Comparison of impacts to SCAQMD Rule XIII significant impact levels for nonattainment criteria pollutants, and
- Visibility impacts in Class I areas.

ISCST3 with BPIP will be used as the primary model for evaluating the NO<sub>x</sub>, SO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> impacts. For determining the annual NO<sub>2</sub> concentration, the ambient ratio method will be used to convert the predicted annual NO<sub>x</sub> concentration to NO<sub>2</sub>. If the modeled NO<sub>2</sub> concentration with the background concentration added exceeds the annual NO<sub>2</sub> air quality standard after applying the ARM, then the ozone limiting method (OLM) will be used to refine the annual NO<sub>2</sub> concentration. For determining the hourly NO<sub>2</sub> concentration, a one-to-one conversion from NO<sub>x</sub> to NO<sub>2</sub> will be used. If the modeled hourly NO<sub>2</sub> concentration with the background concentration added exceeds the air quality standard, the maximum hourly NO<sub>x</sub> concentration will be converted to NO<sub>2</sub> based on the maximum 1-hour ozone concentration recorded at the Riverside-Rubidoux monitoring station between 2002 and 2004. If necessary, the OLM will be used to refine the hourly NO<sub>2</sub> concentration using the actual hourly ozone and meteorological data recorded at the Riverside-Rubidoux monitoring station between 1999 and 2003. For evaluating PM<sub>2.5</sub> impacts, it will be assumed that all particulate from natural gas combustion is less than 2.5 µm and cooling tower particulate emissions are greater than 2.5 µm. CO and SO<sub>x</sub> concentration will be added to the background concentrations and compared to their respective ambient air quality standards. Modeled PM<sub>10</sub> concentrations will be compared directly to the SCAQMD significant increase thresholds.

If the concentrations of NO<sub>2</sub>, SO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> still exceed the ambient air quality standards or the SCAQMD significant increase thresholds after using ISCST3, the ambient ratio method and the ozone limiting method, then CTSCREEN, which is a refined point source Gaussian air quality model for use in all stability conditions for complex terrain applications, will be used. These models, along with options for their use and how they are used, are discussed below.

## 4.1 Simple, Complex, and Intermediate Terrain Impacts

### 4.1.1 ISCST3 Dispersion Model

For modeling the project in simple, complex, and intermediate terrain, the ISCST3 model will be used. The ISCST3 model is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources. The ISCST3 model requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. The model assumes that there is no variability in meteorological parameters over a 1-hour time period, hence the term steady-state. The ISCST3 model allows input of multiple sources and source groupings, eliminating the need for multiple model runs. Complex phenomena such as building-induced plume downwash are also treated in the ISCST3 model.

The ISCST3 model is capable of calculating pollutant concentrations in intermediate terrain. Intermediate terrain is defined as terrain between stack top and final plume height. In calculating pollutant concentrations in intermediate terrain, the model will select the higher of the simple and complex terrain calculations on an hour-by-hour, source-by-source, and receptor-by-receptor basis. In addition, the ISCST3 model is preferred for this application because it incorporates algorithms for the simulation of aerodynamic downwash induced by buildings. These effects are of importance because many of the emission points may be below Good Engineering Practice (GEP) stack height.

The meteorological data from the SCAQMD Riverside monitoring station for 1981 will be used for the ISCST3 modeling.

The technical options selected for the ISCST3 model include:

- Non-regulatory default option (includes final plume rise except for building wake downwash, stack-tip downwash except for Schulman-Scire [SS] downwash, buoyancy-induced dispersion except for SS downwash, default wind profile exponents, default temperature gradients, and no calm processing per SCAQMD policy)
- Anemometer height of 10 meters
- Urban dispersion parameters
- Elevated receptor terrain height option

The final plume rise option does not consider the possible effects of gradual plume rise on ambient concentrations during the rising phase of the plume downwind transport. Gradual plume rise is recommended by USEPA (40 CFR, Part 51, Appendix W, November 9, 2005) when there is significant terrain close to the stacks. Buoyancy-induced dispersion, which accounts for the buoyant growth of a plume caused by entrainment of ambient air, will be included because of the relatively warm exit temperature and subsequent buoyant nature of the exhaust plumes. Stack-tip downwash, which adjusts the effective stack height downward following the methods of Briggs (Briggs, G.A. 1972. "Discussion on Chimney Plumes in Neutral and Stable Surroundings." *Atmos. Environ.* 6:507-510.) for cases where the stack exit velocity is less than 1.5 times the wind speed at stack top, will be selected as per USEPA guidance.

As required by SCAQMD, the ISCST3 model will be run in the urban dispersion mode and the no-calm control option will be chosen.

### 4.1.2 CTSCREEN Dispersion Model

If the ISCST3 model calculates exceedances of the AAQS in intermediate or complex terrain, the CTSCREEN model will be used. The CTSCREEN model, the screening mode of CTDMPPLUS, is a refined point source Gaussian air quality model for use in all stability conditions for complex terrain applications. As a result of the model accounting for the dimensional nature of the plume and terrain interaction, the model requires digitized terrain of the nearby topographical features. The mathematical representation of terrain is accomplished by the terrain preprocessors, FITCON and HCRIT. CTSCREEN and CTDMPPLUS are virtually the same air quality model, the main difference between the two is the meteorological data used. The wind direction used in CTSCREEN is based on the source-terrain geometry, resulting in computation of the highest impacts likely to occur. Other meteorological variables are chosen from possible combinations from a set of predetermined values. CTSCREEN provides maximum concentration estimates that are similar to, but on the conservative side of, those that would be calculated from the CTDMPPLUS model with a full year of onsite meteorological data.

As well as calculating maximum 1-hour concentrations at all receptors, the CTSCREEN model is designed to provide conservative estimates of worst-case 3-hour, 24-hour, and annual impacts. Scaling factors are used to convert calculated 1-hour concentrations to 3-hour, 24-hour, and annual estimates. A workgroup study found the ratios to convert 1-hour concentrations to 3-hour, 24-hour, and annual concentrations to be 0.7, 0.15, and 0.03 respectively (*User's Guide to CTDMPPLUS, Volume 2: The Screening Mode (CTSCREEN)*, USEPA, EPA/600/8-90/087).

CTSCREEN is appropriate for the following applications:

- Elevated point sources
- Terrain elevations above stack top
- Rural or urban areas
- One-hour to annual averaging time periods

## 4.2 Ambient Ratio Method and Ozone Limiting Method

Annual NO<sub>2</sub> concentrations will be calculated according to the *Guideline on Air Quality Models* (40 CFR, Part 51, Appendix W, November 9, 2005). The Guideline allows a nationwide default conversion rate of 75 percent for annual NO<sub>2</sub> /NO<sub>x</sub> ratios. Hourly NO<sub>2</sub> concentrations will be calculated assuming a 100 percent conversion rate of NO<sub>x</sub> to NO<sub>2</sub>.

Should hourly NO<sub>2</sub> concentrations need to be examined in a more rigorous manner, the Ozone (O<sub>3</sub>) Limiting Method (OLM) will be used. Concurrent meteorological and O<sub>3</sub> concentration data are needed for the OLM. Five years of meteorological data collected at Riverside Municipal Airport during 1999 to 2003 will be used in the OLM. Hourly ozone data collected at the Riverside-Rubidoux monitoring station from 1999 to 2003 will be used in conjunction with the meteorological data in the OLM to calculate hourly NO<sub>2</sub> concentrations from hourly NO<sub>x</sub> concentrations. The OLM involves an initial comparison of the estimated maximum NO<sub>x</sub> concentration and the ambient O<sub>3</sub> concentration to determine which is the limiting factor to NO<sub>2</sub> formation. If the O<sub>3</sub> concentration is greater than the maximum NO<sub>x</sub> concentration, total conversion is assumed. If the NO<sub>x</sub> concentration is greater than the O<sub>3</sub> concentration, the formation of NO<sub>2</sub> is limited by the ambient O<sub>3</sub> concentration. In this case, the NO<sub>2</sub> concentration is set equal to the O<sub>3</sub> concentration plus a correction factor which accounts for in-stack and near-stack thermal conversion.

USEPA's ISC-OLM model will be used to calculate the NO<sub>2</sub> concentration based upon the OLM method. ISC-OLM will be implemented on a plume-by-plume basis (i.e., individual plume). However, for some receptors, a demonstration of plume merging may be made to allow use of the combined source analysis. Plume merging will be demonstrated as follows. The horizontal dispersion of each individual plume, as a function of downwind distance, will be identified using USEPA's SCREEN3 dispersion model at the distance to the receptor of interest, under the appropriate meteorology. This value will be compared with half the distance between sources proposed for plume merging. Should the horizontal dispersion at the distance to the receptor exceed half the distance between the sources proposed for merging, then the plumes are assumed to have merged by the time they are transported to the receptor of interest.

### 4.3 Good Engineering Practice Stack Height and Downwash

ISCST3 can account for building downwash effects. Stack locations, heights, building locations, and dimensions will be input to BPIP. The first part of BPIP determines and reports on whether or not a stack follows GEP guidance or is being subjected to wake effects from a structure or structures. The second part calculates direction-dependent "equivalent building dimensions" if a stack is being influenced by structure wake effects. The BPIP output will be used in the ISCST3 modeling.

### 4.4 Receptor Selection

Receptor and source base elevations will be determined from U.S. Geological Survey (USGS) Digital Elevation Model (DEM) data using the 7½-minute format (i.e., 30-meter spacing between grid nodes). All coordinates will be referenced to UTM North American Datum 1927 (NAD27), zone 11. Every effort will be made to maintain receptor spacing across DEM file boundaries.

Cartesian coordinate receptor grids will be used to provide adequate spatial coverage surrounding the project area for assessing ground-level pollution concentrations, to identify the extent of significant impacts, and to identify maximum impact locations. A 30-meter resolution receptor grid will be developed and will extend outwards at least 10 kilometers (km) or more as necessary to calculate the significant impact area. The fence line receptors will be spaced at 30-meter intervals. Concentrations within the facility fence line will not be calculated.

### 4.5 Modeling Scenarios

Pollutant emissions to the atmosphere from the proposed facility will occur from combustion of natural gas in each of the three identical combustion turbines. Emission rates will be calculated based on vendor data and additional conservative assumptions of turbine performance. Turbine emissions and stack parameters, such as flow rate and exit temperature, exhibit some variation with ambient temperature and operating load. Therefore, in order to calculate the worst-case air quality impacts, dispersion modeling will be conducted at base, 75, and 50 percent loads at 97, 80, and 30 degrees Fahrenheit, which represent the design-high, low, and weighted annual average ambient temperatures (annual average was weighted to reflect peak operation during the summer months). Besides the load/temperature scenarios mentioned above, modeling will also be conducted on startup and shutdown scenarios and the various phases of unit commissioning.

The preliminary operational impacts will be modeled using a unit emission rate (i.e., 1.0 gram/sec) for all scenarios. For this modeling analysis, the three combustion turbines will be the only sources of NO<sub>x</sub>, SO<sub>x</sub>, and CO and the emission source parameters (i.e., stack temperature, exit velocity, exhaust flow, stack diameter, and release height) are expected to be similar relative to each operating scenario. Therefore, the preliminary modeled concentrations will be scaled linearly using the actual NO<sub>x</sub>, SO<sub>x</sub>, and CO emission rates for each operating scenario and averaging period. The maximum concentrations for each operating scenario and averaging period will then be added to the background concentration and compared to the respective ambient air quality standards.

The preliminary operational impacts for PM<sub>10</sub> and PM<sub>2.5</sub> will also be modeled using a unit emission rate (i.e., 1.0 gram/sec) for all scenarios. The results of the preliminary 24-hour and annual PM<sub>10</sub> modeling for each permit unit will be scaled linearly using the actual PM<sub>10</sub> emission rate for each operating scenario and compared to the SCAQMD Rule 1303 significance levels. For comparison to the ambient air quality standards, the cooling tower emissions will also be included in the modeling analysis. The maximum concentrations will then be added to the PM<sub>10</sub> and PM<sub>2.5</sub> background concentrations and compared to the respective ambient air quality standards.

A screening analysis (i.e., 1.0 gram/sec) will also be used to determine the worst case impacts from commissioning and start-up/shutdown activities. However, because the emission parameters may vary by unit during the commissioning and start-up/shutdown activities, a refined modeling analysis will be conducted for the worst case scenario using the actual emission rates for each pollutant and averaging period. The maximum concentrations will then be added to the background concentration and compared to the respective ambient air quality standards. In addition, PM<sub>10</sub> will be compared to the SCAQMD Rule 1303 significance levels for each permit unit.

## 4.6 Ambient Air Quality Impact Analyses

In evaluating the impacts of the proposed project on ambient air quality, modeling of the ambient impacts for the project will be added to representative background concentrations, and the results compared to the state and federal ambient air quality standards for SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and CO. The modeled PM<sub>10</sub> concentrations for each permit unit will also be compared with the significance thresholds established by the SCAQMD in Rule 1303.

In accordance with USEPA guidance (40 CFR part 51, Appendix W, Sections 7.2.1.1, November 9, 2005), the highest modeled concentration will be used to demonstrate compliance with the annual National Ambient Air Quality Standards (NAAQS), while the highest, second-highest modeled concentrations of SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and CO will be used to demonstrate compliance with the NAAQS based on averaging periods of 24 hours or less.

In accordance with California Air Resources Board guidance, (CARB AAQS Summary Table, 11/29/2005), the highest modeled concentration will be added to the maximum background concentration and compared to the California Ambient Air Quality Standards (CAAQS) for all averaging periods.

## 4.7 Impacts on Visibility in Class I Areas

SCAQMD Regulation XIII requires the facility to conduct a modeling analysis for plume visibility if the net emission increase from the new or modified source exceeds 15 tons/year of PM<sub>10</sub> or 40 tons/year of NO<sub>x</sub>; and the location of the source, relative to the closest boundary of a specified Federal Class I area, is within the distance specified:

- Agua Tibia: 28 kilometers
- Cucamonga: 28 kilometers
- Joshua Tree: 29 kilometers
- San Gabriel: 29 kilometers
- San Gorgonio: 32 kilometers
- San Jacinto: 28 kilometers

The distances to the Class I areas from the AESH facility were determined using the UTM coordinates for the project site and the nearest boundary of the class I areas. Table 4-1 presents the results of this analysis, showing that no Class I area is closer than the SCAQMD Regulation XIII criteria. Therefore, no visibility analysis is required.

**TABLE 4-1**  
AES Highgrove Distance to Federal Class I areas

| Class I Area | SCAQMD Regulation XIII<br>Distance (Kilometers) | Distance from AESH to<br>Class I Area | Visibility Requires<br>(Yes/No) |
|--------------|-------------------------------------------------|---------------------------------------|---------------------------------|
| Agua Tibia   | 28                                              | 68.8                                  | No                              |
| Cucamonga    | 28                                              | 29.3                                  | No                              |
| Joshua Tree  | 29                                              | 81.5                                  | No                              |
| San Gabriel  | 29                                              | 53.3                                  | No                              |
| San Gorgonio | 32                                              | 35.6                                  | No                              |
| San Jacinto  | 28                                              | 55.3                                  | No                              |

## SECTION 5

## Toxic Air Contaminants – Health Risk Assessment

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SCAQMD Rule 1401 sets forth the health risk threshold for modified and new permit units. A human health risk assessment (HRA) will be performed for the proposed project. The HRA will follow the latest version of the SCAQMD's Risk Assessment Procedures for Rule 1401 and 212, applicable to applications deemed complete after July 1, 2005, the *Air Toxics Hot Spots Program Risk Assessment Guidelines* (Office of Environmental Health Hazard Assessment [OEHHHA], August 2003), and the USEPA *Guideline on Air Quality Models* (40 CFR, Part 51, Appendix W, November 9, 2005). The Hotspots Analysis Reporting Program (HARP, version 1.2a, August 26, 2005) released by CARB will be used to conduct the air dispersion modeling and to evaluate the carcinogenic and non-carcinogenic health risks for the proposed project. The SCAQMD uses the HARP procedure for assessing risk under Rule 1401. The modeled health risk values will be compared with SCAQMD cancer, chronic, and acute risk thresholds. The receptor grid will also include sensitive receptors as required by CEC Regulations (Appendix B (g) (9) (D)).

SCAQMD Rule 1401 presently requires a "permit unit" based assessment. Therefore, impacts of each turbine will be assessed separately. The cooling towers are exempted from SCAQMD permitting requirements per SCAQMD Rule 219 as they will not be using recycled water in the cooling towers. Therefore, no toxics are expected to be emitted by the cooling towers.

## SECTION 6

# Construction Impacts Analysis

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Per Appendix B (g) (8) (I) (i) of the CEC requirements, a screening level or detailed modeling analysis of the direct impacts on ambient air quality is required for the proposed construction related activities. As part of the analysis, construction related exhaust, fugitive dust, and wind blown emissions will be evaluated for the demolition of the existing facility, the construction of the proposed facility, and the associated natural gas and transmission lines. Although the on- and offsite emissions of CO, NO<sub>x</sub>, PM<sub>10</sub>, and SO<sub>x</sub> will be calculated and included as part of the AFC appendix, only the onsite emissions from the proposed project will be included in the air dispersion modeling. This section presents the methodology for estimating emissions and the proposed model selection and settings to be used for the modeling analysis.

## 6.1 Types of Emission Sources

Construction of the proposed AES Highgrove project will be divided into two main phases: (1) demolition of the existing former SCE-owned electric generating units and associated equipment and (2) construction of the proposed facility, including the site preparation, construction of foundations, and installation and assembly of mechanical and electrical equipment. Site preparation is expected to include site excavation, excavation of footings and foundations, and back filling operations. After site preparation is finished, the construction of the foundations will begin. Once the foundations are finished, the installation and assembly of the mechanical and electrical equipment will begin. Demolition activities are expected to occur during the initial five months of the project and construction of the proposed facility is expected to occur during months four through fourteen of the project.

Fugitive dust emissions from the construction of the project result from: (1) demolition of the existing site, (2) dust entrained during excavation and grading at the construction site, (3) dust entrained during onsite travel on paved and unpaved roads and across the unpaved construction site, (4) dust entrained during aggregate and soil loading and unloading operations, (5) dust entrained from raw material transfer to and from material stockpiles, and (6) wind erosion of areas disturbed during construction activities. Heavy equipment exhaust emissions result from: (1) exhaust from the heavy equipment used for demolition, excavation, grading, and construction of onsite structures; (2) exhaust from a water truck used to control construction dust emissions; (3) exhaust from diesel welding machines, gasoline-powered generators, air compressors, and water pumps; and (4) exhaust from gasoline-powered pickup trucks and diesel flatbed trucks used onsite to transport workers and materials around the construction site. Diesel and gasoline truck exhaust emissions will result from transport of mechanical and electrical equipment to the project site and transport of rubble and debris from the site to an appropriate landfill. Diesel exhaust emissions may also result from transport of raw materials to and from stockpiles.

## 6.2 Construction Emissions

Construction emissions from the proposed project will be calculated using the emission factors from the SCAQMD CEQA Air Quality Handbook published in November, 1993 and updates available via SCAQMD's website: [www.aqmd.gov/ceqa/handbook/offroad/offroad.html](http://www.aqmd.gov/ceqa/handbook/offroad/offroad.html) or other updated emission factors, load cycle factors and off-road emissions estimating methodologies from CARB and or USEPA, as appropriate. Emissions of CO, NO<sub>x</sub>, PM<sub>10</sub>, and SO<sub>x</sub> from the vehicle and construction equipment exhaust, and the emission of PM<sub>10</sub> from fugitive dust and wind erosion of storage piles will be summarized for each month of the proposed construction schedule. The maximum short term emission rates used for modeling will be based on the month with the highest on-site emissions, divided by the number of days per month used to determine the emissions (e.g. exhaust emissions would be related to the construction schedule but the wind erosion would be each day of the month), and averaged over the proposed hours of on-site construction activity per day. Emissions for estimating the annual construction impacts will be based on the worst case on-site annual emissions for construction.

## 6.3 Model Type

The USEPA-approved ISCST3 model will be used to estimate ambient impacts from construction emissions. The modeling options and meteorological data described in Section 4.1 will be used for the modeling analysis.

The construction site will be represented as an area source in the modeling analysis. Emissions will be divided into three categories: exhaust emissions, fugitive dust emissions, and wind blown dust emissions. For exhaust emissions, a plume height of 4.6 meters (15 feet) will be used. Plume height refers to the distance measured from ground level to the centerline of the emissions plume. For dust emissions, a release height of 2 meters will be used due to the ambient plume temperatures and negligible plume velocities. If model refinement is required for assessing NO<sub>2</sub> impacts, the localized significance threshold guidance (Chico, Tom and J. Koizumu, 2003) will be used to determine the conversion of NO<sub>x</sub> to NO<sub>2</sub>.

For the construction modeling analysis, the receptor grid will begin at the property boundary and will extend approximately two kilometers in all directions. Receptor spacing will be 30 meters along the construction boundary out to 500 meters and 100 meter spacing out to 2 kilometers.

## 6.4 Evaluation of Impacts on Ambient Air Quality

In evaluating the impacts of the proposed construction on ambient air quality, modeling of the ambient impacts for the project will be added to representative background concentrations, and the results compared to the state and federal ambient air quality standards for SO<sub>2</sub>, NO<sub>2</sub>, and CO. For evaluating PM<sub>10</sub> impacts, the modeled PM<sub>10</sub> concentrations will be compared with the significance thresholds established by the SCAQMD in Rule 1303.

Ambient NO<sub>2</sub>, SO<sub>2</sub>, CO, and PM<sub>10</sub> concentrations monitored at Riverside-Rubidoux station will be used. This site is less than 10 km from the project site, and the monitoring data are believed to be representative of the site. The highest concentration of the most recent 3 years of data will be used as the background concentration (Table 3-1).

## SECTION 7

# Cumulative Impact Analysis

A cumulative impact analysis will be performed for the project's typical operating mode in combination with other stationary emission sources within a 6-mile radius, which have received construction permits but are not yet operational, in the permit process, or sources in the CEQA process. The cumulative impact analysis will assess whether estimated emission concentrations will cause or contribute to a violation of any ambient air quality standards.

The sources to be included in the cumulative impact analysis will be determined by consulting the SCAQMD and the CEC. The applicant has requested the SCAQMD to review its permitting and CEQA databases for a 6-mile radius to identify sources using the zip codes for the surrounding area listed in Table 7-1. Once these data are received from the SCAQMD, they will be forwarded to the CEC for review. The applicant will work with the CEC staff to identify those new air pollution sources within the 6-mile area surrounding the AES facility to be included in the cumulative impact analysis.

**TABLE 7-1**  
Zip codes within 10 km of the AES Site

|       |       |       |
|-------|-------|-------|
| 92501 | 92410 | 92324 |
| 92509 | 92408 | 92557 |
| 92337 | 92354 | 92507 |
| 92316 | 92318 | 92506 |
| 92411 | 92313 | 92504 |

## SECTION 8

# Final Modeling Submittal

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In accordance with SCAQMD and CEC guidelines, the final modeling analyses will include the following materials:

- USGS 7½-minute (1:24,000) map(s) showing the facility
- Modeling summaries of maximum impacts for each air quality model showing meteorological conditions and receptor location and elevation
- All modeling files (including BPIP and meteorological files) on CD, together with a description of all filenames
- Plot plan showing emission points, nearby buildings (including dimensions), cross-section lines, property lines, fencelines, roads, and UTM coordinates
- Table showing the building identifiers in the BPIP run(s) and plot plan

APPENDIX 8.1D

## **LAER/BACT Determination**

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# LAER/BACT Determination

## Evaluation of Lowest Achievable Emission Rate/Best Available Control Technology

To evaluate BACT for the proposed simple cycle turbines, the SCAQMD LAER/BACT guideline for large gas turbines was reviewed. The relevant LAER/BACT determinations for this analysis are shown in Table 8.1D-1.

**TABLE 8.1D-1**  
SCAQMD LAER/BACT Guideline For Large Gas Turbines

| Pollutant        | Achieved in Practice or Contained in SIP                                                         | Technologically Feasible                                                                                  |
|------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| NO <sub>x</sub>  | 2 ppmvd, 1 hr avg, excluding startup and shutdown. SCR or equal and natural gas fuel.            | 2 ppmvd, 1 hr avg, excluding startup and shutdown. SCR or equal and natural gas fuel                      |
| SO <sub>2</sub>  | 1. PUC-regulated natural gas or<br>2. Non-PUC-regulated gas with no more than 0.75 g S/100 dscf. | 1. PUC-regulated natural gas or<br>2. Non-PUC-regulated gas with no more than 0.75 g S/100 dscf<br>3. LPG |
| CO               | 3.0 ppmv<br>Oxidation catalyst and natural gas fuel                                              | 3 ppmv<br>Oxidation catalyst and natural gas fuel or LPG                                                  |
| VOC              | 2.0 ppmv and natural gas fuel*                                                                   | 2.0 ppmv and natural gas fuel*                                                                            |
| PM <sub>10</sub> | Air inlet filter cooler, lube oil vent coalescer and natural gas fuel                            | Air inlet cooler/filter, lube oil vent coalescer and natural gas fuel or LPG                              |
| Ammonia          | 5 ppmvd*                                                                                         | 5 ppmvd*                                                                                                  |

\* SCAQMD BACT policy (Section D) and the CARB September 1999 *Guidance for Power Plant Siting and Best Available Control Technology* list 2 ppmvd as the VOC BACT level. In Section D of its BACT Policy Guidelines, the SCAQMD lists 5 ppmvd ammonia slip as the BACT level.

The EPA RACT-BACT-LAER Clearinghouse (RBLC) was also consulted to review recent permitting decisions for simple cycle gas-fired gas turbines. These recent LAER/BACT decisions are shown in Attachment 8.1D-A for CO and NO<sub>x</sub>. The RBLC database does not strictly adhere to the definition of simple cycle and when a search is conducted for simple cycle natural gas-fired turbines over 25 megawatts (MW), the resulting data is mostly combined cycle installations. While there are a few true simple cycle installations with low NO<sub>x</sub> or CO emissions presented, the great majority of the search results are projects with heat recovery steam generators operated without duct burners firing. Of the projects appearing on the list with NO<sub>x</sub> emissions below 3.5 ppmvd, Summit Vineyard, Keyspan Energy, Umatilla Generating Company, Lake Road Generating Company, Sithe Heritage Station, Allegheny Energy Supply, Mantua Creek Generating Facility, Garnet Energy, Genpower Rincon, SCE&G – Jasper County Generating Facility, and Whiting Clean Energy

are combined cycle facilities and would not be relevant to a true simple cycle facility. Several facilities were permitted with dual NO<sub>x</sub> limits – 3 ppmvd for combined cycle and 9 ppmvd for simple cycle. These included Connective Energy and Entergy Hawkeye Generating. The SEI Texas Bosque Plant appears in the USEPA Region IV national turbine data base as a simple cycle Frame 7 that is not equipped with a catalyst and is permitted at 9 ppmvd. Lambie Energy Center and PPL Wallingford are both simple cycle LM 6000s and do have permit limits of 2.5 ppmvd. Draft SCAQMD BACT listings were prepared in 2004 for both the Lambie Energy Center and the PPL Wallingford projects, but final versions are not currently listed in the SCAQMD's BACT Guidelines (see Attachment 8.1D-B for copies of the SCAQMD BACT Guidelines). The Lambie Energy Center listing has source test results documenting performance at full load at 2.5 ppmvd. No partial load operation was documented and the February 2004 BACT listing indicates that all operation is at full load. The PPL Wallingford listing indicates full load operation with NO<sub>x</sub> and NH<sub>3</sub> emissions occasionally exceeding the permit limits by small amounts.

The CO-RBLC search for natural gas-fired simple cycle turbines larger than 25 MW was similar to the NO<sub>x</sub> search results. Most of the listed projects are combined cycle and are the same projects as presented in the NO<sub>x</sub> search results. The Competitive Power Venture Project has been cancelled. The WEPCO-Paris Generating Station appears to be a Frame 7 operating without an oxidation catalyst. The Entergy Hawkeye Generating Plant has a combined cycle CO limit of 5 ppmvd and a simple cycle limit of 9 ppmvd. The value for the Wisconsin Electric Company Germantown Plant doesn't appear correct as the project appears in USEPA Region IV national turbine data base with a 25 ppmvd CO limit and the other CO RBLC listings for the two turbines at this facility do not conform to the 1.8 ppmvd value. Attachment 8.1D-A presents a listing of the RBLC search results for emission limits at or below those proposed by the Applicant, and the LAER/BACT determinations prepared by the SCAQMD.

The ARB's BACT Clearinghouse Database was also reviewed for recent BACT decisions regarding large simple cycle gas turbine projects in California. There are no listed projects above 50 MW. The two LM 6000 projects that are listed are the EI Colton Project in the South Coast and the Lambie Energy Project in the Bay Area. Both projects have CO limits of 6 ppmvd. EI Colton has a NO<sub>x</sub> limit of 3.5 ppmvd, while the Lambie project has a NO<sub>x</sub> limit of 2.5 ppmvd. However, note that the listed Lambie NH<sub>3</sub> slip level is 10 ppmvd, which is double the allowable SCAQMD limit.

Finally, the ARB's 1999 Guidance for Power Plant Siting and Best Available Control Technology and the November 2001 Guidance for the Permitting of Electrical Generation Technologies were also reviewed. The relevant LAER/BACT levels recommended in the ARB power plant guidance documents for simple cycle turbines are summarized in Table 8.1D-2.

The Project proposes to use the new LMS 100 low NO<sub>x</sub> combustors with water injection and selective catalytic reduction technology to achieve a NO<sub>x</sub> exhaust concentration of 3.5 ppmvd or less (1-hour average). While several recent projects using LM 6000s and another LMS 100 project have elected to use 2.5 ppmvd as the NO<sub>x</sub> BACT/LAER level, this project believes that is premature at this time for the LMS 100. This is a brand new turbine and the first commercial unit has not begun operation. Further, AES desires to maintain the flexibility of operating the turbines down to 50% load and not merely as an on/off plant, typical for most

peaking plants. CO exhaust concentration will be controlled to 6 ppmvd (3-hour average) through use of natural gas fuel, modern combustors, good combustion practices and oxidizing catalysts. The gas turbines will be fueled with natural gas to minimize SO<sub>2</sub> and PM<sub>10</sub> emissions. VOC levels are inherently very low for the turbines (i.e., 2 ppmv) and comply with LAER/BACT, as measured using the SCAQMD's modified TO-12 source testing methodology. The AESH will be exclusively natural gas fired and will employ emission controls on the cooling tower (0.0005 percent drift eliminators), inlet air conditioning (filtration and moisture conditioning), and mist eliminators on lube oil system vents. The SCR systems will also be designed to achieve an ammonia slip of 5 ppmvd (1-hour average). These pollutant levels will achieve emission reductions consistent with the SCAQMD LAER/BACT guidelines and the ARB BACT guideline for power plants. A more detailed top down analysis for BACT for NO<sub>x</sub> and CO emissions will be included in the NSR/Title V Permit Application being submitted to SCAQMD under a separate cover. Table 8.1D-3 presents the project's proposed LAER/BACT emission limits.

**TABLE 8.1D-2**  
ARB BACT Guidance for Simple Cycle Power Plants

| Pollutant        | BACT                                                                                                       |
|------------------|------------------------------------------------------------------------------------------------------------|
| NO <sub>x</sub>  | 5.0 ppmv @ 15% O <sub>2</sub> (3-hour average)                                                             |
| SO <sub>2</sub>  | Fuel sulfur limit of 1.0 grains/100 scf                                                                    |
| CO               | Nonattainment areas: 6 ppmv @ 15% O <sub>2</sub> (3-hour average)<br>Attainment areas: District discretion |
| VOC              | 2 ppmv @ 15% O <sub>2</sub> (3-hour average)                                                               |
| Ammonia          | 5 ppmv @ 15% O <sub>2</sub> (3-hour average)                                                               |
| PM <sub>10</sub> | Fuel sulfur limit of 1.0 grains/100 scf                                                                    |

**TABLE 8.1D-3**  
AES Highgrove Project Proposed LAER/BACT Emission Limits

| NO <sub>x</sub>                                         | CO                                                    | VOC                                                   | PM <sub>10</sub>                                         | SO <sub>x</sub>                                                      |
|---------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------------------|
| 3.5 ppmvd @ 15% O <sub>2</sub> , 1-hour rolling average | 6 ppmvd @ 15% O <sub>2</sub> , 3-hour rolling average | 2 ppmvd @ 15% O <sub>2</sub> , 1-hour rolling average | Primary use of natural gas fuel limited to 4 ppm sulfur* | Primary use of natural gas fuel limited to 4 ppm sulfur <sup>a</sup> |

\* Natural gas provided by the Southern California Gas Company is limited to 16 ppm in the South Coast by Rule 431.1.

ATTACHMENT 8.1D-A

# **EPA RACT/BACT/LAER Determinations for Simple-Cycle Gas Turbine Projects**

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# U.S. Environmental Protection Agency

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### Search Criteria

Pollutant: Carbon Monoxide

Process Category: Large Combustion Turbines (> 25 MW)

Process Type: 15.110

Process Name: Natural Gas

Permit Date Between 05/22/1996 And 05/22/2006

☒ Check ☐ Un-Check ☐ ALL Facilities

[New Search](#)

|                                     | RBLCID                  | PERMIT DATE | CORPORATE/COMPANY NAME & FACILITY NAME                                             | STANDARD EMISSION LIMIT          |
|-------------------------------------|-------------------------|-------------|------------------------------------------------------------------------------------|----------------------------------|
| <input checked="" type="checkbox"/> | <a href="#">TX-0400</a> | 12/20/1999  | SEI TEXAS, LLC<br>SEI BOSQUE PLANT                                                 | <a href="#">0.0160 LB/MMBTU</a>  |
| <input checked="" type="checkbox"/> | <a href="#">UT-0067</a> | 01/06/2005  | SUMMIT VINEYARD<br>LAKE SIDE POWER PLANT                                           | <a href="#">0.0370 LB/MMBTU</a>  |
| <input checked="" type="checkbox"/> | <a href="#">WI-0177</a> | 06/26/2000  | WISCONSIN ELECTRIC COMPANY - GERMANTOWN<br>WISCONSIN ELECTRIC COMPANY - GERMANTOWN | <a href="#">1.8 PPM @ 15% O2</a> |

|                                     |                |            |                                            |                            |
|-------------------------------------|----------------|------------|--------------------------------------------|----------------------------|
| <input checked="" type="checkbox"/> | <u>NY-0086</u> | 09/07/2001 | KEY SPAN ENERGY                            | <u>2 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>VA-0261</u> | 09/06/2002 | RAVENSWOOD GENERATING STATION              | <u>2 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>ID-0010</u> | 10/19/2001 | COMPETITIVE POWER VENTURE                  | <u>2 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>GA-0098</u> | 03/24/2003 | CPV CUNNINGHAM CREEK                       | <u>2 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>OR-0043</u> | 05/11/2004 | GARNET ENERGY LLC                          | <u>2 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>SC-0060</u> | 04/03/2000 | MIDDLETON FACILITY                         | <u>2 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>NJ-0044</u> | 06/26/2001 | GENPOWER RINCON LLC                        | <u>2 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>NJ-0044</u> | 06/26/2001 | RINCON POWER PLANT                         | <u>2 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>CT-0148</u> | 06/22/1999 | UMATILLA GENERATING COMPANY, L.P.          | <u>2.3 PPM @ 15% O2</u>    |
| <input checked="" type="checkbox"/> | <u>AZ-0049</u> | 09/04/2003 | UMATILLA GENERATING COMPANY, L.P.          | <u>2.34 PPMVD @ 15% O2</u> |
| <input checked="" type="checkbox"/> | <u>NY-0087</u> | 11/01/2000 | SANTEE COOPER                              | <u>2.42 PPMVD @ 15% O2</u> |
| <input checked="" type="checkbox"/> | <u>MI-0327</u> | 04/21/2004 | RAINEY GENERATING STATION                  | <u>2.51 PPMVD @ 15% O2</u> |
| <input checked="" type="checkbox"/> | <u>PA-0166</u> | 03/29/1999 | MANTUA CREEK GENERATING FACILITY           | <u>3 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>IA-0060</u> | 07/23/2002 | MANTUA CREEK GENERATING FACILITY           | <u>3 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>CA-0952</u> | 05/18/2001 | MANTUA CREEK GENERATING FACILITY           | <u>3 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>FL-0261</u> | 10/26/2004 | MANTUA CREEK GENERATING FACILITY           | <u>4 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>CA-1098</u> | 12/15/2002 | MANTUA CREEK GENERATING FACILITY           | <u>5 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>CA-1095</u> | 01/10/2003 | MANTUA CREEK GENERATING FACILITY           | <u>5 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>CA-0951</u> | 07/13/2001 | MANTUA CREEK GENERATING FACILITY           | <u>6 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>CA-0953</u> | 10/18/2001 | LAKE ROAD GENERATING COMPANY               | <u>6 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>IL-0080</u> | 12/08/2000 | LAKE ROAD GENERATING COMPANY               | <u>7 PPM @ 15% O2</u>      |
| <input checked="" type="checkbox"/> | <u>AR-0042</u> | 05/04/2001 | LAKE ROAD GENERATING COMPANY               | <u>7 PPM @ 15% O2</u>      |
|                                     |                |            | ALLEGHENY ENERGY SUPPLY LLC                |                            |
|                                     |                |            | LA PAZ GENERATING FACILITY                 |                            |
|                                     |                |            | SITHE HERITAGE STATION GENERATING FACILITY |                            |
|                                     |                |            | HERITAGE POWER LLC                         |                            |
|                                     |                |            | INDECK ENERGY                              |                            |
|                                     |                |            | INDECK-NILES, LLC                          |                            |
|                                     |                |            | AES IRONWOOD                               |                            |
|                                     |                |            | ENTERGY                                    |                            |
|                                     |                |            | HAWKEYE GENERATING, LLC                    |                            |
|                                     |                |            | LA DEPT OF WATER & POWER                   |                            |
|                                     |                |            | LA DEPT OF WATER & POWER                   |                            |
|                                     |                |            | CITY OF TALLAHASSEE                        |                            |
|                                     |                |            | ARVAH B. HOPKINS GENERATING STATION        |                            |
|                                     |                |            | LAMBIE ENERGY CENTER                       |                            |
|                                     |                |            | LAMBIE ENERGY CENTER                       |                            |
|                                     |                |            | EI COLTON, LLC                             |                            |
|                                     |                |            | EI COLTON, LLC                             |                            |
|                                     |                |            | INDIGO ENERGY FACILITY                     |                            |
|                                     |                |            | INDIGO ENERGY FACILITY                     |                            |
|                                     |                |            | ALLIANCE COLTON-CENTURY                    |                            |
|                                     |                |            | ALLIANCE COLTON-CENTURY                    |                            |
|                                     |                |            | ZION ENERGY LLC                            |                            |
|                                     |                |            | ZION ENERGY LLC                            |                            |
|                                     |                |            | GENPOWER - KEO, LLC.                       |                            |



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### Search Criteria

Pollutant: Nitrogen Oxides (NOx)

Process Category: Large Combustion Turbines (&gt; 25 MW)

Process Type: 15.110

Process Name: Natural Gas

Permit Date Between 05/22/1996 And 05/22/2006

☒ Check ☐ Un-Check ☒ ALL Facilities 

|                                     | RBLCID  | PERMIT DATE | CORPORATE/COMPANY NAME & FACILITY NAME                       | STANDARD EMISSION<br>LIMIT |
|-------------------------------------|---------|-------------|--------------------------------------------------------------|----------------------------|
| <input checked="" type="checkbox"/> | UT-0067 | 01/06/2005  | SUMMIT VINEYARD<br>LAKE SIDE POWER PLANT                     | 0.0170 LB/MMBTU            |
| <input checked="" type="checkbox"/> | TX-0400 | 12/20/1999  | SEI TEXAS, LLC<br>SEI BOSQUE PLANT                           | 0.03 LB/MMBTU              |
| <input checked="" type="checkbox"/> | CT-0148 | 06/22/1999  | LAKE ROAD GENERATING COMPANY<br>LAKE ROAD GENERATING COMPANY | 2 PPM @ 15% O2             |

|                                     |                |            |                                                                        |                           |
|-------------------------------------|----------------|------------|------------------------------------------------------------------------|---------------------------|
| <input checked="" type="checkbox"/> | <u>NY-0087</u> | 11/01/2000 | SITHE HERITAGE STATION GENERATING FACILITY<br>HERITAGE POWER LLC       | <u>2 PPM @ 15% O2</u>     |
| <input checked="" type="checkbox"/> | <u>AZ-0049</u> | 09/04/2003 | ALLEGHENY ENERGY SUPPLY LLC<br>LA PAZ GENERATING FACILITY              | <u>2 PPM @ 15% O2</u>     |
| <input checked="" type="checkbox"/> | <u>NY-0086</u> | 09/07/2001 | KEY SPAN ENERGY<br>RAVENSWOOD GENERATING STATION                       | <u>2 PPM @ 15% O2</u>     |
| <input checked="" type="checkbox"/> | <u>OR-0043</u> | 05/11/2004 | UMATILLA GENERATING COMPANY, L.P.<br>UMATILLA GENERATING COMPANY, L.P. | <u>2 PPM @ 15% O2</u>     |
| <input checked="" type="checkbox"/> | <u>CT-0143</u> | 06/10/2001 | PPL WALLINGFORD ENERGY, LLC<br>PPL WALLINGFORD ENERGY, LLC             | <u>2.5 PPM @ 15% O2</u>   |
| <input checked="" type="checkbox"/> | <u>NJ-0044</u> | 06/26/2001 | MANTUA CREEK GENERATING FACILITY<br>MANTUA CREEK GENERATING FACILITY   | <u>2.5 PPMVD @ 15% O2</u> |
| <input checked="" type="checkbox"/> | <u>NJ-0044</u> | 06/26/2001 | MANTUA CREEK GENERATING FACILITY<br>MANTUA CREEK GENERATING FACILITY   | <u>2.5 PPMVD @ 15% O2</u> |
| <input checked="" type="checkbox"/> | <u>SC-0064</u> | 05/23/2002 | SCE&G<br>SCE&G - JASPER COUNTY GENERATING FACILITY                     | <u>2.5 PPMV @ 15% O2</u>  |
| <input checked="" type="checkbox"/> | <u>GA-0098</u> | 03/24/2003 | GENPOWER RINCON LLC<br>RINCON POWER PLANT                              | <u>2.5 PPM @ 15% O2</u>   |
| <input checked="" type="checkbox"/> | <u>CA-1098</u> | 12/15/2002 | LAMBIE ENERGY CENTER<br>LAMBIE ENERGY CENTER                           | <u>2.5 PPM @ 15% O2</u>   |
| <input checked="" type="checkbox"/> | <u>ID-0010</u> | 10/19/2001 | GARNET ENERGY LLC<br>MIDDLETON FACILITY                                | <u>2.5 PPM @ 15% O2</u>   |
| <input checked="" type="checkbox"/> | <u>NJ-0044</u> | 06/26/2001 | MANTUA CREEK GENERATING FACILITY<br>MANTUA CREEK GENERATING FACILITY   | <u>2.5 PPM @ 15% O2</u>   |
| <input checked="" type="checkbox"/> | <u>IN-0092</u> | 07/20/2000 | WHITING CLEAN ENERGY, INC.<br>WHITING CLEAN ENERGY, INC.               | <u>3 PPM @ 15% O2</u>     |
| <input type="checkbox"/>            | <u>MS-0040</u> | 12/31/1998 | MISSISSIPPI POWER PLANT (PLANT DANIEL)<br>DUKE ENERGY LUNA             | <u>3.5 PPM @ 15% O2</u>   |
| <input type="checkbox"/>            | <u>NM-0042</u> | 12/29/2000 | DEMING ENERGY FACILITY<br>DUKE ENERGY HOT SPRINGS                      | <u>3.5 PPM @ 15% O2</u>   |
| <input type="checkbox"/>            | <u>AR-0040</u> | 12/29/2000 | DUKE ENERGY HOT SPRINGS<br>ORION POWER MIDWEST, L.P.                   | <u>3.5 PPM @ 15% O2</u>   |
| <input type="checkbox"/>            | <u>PA-0229</u> | 03/05/2001 | BRUNOT ISLAND POWER STATION<br>INDECK ENERGY                           | <u>3.5 PPM @ 15% O2</u>   |
| <input type="checkbox"/>            | <u>MI-0327</u> | 04/21/2004 | INDECK-NILES, LLC<br>EI COLTON, LLC                                    | <u>3.5 PPM @ 15% O2</u>   |
| <input type="checkbox"/>            | <u>CA-1095</u> | 01/10/2003 | EI COLTON, LLC<br>GENOVA OKLAHOMA LLC                                  | <u>3.5 PPM @ 15% O2</u>   |
| <input type="checkbox"/>            | <u>OK-0070</u> | 06/13/2002 | GENOVA OK I POWER PROJECT<br>ENERGETIX                                 | <u>3.5 PPM @ 15% O2</u>   |
| <input type="checkbox"/>            | <u>OK-0067</u> | 05/29/2002 | LAWTON ENERGY COGEN FACILITY<br>MIRANT GASTONIA LLC                    | <u>3.5 PPM @ 15% O2</u>   |
| <input type="checkbox"/>            | <u>NC-0095</u> | 05/28/2002 | MIRANT GASTONIA POWER FACILITY<br>REDBUD ENERGY LP                     | <u>3.5 PPM @ 15% O2</u>   |
| <input type="checkbox"/>            | <u>OK-0072</u> | 05/06/2002 |                                                                        | <u>3.5 PPM @ 15% O2</u>   |

ATTACHMENT 8.1D-B

**SCAQMD BACT Guideline Listings for Simple  
Cycle Turbines, Including Draft Listings for the  
Lambie and PPL Wallingford Projects**

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## Section I: AQMD BACT Determinations

Application No.: 383044

Equipment Category – Gas Turbine

|                                                                                               |  |                                    |  |
|-----------------------------------------------------------------------------------------------|--|------------------------------------|--|
| <b>1. GENERAL INFORMATION</b>                                                                 |  | DATE: 12/18/2001                   |  |
| A. MANUFACTURER: General Electric                                                             |  |                                    |  |
| B. TYPE: Simple Cycle                                                                         |  | C. MODEL: LM6000 (Enhanced Sprint) |  |
| D. STYLE: Includes inlet air evaporative cooling and steam or water injection for NOx control |  |                                    |  |
| E. APPLICABLE AQMD REGULATION XI RULES:                                                       |  |                                    |  |
| F. COST: \$ (2000)                                                                            |  | SOURCE OF COST DATA:               |  |
| G. OPERATING SCHEDULE: 22 HRS/DAY 7 DAYS/WK 52 WKS/YR                                         |  |                                    |  |

|                                                        |  |                              |  |
|--------------------------------------------------------|--|------------------------------|--|
| <b>2. EQUIPMENT INFORMATION</b>                        |  | APP. NO.: 383044             |  |
| A. FUNCTION: Power Generation (one of three identical) |  |                              |  |
| B. MAXIMUM HEAT INPUT: 450 MMBtu/hr                    |  | C. MAXIMUM THROUGHPUT: 45 MW |  |
| D. BURNER INFORMATION: NO.:                            |  | TYPE: Can-Annular            |  |
| E. PRIMARY FUEL: Natural Gas                           |  | F. OTHER FUEL:               |  |
| G. OPERATING CONDITIONS: Peaking Service               |  |                              |  |

|                                                                                          |  |                            |  |
|------------------------------------------------------------------------------------------|--|----------------------------|--|
| <b>3. COMPANY INFORMATION</b>                                                            |  | APP. NO.: 383044           |  |
| A. NAME: Indigo Energy Facility (Wildflower Energy LP)                                   |  | B. SIC CODE: 4911          |  |
| C. ADDRESS: 19th Ave., West of N. Indian Ave.<br>CITY: North Palm Springs STATE: CA ZIP: |  |                            |  |
| D. CONTACT PERSON: James Cough                                                           |  | E. PHONE NO.: 713-374-3919 |  |

|                                                                                         |  |                                                                         |  |
|-----------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------|--|
| <b>4. PERMIT INFORMATION</b>                                                            |  | APP. NO.: 383044                                                        |  |
| A. AGENCY: SCAQMD                                                                       |  | B. APPLICATION TYPE: new construction                                   |  |
| C. AGENCY CONTACT PERSON: Knut Beruldsen                                                |  | D. PHONE NO.: 909-396-3136                                              |  |
| E. PERMIT TO CONSTRUCT/OPERATE INFORMATION:<br><input type="checkbox"/> CHECK IF NO P/C |  | P/C NO.: 383044 (A/N) ISSUANCE DATE: 7-13-01<br>P/O NO.: ISSUANCE DATE: |  |
| F. START-UP DATE: Units 1 and 2: July 26, 2001. Unit 3: Expected September 2001.        |  |                                                                         |  |

|                                                                                                                                                          |  |                  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------|--|
| <b>5. EMISSION INFORMATION</b>                                                                                                                           |  | APP. NO.: 383044 |  |
| <b>A. PERMIT</b>                                                                                                                                         |  |                  |  |
| A1. PERMIT LIMIT: PPMVD@15%O2: NOx-5(1-hr), CO-6(1-hr), VOC-2(1-hr), NH3-5(1-hr). PM: .01gr/scf and 11 lb/hr. Monthly mass limits on NOx, SOx, and PM10. |  |                  |  |
| A2. BACT/LAER DETERMINATION: Above limits on NOx, CO, VOC and NH3 were believed to represent BACT for simple-cycle gas turbines.                         |  |                  |  |

|                                                                                                                                                                                     |  |                         |                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------|--------------------------|
| <b>5. EMISSION INFORMATION</b>                                                                                                                                                      |  | APP. NO.: 383044        |                          |
| A3. BASIS OF THE BACT/LAER DETERMINATION: CARB Guidance Document for Power Plant Sitings--except that the CARB document recommends 3-hr averaging for NO <sub>x</sub> , CO and VOC. |  |                         |                          |
| <b>B. CONTROL TECHNOLOGY</b>                                                                                                                                                        |  |                         |                          |
| B1. MANUFACTURER/SUPPLIER: Engelhard                                                                                                                                                |  |                         |                          |
| B2. TYPE: SCR System and oxidation Catalyst                                                                                                                                         |  |                         |                          |
| B3. DESCRIPTION: NOXCAT-VNX-HT, high-temperature SCR catalyst, with tempering air system to control gas temperature entering catalyst. Aqueous ammonia (max. 20 wt. %) is used.     |  |                         |                          |
| B4. CONTROL EQUIPMENT PERMIT APPLICATION DATA:                                                                                                                                      |  | P/C NO.: 383044 (A/N)   | ISSUANCE DATE: 7/13/2001 |
|                                                                                                                                                                                     |  | P/O NO.:                | ISSUANCE DATE:           |
| B5. WASTE AIR FLOW TO CONTROL EQUIPMENT:                                                                                                                                            |  | FLOW RATE:              |                          |
| ACTUAL CONTAMINANT LOADING:                                                                                                                                                         |  | BLOWER HP:              |                          |
| B6. WARRANTY: Catalysts are warranted for 3 years from startup or 4500 hours of operation, not to exceed 42 months after installation.                                              |  |                         |                          |
| B7. PRIMARY POLLUTANTS: NO <sub>x</sub> , CO, VOC, PM, SO <sub>x</sub>                                                                                                              |  |                         |                          |
| B8. SECONDARY POLLUTANTS: NH <sub>3</sub>                                                                                                                                           |  |                         |                          |
| B9. SPACE REQUIREMENT: SCR Catalyst: 790 cu. ft; CO Catalyst: 85 cu. ft                                                                                                             |  |                         |                          |
| B10. LIMITATIONS: SCR catalyst temperature must not exceed 871 deg F.                                                                                                               |  |                         | B11. UNUSED              |
| B12. OPERATING HISTORY:                                                                                                                                                             |  |                         |                          |
| B13. UNUSED                                                                                                                                                                         |  | B14. UNUSED             |                          |
| <b>C. CONTROL EQUIPMENT COSTS</b>                                                                                                                                                   |  |                         |                          |
| C1. CAPITAL COST: <input type="checkbox"/> CHECK IF INSTALLATION COST IS INCLUDED IN EQUIPMENT COST                                                                                 |  |                         |                          |
| EQUIPMENT: \$                                                                                                                                                                       |  | INSTALLATION: \$ (2000) | SOURCE OF COST DATA:     |
| C2. ANNUAL OPERATING COST: \$ (2000)                                                                                                                                                |  | SOURCE OF COST DATA:    |                          |
| <b>D. DEMONSTRATION OF COMPLIANCE</b>                                                                                                                                               |  |                         |                          |
| D1. STAFF PERFORMING FIELD EVALUATION:                                                                                                                                              |  |                         |                          |
| ENGINEER'S NAME:                                                                                                                                                                    |  | INSPECTOR'S NAME:       | DATE:                    |
| D2. COMPLIANCE DEMONSTRATION: CEMS for NO <sub>x</sub> and CO, annual RATA, annual NH <sub>3</sub> test, source test every 3 years.                                                 |  |                         |                          |
| D3. VARIANCE:                                                                                                                                                                       |  | NO. OF VARIANCES:       | DATES:                   |
| CAUSES:                                                                                                                                                                             |  |                         |                          |
| D4. VIOLATION:                                                                                                                                                                      |  | NO. OF VIOLATIONS:      | DATES:                   |
| CAUSES:                                                                                                                                                                             |  |                         |                          |
| D5. MAINTENANCE REQUIREMENTS:                                                                                                                                                       |  |                         | D6. UNUSED               |
| D7. SOURCE TEST/PERFORMANCE DATA RESULTS AND ANALYSIS:                                                                                                                              |  |                         |                          |
| DATE OF SOURCE TEST: within 60 days after startup                                                                                                                                   |  | CAPTURE EFFICIENCY:     |                          |
| DESTRUCTION EFFICIENCY:                                                                                                                                                             |  | OVERALL EFFICIENCY:     |                          |
| SOURCE TEST/PERFORMANCE DATA:                                                                                                                                                       |  |                         |                          |
| OPERATING CONDITIONS:                                                                                                                                                               |  |                         |                          |
| TEST METHODS:                                                                                                                                                                       |  |                         |                          |

**6. COMMENTS**

APP. NO.: 383044

Permit requirements here are consistent with CARB Guidance for Power Plant Sitings with the exception that 1-hr averaging is required here versus 3-hr averaging recommended by CARB. It was the permitting team's opinion that 1-hr averaging, which is more stringent, was appropriate in this case. Type of emission monitoring and control as well as load following requirements should be considered in determining the appropriate averaging time. It should be noted that the permit emission limits have not yet been verified by performance data.

## Section I: AQMD BACT Determinations

Application No.: 374502

Equipment Category – Gas Turbine

|                                                                                                |  |                                    |  |
|------------------------------------------------------------------------------------------------|--|------------------------------------|--|
| <b>1. GENERAL INFORMATION</b>                                                                  |  | DATE: 12/18/2001                   |  |
| A. MANUFACTURER: General Electric                                                              |  |                                    |  |
| B. TYPE: Simple Cycle                                                                          |  | C. MODEL: LM6000 (Enhanced Sprint) |  |
| D. STYLE: Includes inlet air evaporative cooling and steam or water injection for NOx control. |  |                                    |  |
| E. APPLICABLE AQMD REGULATION XI RULES:                                                        |  |                                    |  |
| F. COST: \$ (2000)                                                                             |  | SOURCE OF COST DATA:               |  |
| G. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WK 50 WKS/YR                                          |  |                                    |  |

|                                          |  |                                    |  |
|------------------------------------------|--|------------------------------------|--|
| <b>2. EQUIPMENT INFORMATION</b>          |  | APP. NO.: 374502                   |  |
| A. FUNCTION: Power Generation            |  |                                    |  |
| B. MAXIMUM HEAT INPUT: 466.8 MMBtu/hr    |  | C. MAXIMUM THROUGHPUT: 47.4 MW     |  |
| D. BURNER INFORMATION: NO.:              |  | TYPE: Can-Annular                  |  |
| E. PRIMARY FUEL: Natural Gas             |  | F. OTHER FUEL: LOW-N, LOW-S DIESEL |  |
| G. OPERATING CONDITIONS: Peaking Service |  |                                    |  |

|                                            |  |                                |  |
|--------------------------------------------|--|--------------------------------|--|
| <b>3. COMPANY INFORMATION</b>              |  | APP. NO.: 374502               |  |
| A. NAME: Los Angeles Dept of Water & Power |  | B. SIC CODE: 4940              |  |
| C. ADDRESS: 11801 Sheldon Street           |  | STATE: CA ZIP: 91352           |  |
| CITY: Sun Valley                           |  | D. CONTACT PERSON: Bruce Moore |  |
| E. PHONE NO.: 213-367-3772                 |  |                                |  |

|                                                                                         |  |                                                                         |  |
|-----------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------|--|
| <b>4. PERMIT INFORMATION</b>                                                            |  | APP. NO.: 374502                                                        |  |
| A. AGENCY: SCAQMD                                                                       |  | B. APPLICATION TYPE: new construction                                   |  |
| C. AGENCY CONTACT PERSON: Chris Perri                                                   |  | D. PHONE NO.: 909-396-2696                                              |  |
| E. PERMIT TO CONSTRUCT/OPERATE INFORMATION:<br><input type="checkbox"/> CHECK IF NO P/C |  | P/C NO.: 374502 (A/N) ISSUANCE DATE: 5-18-01<br>P/O NO.: ISSUANCE DATE: |  |
| F. START-UP DATE: 8/8/01                                                                |  |                                                                         |  |

|                                                                                                                                                                                                      |  |                  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------|--|
| <b>5. EMISSION INFORMATION</b>                                                                                                                                                                       |  | APP. NO.: 374502 |  |
| <b>A. PERMIT</b>                                                                                                                                                                                     |  |                  |  |
| A1. PERMIT LIMIT: PPMVD @ 15% O2: NOx-5 (3-hr), CO-6 (3-hr), VOC-2, NH3-5 (1-hr), PM-.01 gr/dscf. Max. S in oil-15 ppm. Monthly mass limits on CO, VOC, PM10 and SOx (calculated based on fuel use). |  |                  |  |
| A2. BACT/LAER DETERMINATION: Above limits on NOx, CO, VOC and NH3 were believed to represent prior BACT for simple-cycle gas turbines.                                                               |  |                  |  |

|                                                                                                                                                                                                                                                                                  |  |                         |                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------|------------------------|
| <b>5. EMISSION INFORMATION</b>                                                                                                                                                                                                                                                   |  | APP. NO.: 374502        |                        |
| A3. BASIS OF THE BACT/LAER DETERMINATION: The NO <sub>x</sub> , CO, VOC and NH <sub>3</sub> limits were based on CARB's Guidance Document for Power Plant Sitings.                                                                                                               |  |                         |                        |
| <b>B. CONTROL TECHNOLOGY</b>                                                                                                                                                                                                                                                     |  |                         |                        |
| B1. MANUFACTURER/SUPPLIER: Engelhard                                                                                                                                                                                                                                             |  |                         |                        |
| B2. TYPE: SCR System and Oxidation Catalyst                                                                                                                                                                                                                                      |  |                         |                        |
| B3. DESCRIPTION: SCR System includes an aqueous (29%) ammonia system and injectors and titania-vanadia high-temperature SCR catalyst (NOXCAT-VNX-HT). The CO catalyst is platinum on alumina.                                                                                    |  |                         |                        |
| B4. CONTROL EQUIPMENT PERMIT APPLICATION DATA:                                                                                                                                                                                                                                   |  | P/C NO.: 374502 (A/N)   | ISSUANCE DATE: 5-18-01 |
|                                                                                                                                                                                                                                                                                  |  | P/O NO.:                | ISSUANCE DATE:         |
| B5. WASTE AIR FLOW TO CONTROL EQUIPMENT:                                                                                                                                                                                                                                         |  | FLOW RATE:              |                        |
| ACTUAL CONTAMINANT LOADING:                                                                                                                                                                                                                                                      |  | BLOWER HP:              |                        |
| B6. WARRANTY: 5000 hrs operation or 2.5 yrs after delivery, whichever expires first.                                                                                                                                                                                             |  |                         |                        |
| B7. PRIMARY POLLUTANTS: NO <sub>x</sub> , CO, VOC, PM, SO <sub>x</sub>                                                                                                                                                                                                           |  |                         |                        |
| B8. SECONDARY POLLUTANTS: NH <sub>3</sub>                                                                                                                                                                                                                                        |  |                         |                        |
| B9. SPACE REQUIREMENT: SCR catalyst: 790 cu. ft, CO catalyst: 85 cu. ft. Total system plan area: approx. 52' x 48'.                                                                                                                                                              |  |                         |                        |
| B10. LIMITATIONS: Minimum temperature for NH <sub>3</sub> injection: 800 deg F. Max. allowable catalyst temperature: 871 deg F.                                                                                                                                                  |  |                         | B11. UNUSED            |
| B12. OPERATING HISTORY:                                                                                                                                                                                                                                                          |  |                         |                        |
| B13. UNUSED                                                                                                                                                                                                                                                                      |  | B14. UNUSED             |                        |
| <b>C. CONTROL EQUIPMENT COSTS</b>                                                                                                                                                                                                                                                |  |                         |                        |
| C1. CAPITAL COST: <input type="checkbox"/> CHECK IF INSTALLATION COST IS INCLUDED IN EQUIPMENT COST                                                                                                                                                                              |  |                         |                        |
| EQUIPMENT: \$                                                                                                                                                                                                                                                                    |  | INSTALLATION: \$ (2000) | SOURCE OF COST DATA:   |
| C2. ANNUAL OPERATING COST: \$ (2000)                                                                                                                                                                                                                                             |  | SOURCE OF COST DATA:    |                        |
| <b>D. DEMONSTRATION OF COMPLIANCE</b>                                                                                                                                                                                                                                            |  |                         |                        |
| D1. STAFF PERFORMING FIELD EVALUATION:                                                                                                                                                                                                                                           |  |                         |                        |
| ENGINEER'S NAME:                                                                                                                                                                                                                                                                 |  | INSPECTOR'S NAME:       | DATE:                  |
| D2. COMPLIANCE DEMONSTRATION: CEMS for NO <sub>x</sub> and CO. Continuous calculation of NH <sub>3</sub> slip based on measurements of NO <sub>x</sub> upstream of catalyst and NH <sub>3</sub> injection rate. NH <sub>3</sub> tests quarterly first year, annually thereafter. |  |                         |                        |
| D3. VARIANCE:                                                                                                                                                                                                                                                                    |  | NO. OF VARIANCES:       | DATES:                 |
| CAUSES:                                                                                                                                                                                                                                                                          |  |                         |                        |
| D4. VIOLATION:                                                                                                                                                                                                                                                                   |  | NO. OF VIOLATIONS:      | DATES:                 |
| CAUSES:                                                                                                                                                                                                                                                                          |  |                         |                        |
| D5. MAINTENANCE REQUIREMENTS: Periodic replacement of catalysts; maintenance of NH <sub>3</sub> storage and injection system.                                                                                                                                                    |  |                         | D6. UNUSED             |

**5. EMISSION INFORMATION**

APP. NO.: 374502

D7. SOURCE TEST/PERFORMANCE DATA RESULTS AND ANALYSIS:

DATE OF SOURCE TEST: Within 60 days after first full-load operation or 180 days after startup.

Tests to be conducted at 100, 75 and 50 percent max. load.

CAPTURE EFFICIENCY:

DESTRUCTION EFFICIENCY:

OVERALL EFFICIENCY:

SOURCE TEST/PERFORMANCE DATA:

OPERATING CONDITIONS:

TEST METHODS:

**6. COMMENTS**

APP. NO.: 374502

This is an example of BACT for a simple-cycle gas turbine using oil as a backup fuel. The NO<sub>x</sub>, CO, VOC and NH<sub>3</sub> ppm limits apply on both gas and oil operation. Oil operation is permitted only in the event of an interruption in gas service plus as required for CEMS certification and RATA tests and up to 30 minutes per month oil-readiness testing. It should be noted that the permit emission limits have not yet been verified by performance data.

## Section II: Other LAER/BACT Determinations

Application No.: 6510

Equipment Category – Gas Turbine

|                                   |  |                      |                |
|-----------------------------------|--|----------------------|----------------|
| <b>1. GENERAL INFORMATION</b>     |  | DATE: 2/11/2004      |                |
| A. MANUFACTURER: General Electric |  |                      |                |
| B. TYPE: Simple Cycle             |  | C. MODEL: LM6000PC   |                |
| D. STYLE:                         |  |                      |                |
| E. APPLICABLE AQMD RULES:         |  |                      |                |
| F. COST: \$ (NA)                  |  | SOURCE OF COST DATA: |                |
| G. OPERATING SCHEDULE:            |  | HRS/DAY              | DAYS/WK WKS/YR |

|                                                                                                                 |  |                                |  |
|-----------------------------------------------------------------------------------------------------------------|--|--------------------------------|--|
| <b>2. EQUIPMENT INFORMATION</b>                                                                                 |  | APP. NO.: 6510                 |  |
| A. FUNCTION: Merchant power plant selling power on the grid (peaking power plant).                              |  |                                |  |
| B. MAXIMUM HEAT INPUT: 500 MMBtu/hr                                                                             |  | C. MAXIMUM THROUGHPUT: 49.9 MW |  |
| D. BURNER INFORMATION: NO.: TYPE:                                                                               |  |                                |  |
| E. PRIMARY FUEL: Natural Gas                                                                                    |  | F. OTHER FUEL: None            |  |
| G. OPERATING CONDITIONS: Operates during peak demand hours when power-vs.-fuel price differential is favorable. |  |                                |  |

|                                 |  |                            |  |
|---------------------------------|--|----------------------------|--|
| <b>3. COMPANY INFORMATION</b>   |  | APP. NO.: 6510             |  |
| A. NAME: Lambie Energy Center   |  | B. SIC CODE: 4911          |  |
| C. ADDRESS: 5975 Lambie Road    |  | STATE: CA ZIP: 94585       |  |
| CITY: Suisun City               |  |                            |  |
| D. CONTACT PERSON: Diane Tullos |  | E. PHONE NO.: 530-821-2074 |  |

|                                             |  |                                         |  |
|---------------------------------------------|--|-----------------------------------------|--|
| <b>4. PERMIT INFORMATION</b>                |  | APP. NO.: 6510                          |  |
| A. AGENCY: BAAQMD                           |  | B. APPLICATION TYPE: new construction   |  |
| C. AGENCY CONTACT PERSON: Dennis Jang       |  | D. PHONE NO.: 415-749-4707              |  |
| E. PERMIT TO CONSTRUCT/OPERATE INFORMATION: |  | P/C NO.: 6510 ISSUANCE DATE: 12/15/2002 |  |
| <input type="checkbox"/> CHECK IF NO P/C    |  | P/O NO.: 6510 ISSUANCE DATE: 6/5/2003   |  |
| F. START-UP DATE: December 2002             |  |                                         |  |

**5. EMISSION INFORMATION**

APP. NO.: 6510

**A. PERMIT**

A1. PERMIT LIMIT: Concentration limits (ppmvd@15%O<sub>2</sub>): NO<sub>x</sub>-2.5 (3-hr), CO-6 (3-hr), VOC-2, NH<sub>3</sub>-10. Maximum mass emission rates (lb/hr): PM<sub>10</sub>-3.0 and SO<sub>x</sub>-1.39. Limits on pollutant concentration and mass emission rates do not apply during startup (limited to 60 minutes) or shutdown (limited to 30 minutes). Daily and 12-month limits on mass emissions of NO<sub>x</sub>, CO, VOC, PM<sub>10</sub> and SO<sub>x</sub>. Hourly, daily and 12-month limits on heat input to the gas turbine. CEMS for NO<sub>x</sub>, CO, O<sub>2</sub> and CO<sub>2</sub>. Initial and annual source tests.

A2. BACT/LAER DETERMINATION: Above concentration limits on NO<sub>x</sub>, CO and VOC.

A3. BASIS OF THE BACT/LAER DETERMINATION: The concentration limit on NO<sub>x</sub> was volunteered by the applicant. The concentration limit on CO was more stringent than BAAQMD BACT, but is consistent with 1999 CARB guidelines for power plants. The concentration limit on VOC was based on BAAQMD BACT and is consistent with the 1999 CARB guidance.

**B. CONTROL TECHNOLOGY**

B1. MANUFACTURER/SUPPLIER: Stack and add-on pollution control devices were supplied by Nooter Erickson (Kansas City)

B2. TYPE: Water Injection to Gas Turbine (included in General Electric scope of equipment) and add-on controls consisting of SCR system (aqueous ammonia) and Oxidation Catalyst

B3. DESCRIPTION: Ammonia injection rate regulated based on outlet NO<sub>x</sub> concentration. Gas temperature entering catalysts controlled to 750F maximum using tempering air. Catalyst can perform down to 550F.

|                                                |          |                |
|------------------------------------------------|----------|----------------|
| B4. CONTROL EQUIPMENT PERMIT APPLICATION DATA: | P/C NO.: | ISSUANCE DATE: |
|                                                | P/O NO.: | ISSUANCE DATE: |

|                                          |            |
|------------------------------------------|------------|
| B5. WASTE AIR FLOW TO CONTROL EQUIPMENT: | FLOW RATE: |
|                                          | BLOWER HP: |

B6. WARRANTY: Gas turbine was guaranteed not to exceed 25 ppmvd@15%O<sub>2</sub>. Catalyst system was guaranteed to reduce NO<sub>x</sub> to 2.5 ppmvd and CO to 6.0 ppmvd and to achieve 33% oxidation of VOC. Catalyst effectiveness was guaranteed for three years from startup.

B7. PRIMARY POLLUTANTS: NO<sub>x</sub>, CO, VOC, PM<sub>10</sub>

B8. SECONDARY POLLUTANTS: NH<sub>3</sub>

B9. SPACE REQUIREMENT:

|                   |             |
|-------------------|-------------|
| B10. LIMITATIONS: | B11. UNUSED |
|-------------------|-------------|

B12. OPERATING HISTORY: First fire was in December 2002. Source tested January 2003. Operation hours to date have been: 93 in Q1 2003, 25 in May, 51 in June, 95 in July, 38 in August, 42 in September, 26 in October, 2 in November-December. All operation has been at full load.

|             |             |
|-------------|-------------|
| B13. UNUSED | B14. UNUSED |
|-------------|-------------|

**C. CONTROL EQUIPMENT COSTS**

C1. CAPITAL COST: ☐ CHECK IF INSTALLATION COST IS INCLUDED IN EQUIPMENT COST

|               |                  |      |                      |
|---------------|------------------|------|----------------------|
| EQUIPMENT: \$ | INSTALLATION: \$ | (NA) | SOURCE OF COST DATA: |
|---------------|------------------|------|----------------------|

|                               |      |                      |
|-------------------------------|------|----------------------|
| C2. ANNUAL OPERATING COST: \$ | (NA) | SOURCE OF COST DATA: |
|-------------------------------|------|----------------------|

**5. EMISSION INFORMATION**

APP. NO.: 6510

**D. DEMONSTRATION OF COMPLIANCE**

D1. STAFF PERFORMING FIELD EVALUATION:

ENGINEER'S NAME:

INSPECTOR'S NAME: Cliff Senello

DATE:

D2. COMPLIANCE DEMONSTRATION: BAAQMD records show that there have been three exceedances of permit limits-one due to CEMS malfunction and two due to fuel flow control malfunction. The inspector reports that the fuel flow control malfunctions caused the water injection to shut off, leading to NOx exceedances-one of which extended long enough to result in a violation. The causes of the fuel flow control malfunctions were traced to programming errors, which have been corrected.

D3. VARIANCE: NO. OF VARIANCES: None DATES:  
CAUSES:

D4. VIOLATION: NO. OF VIOLATIONS: 1 DATES:  
CAUSES: NOx exceedance caused by software programming error, which was corrected.

D5. MAINTENANCE REQUIREMENTS:

D6. UNUSED

D7. SOURCE TEST/PERFORMANCE DATA RESULTS AND ANALYSIS:

DATE OF SOURCE TEST: 1/16-17/2003

CAPTURE EFFICIENCY:

DESTRUCTION EFFICIENCY:

OVERALL EFFICIENCY:

SOURCE TEST/PERFORMANCE DATA:

|                          |       |       |       |
|--------------------------|-------|-------|-------|
| Date                     | 1/16  | 1/16  | 1/17  |
| Load, MW                 | 50.0  | 50.0  | 50.0  |
| O2, % (dry)              | 15.50 | 15.52 | 15.55 |
| SCR Inlet NOx, ppmvd     | 27.7  | 27.4  | 17.3  |
| SCR Outlet, ppmvd@15%O2: |       |       |       |
| NOx                      | 2.49  | 2.51  | 2.34  |
| CO                       | 1.73  | 1.91  | 1.49  |
| VOC                      | 0.60  | 0.19  | 1.03  |
| NH3                      | 1.31  | 1.42  | 1.77  |

OPERATING CONDITIONS:

TEST METHODS: Each test was a one-hour test (1/2-hr for ammonia). NOx was highly stratified. Sampling for NOx and CO was at eight lowest-O2 (highest NOx) points from a 50-point duct traverse. The following methods were used: Multi-Point Traverse--EPA-1/CARB-1, O2/CO2--EPA 3A/CARB 100, CO--EPA 10/CARB 100, NOx/O2--EPA 20/CARB 100, NMHC--EPA TO-12, NH3--BAAQMD ST-1B. Test was approved by BAAQMD source test group.

**6. COMMENTS**

APP. NO.: 6510

## Section II: Other LAER/BACT Determinations

Application No.: 189-0195

### Equipment Category – Gas Turbine, Simple Cycle

|                                                       |  |                              |           |
|-------------------------------------------------------|--|------------------------------|-----------|
| <b>1. GENERAL INFORMATION</b>                         |  | DATE: 11/10/2004             |           |
| A. MANUFACTURER: General Electric/S&S Energy Products |  |                              |           |
| B. TYPE:                                              |  | C. MODEL: LM6000-PC-E-Sprint |           |
| D. STYLE:                                             |  |                              |           |
| E. APPLICABLE AQMD RULES:                             |  |                              |           |
| F. COST: \$ (NA)                                      |  | SOURCE OF COST DATA:         |           |
| G. OPERATING SCHEDULE:                                |  | 6 HRS/DAY                    | 5 DAYS/WK |
|                                                       |  |                              | 12 WKS/YR |

|                                                                                                |  |                              |  |
|------------------------------------------------------------------------------------------------|--|------------------------------|--|
| <b>2. EQUIPMENT INFORMATION</b>                                                                |  | APP. NO.: 189-0195           |  |
| A. FUNCTION: Peaking power plant. This is Unit No. 2 of five identical gas turbine/generators. |  |                              |  |
| B. MAXIMUM HEAT INPUT: 461.2 MMBtu/hr                                                          |  | C. MAXIMUM THROUGHPUT: 50 MW |  |
| D. BURNER INFORMATION:                                                                         |  | TYPE: Low NOx                |  |
| NO.: 1                                                                                         |  |                              |  |
| E. PRIMARY FUEL: Natural Gas                                                                   |  | F. OTHER FUEL: None          |  |
| G. OPERATING CONDITIONS: Intermittent                                                          |  |                              |  |

|                                     |  |                            |  |
|-------------------------------------|--|----------------------------|--|
| <b>3. COMPANY INFORMATION</b>       |  | APP. NO.: 189-0195         |  |
| A. NAME: PPL Wallingford Energy LLC |  | B. SIC CODE: 4911          |  |
| C. ADDRESS: 195 East Street         |  | STATE: CT                  |  |
| CITY: Wallingford                   |  | ZIP:                       |  |
| D. CONTACT PERSON: Linda Boyer      |  | E. PHONE NO.: 610-774-4400 |  |

|                                                          |  |                                       |                          |
|----------------------------------------------------------|--|---------------------------------------|--------------------------|
| <b>4. PERMIT INFORMATION</b>                             |  | APP. NO.: 189-0195                    |                          |
| A. AGENCY: Connecticut Dept. of Environmental Protection |  | B. APPLICATION TYPE: new construction |                          |
| C. AGENCY CONTACT PERSON: Ernest Bouffard                |  | D. PHONE NO.: 860-424-4152            |                          |
| E. PERMIT TO CONSTRUCT/OPERATE INFORMATION:              |  | P/C NO.: 189-0195                     | ISSUANCE DATE: 7/28/2000 |
| <input type="checkbox"/> CHECK IF NO P/C                 |  | P/O NO.: 189-0195                     | ISSUANCE DATE: 6/10/2001 |
| F. START-UP DATE: 4 <sup>th</sup> quarter 2001           |  |                                       |                          |

**5. EMISSION INFORMATION**

APP. NO.: 189-0195

**A. PERMIT**

- A1. PERMIT LIMIT: Operation limits: 4000 hrs and 1,844,800,000 cu. ft. fuel (12-mo. rolling averages). Maximum input: 461.2 MMBtu/hr. Fuel sulfur: .0025 lb/MMBtu. Emission limits, lb/MMBtu (ppmvd@15%O<sub>2</sub>): NO<sub>x</sub>-.00932 (2.5), CO-.0364, VOC-.0107 as methane, SO<sub>x</sub>-.0027, PM<sub>10</sub>-.026 (filter + probe). NH<sub>3</sub> limit-6.0 ppmvd@15%O<sub>2</sub>. Source test required every five years. CEMS for NO<sub>x</sub>, CO, O<sub>2</sub> and NH<sub>3</sub>. Startup/shutdown emission limits to be developed based on 18 months of data.
- A2. BACT/LAER DETERMINATION: NO<sub>x</sub>-2.5 ppmvd@15%O<sub>2</sub>, NH<sub>3</sub>-6.0 ppmvd@15%O<sub>2</sub>, CO-.0364 lb/MMBtu, VOC-.0107 lb/MMBtu as methane, SO<sub>x</sub>-.0027 lb/MMBtu, PM<sub>10</sub>-.026 lb/MMBtu (filter + probe).
- A3. BASIS OF THE BACT/LAER DETERMINATION: The BACT limits on NO<sub>x</sub>, CO, VOC and SO<sub>x</sub> were based on vendor guarantees; and the BACT limit on PM<sub>10</sub> was based on AP-42. The ammonia BACT limit was negotiated.

**B. CONTROL TECHNOLOGY**

- B1. MANUFACTURER/SUPPLIER: Deltak (system), Engelhard (catalysts)
- B2. TYPE: Low-NO<sub>x</sub> Burner, water injection, selective catalytic reduction (SCR) of NO<sub>x</sub> and oxidation catalyst for CO and VOC reduction.
- B3. DESCRIPTION: SCR: aqueous ammonia is injected and mixed with flue gas upstream of SCR catalyst. Catalyst causes selective reaction between ammonia and NO, forming N<sub>2</sub> and H<sub>2</sub>O. Turbine design exhaust temperature at full load is 753F.
- B4. CONTROL EQUIPMENT PERMIT APPLICATION DATA: P/C NO.: ISSUANCE DATE:  
P/O NO.: ISSUANCE DATE:
- B5. WASTE AIR FLOW TO CONTROL EQUIPMENT: FLOW RATE:  
ACTUAL CONTAMINANT LOADING: NO<sub>x</sub>-25 ppmvd@15%O<sub>2</sub> (design) BLOWER HP:
- B6. WARRANTY: Suppliers guaranteed the following: 2.5 ppmvd@15%O<sub>2</sub> NO<sub>x</sub>, 16.8 lb/hr CO, 4.95 lb/hr VOC, 1.26 lb/hr SO<sub>x</sub>.
- B7. PRIMARY POLLUTANTS: NO<sub>x</sub>, CO, VOC, SO<sub>x</sub>, PM<sub>10</sub>
- B8. SECONDARY POLLUTANTS: NH<sub>3</sub>
- B9. SPACE REQUIREMENT:
- B10. LIMITATIONS: B11. UNUSED
- B12. OPERATING HISTORY: Planned operation is 6-8 hrs/day, weekdays, summer months. However, it has been less than this.
- B13. UNUSED B14. UNUSED

**C. CONTROL EQUIPMENT COSTS**

- C1. CAPITAL COST: ☐ CHECK IF INSTALLATION COST IS INCLUDED IN EQUIPMENT COST  
EQUIPMENT: \$ INSTALLATION: \$ (NA) SOURCE OF COST DATA:
- C2. ANNUAL OPERATING COST: \$ (NA) SOURCE OF COST DATA:

**D. DEMONSTRATION OF COMPLIANCE**

- D1. STAFF PERFORMING FIELD EVALUATION:  
ENGINEER'S NAME: INSPECTOR'S NAME: DATE:

|                                   |                        |                    |
|-----------------------------------|------------------------|--------------------|
| <b>5. EMISSION INFORMATION</b>    |                        | APP. NO.: 189-0195 |
| D2. COMPLIANCE DEMONSTRATION:     |                        |                    |
| D3. VARIANCE:                     | NO. OF VARIANCES: None | DATES:             |
| CAUSES:                           |                        |                    |
| D4. VIOLATION:                    | NO. OF VIOLATIONS: 1   | DATES:             |
| CAUSES: Related to SOx reporting. |                        |                    |
| D5. MAINTENANCE REQUIREMENTS:     |                        | D6. UNUSED         |

**5. EMISSION INFORMATION**

APP. NO.: 189-0195

## D7. SOURCE TEST/PERFORMANCE DATA RESULTS AND ANALYSIS:

DATE OF SOURCE TEST: May and Sept 2002, Aug 2003, July 2004 CAPTURE EFFICIENCY:  
DESTRUCTION EFFICIENCY: OVERALL EFFICIENCY:  
SOURCE TEST/PERFORMANCE DATA:

## May 2002 (Source Test):

|                       |               |           |             |           |
|-----------------------|---------------|-----------|-------------|-----------|
| Unit                  | 5             | 5         | 4           | 4         |
| Date                  | 5/28          | 5/29      | 5/30        | 5/31      |
| Time                  | 1330-1814     | 1650-2148 | 1150-1705   | 0900-1548 |
| THC, lb/MMBtu (ppmvd) | <.0008 (<0.5) |           | .0036 (2.4) |           |
| NH3, ppmvd@15%O2      | 5.7           |           | 4.8         |           |

## September 2002 (RATA):

|                 |       |       |        |        |        |
|-----------------|-------|-------|--------|--------|--------|
| Unit            | 1     | 2     | 3      | 4      | 5      |
| Date            | 9/16  | 9/20  | 9/19   | 9/18   | 9/17   |
| NOx, lb/MMBtu   | .0084 | .0102 | .00934 | .00934 | .00885 |
| NH3 ppmvd@15%O2 | 6.6   | 5.7   | 6.9    | 6.9    | 6.6    |
| CO, lb/MMBtu    | .005  | .001  | .003   | .002   | .003   |

## August 2003 RATA:

|                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|
| Unit            | 1     | 2     | 3     | 4     | 5     |
| Date            | 8/21  | 8/20  | 8/19  | 8/20  | 8/19  |
| NOx, lb/MMBtu   | .0090 | .0084 | .0090 | .0073 | .0075 |
| NH3 ppmvd@15%O2 | 3.1   | 4.1   | 3.9   | 5.2   | 4.3   |
| CO, lb/MMBtu    | .0024 | .0028 | .0039 | .0028 | .0033 |

## July 2004 RATA:

|                 |       |       |       |       |       |
|-----------------|-------|-------|-------|-------|-------|
| Unit            | 1     | 2     | 3     | 4     | 5     |
| Date            | 7/16  | 7/20  | 7/21  | 7/21  | 7/22  |
| NOx, lb/MMBtu   | .0097 | .0098 | .0091 | .0087 | .0090 |
| NH3 ppmvd@15%O2 | 5.1   | 6.1   | ---   | ---   | 6.2   |
| CO, lb/MMBtu    | ----  | .0033 | .0026 | .0019 | .0024 |

OPERATING CONDITIONS: May 2002: 45.7-47.4 MW, 389-398 MMBtu/hr, 14.3% O2, 854-860F stack temperature. September 2002: 44.1-46.4 MW. August 2003: 45.9-48.9 MW. July 2004: 45.1-47.2 MW.

TEST METHODS: USEPA Methods 18 and 25A for methane and THC, resp.; and USEPA Conditional Method 027 for ammonia (ion chromatography). In source test, all tests were triplicates. Each RATA consisted of nine 20-min. tests.

**6. COMMENTS**

APP. NO.: 189-0195

The continuous ammonia measurement utilizes an ammonia-to-NO converter and an NOx analyzer. The apparent ammonia concentration is the difference between the NO measurement registered by this analyzer and the measurement registered by the NOx CEMS. This ammonia CEMS measurement is compared to Conditional Method 027 annually at the time of the CEMS RATA and has passed RATA each time.

Engines capable of meeting these emission limits may not be available in all sizes.

## Section I: AQMD BACT Determinations

Application No.: 406065

Equipment Category – Gas Turbine

|                                                                                      |                                    |                 |
|--------------------------------------------------------------------------------------|------------------------------------|-----------------|
| <b>1. GENERAL INFORMATION</b>                                                        |                                    | DATE: 2/10/2004 |
| A. MANUFACTURER: General Electric                                                    |                                    |                 |
| B. TYPE: Simple Cycle                                                                | C. MODEL: LM6000 (Enhanced Sprint) |                 |
| D. STYLE: Includes inlet air evaporative cooling and water injection for NOx Control |                                    |                 |
| E. APPLICABLE AQMD RULES:                                                            |                                    |                 |
| F. COST: \$ (NA)                                                                     | SOURCE OF COST DATA:               |                 |
| G. OPERATING SCHEDULE: 24 HRS/DAY 7 DAYS/WK 52 WKS/YR                                |                                    |                 |

|                                                          |                                |                  |
|----------------------------------------------------------|--------------------------------|------------------|
| <b>2. EQUIPMENT INFORMATION</b>                          |                                | APP. NO.: 406065 |
| A. FUNCTION: Power Generation                            |                                |                  |
| B. MAXIMUM HEAT INPUT: 456.5 MMBtu/hr                    | C. MAXIMUM THROUGHPUT: 48.7 MW |                  |
| D. BURNER INFORMATION: NO.: TYPE: Can-Annular            |                                |                  |
| E. PRIMARY FUEL: Natural Gas                             | F. OTHER FUEL:                 |                  |
| G. OPERATING CONDITIONS: Peaking and/or Baseload Service |                                |                  |

|                                                                      |                            |                  |
|----------------------------------------------------------------------|----------------------------|------------------|
| <b>3. COMPANY INFORMATION</b>                                        |                            | APP. NO.: 406065 |
| A. NAME: EI Colton, LLC                                              | B. SIC CODE: 4911          |                  |
| C. ADDRESS: 2040 Aqua Mansa Rd.<br>CITY: Colton STATE: CA ZIP: 92324 |                            |                  |
| D. CONTACT PERSON: Wayne Murray                                      | E. PHONE NO.: 909-841-6880 |                  |

|                                                                                         |                                       |                                            |
|-----------------------------------------------------------------------------------------|---------------------------------------|--------------------------------------------|
| <b>4. PERMIT INFORMATION</b>                                                            |                                       | APP. NO.: 406065                           |
| A. AGENCY: SCAQMD                                                                       | B. APPLICATION TYPE: new construction |                                            |
| C. AGENCY CONTACT PERSON: John Dang                                                     | D. PHONE NO.: 909-396-2427            |                                            |
| E. PERMIT TO CONSTRUCT/OPERATE INFORMATION:<br><input type="checkbox"/> CHECK IF NO P/C | P/C NO.: 406065<br>P/O NO.:           | ISSUANCE DATE: 1/10/2003<br>ISSUANCE DATE: |
| F. START-UP DATE: 5/12/03                                                               |                                       |                                            |

|                                                                                                                                                                         |  |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------|
| <b>5. EMISSION INFORMATION</b>                                                                                                                                          |  | APP. NO.: 406065 |
| <b>A. PERMIT</b>                                                                                                                                                        |  |                  |
| A1. PERMIT LIMIT: PPMVD@15% O2: NOx-3.5 (3-hr), CO-6.0(3-hr), VOC-2.0(3-hr), NH3-5.0(3-hr), PM: .01 gr/scf and 11 lb/hr. Monthly mass limits on CO, VOC, SOX, and PM10. |  |                  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------|---------------|------------------|---------------------------|
| <b>5. EMISSION INFORMATION</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | APP. NO.: 406065 |                                                                                   |                 |                                                                                   |               |                  |                           |
| <p>A2. BACT/LAER DETERMINATION: Above limits on CO, VOC and NH3 were believed to represent BACT for simple cycle gas turbines. NOx concentration of 5 ppmvd @ 15% O2 is currently considered LAER however, limit of 3.5 ppmvd NOx was proposed by the applicant for the purposes of determining required emission offsets.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
| <p>A3. BASIS OF THE BACT/LAER DETERMINATION:</p> <p>CARB Guidance Document for Power Plant Sitings. Additionally, SCAQMD BACT guidelines website page contained one listing for similar equipment (Indigo Energy Facility [Wildflower Energy LP]) which however, was not considered to be achieved in practice at the time of BACT determination. Other recently permitted GE LM6000 simple cycle power plants include LADWP Harbor, City of Glendale, City of Pasadena, City of Burbank, and THUMS Long Beach Company and are permitted with the same or similar emission concentrations for CO, VOC, NH3 and NOx. However, this equipment was not considered to be achieved in practice at the time of BACT determination. Permit concentration limit for NOx, which is more stringent than current BACT, was suggested by applicant for the purpose of determining required emission offsets.</p> |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
| <b>B. CONTROL TECHNOLOGY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
| B1. MANUFACTURER/SUPPLIER: Engelhard                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
| B2. TYPE: SCR system and oxidation catalyst.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
| B3. DESCRIPTION: High temperature (825F design) SCR catalyst with tempering air system to control gas temperature entering catalyst. Aqueous ammonia (max. 19 wt. %) is used.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
| <table border="0" style="width: 100%;"> <tr> <td style="width: 40%;">B4. CONTROL EQUIPMENT PERMIT APPLICATION DATA:</td> <td style="width: 30%;">P/C NO.: 406068</td> <td style="width: 30%;">ISSUANCE DATE: 1/10/2003</td> </tr> <tr> <td></td> <td>P/O NO.:</td> <td>ISSUANCE DATE:</td> </tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                  | B4. CONTROL EQUIPMENT PERMIT APPLICATION DATA:                                    | P/C NO.: 406068 | ISSUANCE DATE: 1/10/2003                                                          |               | P/O NO.:         | ISSUANCE DATE:            |
| B4. CONTROL EQUIPMENT PERMIT APPLICATION DATA:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | P/C NO.: 406068  | ISSUANCE DATE: 1/10/2003                                                          |                 |                                                                                   |               |                  |                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | P/O NO.:         | ISSUANCE DATE:                                                                    |                 |                                                                                   |               |                  |                           |
| <table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">B5. WASTE AIR FLOW TO CONTROL EQUIPMENT:</td> <td style="width: 40%;">FLOW RATE:</td> </tr> <tr> <td>ACTUAL CONTAMINANT LOADING:</td> <td>BLOWER HP:</td> </tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  | B5. WASTE AIR FLOW TO CONTROL EQUIPMENT:                                          | FLOW RATE:      | ACTUAL CONTAMINANT LOADING:                                                       | BLOWER HP:    |                  |                           |
| B5. WASTE AIR FLOW TO CONTROL EQUIPMENT:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | FLOW RATE:       |                                                                                   |                 |                                                                                   |               |                  |                           |
| ACTUAL CONTAMINANT LOADING:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | BLOWER HP:       |                                                                                   |                 |                                                                                   |               |                  |                           |
| B6. WARRANTY: 3 years of operation or 3.5 years after delivery, whichever occurs first. Guaranteed to meet permit limits on NOx, CO, VOC, NH3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
| B7. PRIMARY POLLUTANTS: NOx, CO, VOC, PM, SOx                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
| B8. SECONDARY POLLUTANTS: NH3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
| B9. SPACE REQUIREMENT: SCR Catalyst:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
| B10. LIMITATIONS: SCR Catalyst: 1180 cu. ft; CO Catalyst: 65 cu. ft.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
| B11. UNUSED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
| B12. OPERATING HISTORY: Hours in 2003-2004: June-57, July 290, Aug-221, Sep-163, Oct-173, Nov-1, Dec-30, Jan-0.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
| B13. UNUSED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | B14. UNUSED      |                                                                                   |                 |                                                                                   |               |                  |                           |
| <b>C. CONTROL EQUIPMENT COSTS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  |                                                                                   |                 |                                                                                   |               |                  |                           |
| <table border="0" style="width: 100%;"> <tr> <td colspan="2">C1. CAPITAL COST:</td> <td><input type="checkbox"/> CHECK IF INSTALLATION COST IS INCLUDED IN EQUIPMENT COST</td> </tr> <tr> <td>EQUIPMENT: \$</td> <td>INSTALLATION: \$</td> <td>(NA) SOURCE OF COST DATA:</td> </tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                  | C1. CAPITAL COST:                                                                 |                 | <input type="checkbox"/> CHECK IF INSTALLATION COST IS INCLUDED IN EQUIPMENT COST | EQUIPMENT: \$ | INSTALLATION: \$ | (NA) SOURCE OF COST DATA: |
| C1. CAPITAL COST:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                  | <input type="checkbox"/> CHECK IF INSTALLATION COST IS INCLUDED IN EQUIPMENT COST |                 |                                                                                   |               |                  |                           |
| EQUIPMENT: \$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | INSTALLATION: \$ | (NA) SOURCE OF COST DATA:                                                         |                 |                                                                                   |               |                  |                           |
| C2. ANNUAL OPERATING COST: \$ (NA) SOURCE OF COST DATA:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                  |                                                                                   |                 |                                                                                   |               |                  |                           |

**5. EMISSION INFORMATION**

APP. NO.: 406065

**D. DEMONSTRATION OF COMPLIANCE**

D1. STAFF PERFORMING FIELD EVALUATION:

ENGINEER'S NAME:

INSPECTOR'S NAME:

Martha Thomas

DATE:

Inspections

done in June, July, Aug, Oct 2003 and Jan 2004--facility doing very well.

D2. COMPLIANCE DEMONSTRATION:

CEMS for NO<sub>x</sub> and CO, annual RATA, annual NH<sub>3</sub> test, source test for SO<sub>x</sub>, VOC, and PM every three years.

D3. VARIANCE:

NO. OF VARIANCES:

None

DATES:

CAUSES:

D4. VIOLATION:

NO. OF VIOLATIONS:

1

DATES:

10/20/2003

CAUSES:

NO<sub>x</sub>>3.5 ppmvd@15%O<sub>2</sub>, operator error

D5. MAINTENANCE REQUIREMENTS:

D6. UNUSED

D7. SOURCE TEST/PERFORMANCE DATA RESULTS AND ANALYSIS:

DATE OF SOURCE TEST:

6/12-16/03, 10/08/03 (VOC)

CAPTURE EFFICIENCY:

DESTRUCTION EFFICIENCY:

OVERALL EFFICIENCY:

SOURCE TEST/PERFORMANCE DATA:

Load, MW 43.8 33.8 22.4

PPMVD@15%O<sub>2</sub>:NO<sub>x</sub> 3.11 3.12 3.27

CO 3.63 3.29 3.19

VOC 1.52 1.61 1.91

NH<sub>3</sub> 2.3 2.7 2.2

OPERATING CONDITIONS:

TEST METHODS:

AQMD Methods 1.1 (multi-point traverse), 4.1 (moisture), 100.1 (NO<sub>x</sub>, CO, O<sub>2</sub>), 207.1 (NH<sub>3</sub>), USEPA Method TO-12 (VOC). Test reports were approved by AQMD's Source Test Engineering group.**6. COMMENTS**

APP. NO.: 406065

Permit requirements here are consistent with CARB Guidance for Power Plant Sitings document, with the exception that the NO<sub>x</sub> concentration limit as proposed by the applicant is more stringent. Initial compliance source test report was reviewed and accepted by the AQMD on November 6, 2003. It is significant that the emission limits are met down to approximately 50% load.

APPENDIX 8.1E

## **Cumulative Impact Sources Identified by the SCAQMD**

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Appendix 8.1E  
Cumulative Impact Sources Identified by the SCAQMD for the AES Highgrove Project

| Facility ID | SIC Code | Facility Name                            | Address                     | City           | Zip        | Application Nbr | Appl Status | Appl Status Description        | NOX AV30 | CO AV30 | PM10 AV30 | SOX AV30 | BCAT   | BCAT Description                         | Engineer               | Engineer Phone |
|-------------|----------|------------------------------------------|-----------------------------|----------------|------------|-----------------|-------------|--------------------------------|----------|---------|-----------|----------|--------|------------------------------------------|------------------------|----------------|
| 9961        | 4952     | RIVERSIDE CITY, WATER QUALITY CONTROL    | 5950 ACORN ST               | RIVERSIDE      | 92504-1036 | 437910          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 22700  | SEWAGE TREATMENT (>5 MG/D) ANEROBIC      | SUPARNA CHAKLADAR      | (909) 396-2477 |
| 11301       | 4952     | SAN BERNARDINO CITY MUN WATER DEPT (WRP) | 399 CHANDLER PL             | SAN BERNARDINO | 92408-2022 | 448787          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 56057  | I C E (>500 HP) NAT & DIGESTER GAS       | HASSAN NAMAKI          | (909) 396-2699 |
| 11301       | 4952     | SAN BERNARDINO CITY MUN WATER DEPT (WRP) | 399 CHANDLER PL             | SAN BERNARDINO | 92408-2022 | 448788          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 56057  | I C E (>500 HP) NAT & DIGESTER GAS       | HASSAN NAMAKI          | (909) 396-2699 |
| 39979       | 4100     | OMNITRANS                                | 1700 W 5TH ST               | SAN BERNARDINO | 92411-2499 | 452966          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 43901  | I C E (50-500 HP) EM ELEC GEN-DIESEL     | MARCEL SAULIS          | (909) 396-3093 |
| 54402       | 3354     | SIERRA ALUMINUM COMPANY                  | 2345 FLEETWOOD              | RIVERSIDE      | 92509-2426 | 452775          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 302    | HEAT TREATING FURNACE                    | MONICA FERNANDEZ NEILD | (909) 396-2202 |
| 54402       | 3354     | SIERRA ALUMINUM COMPANY                  | 2345 FLEETWOOD              | RIVERSIDE      | 92509-2426 | 452776          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 302    | HEAT TREATING FURNACE                    | MONICA FERNANDEZ NEILD | (909) 396-2202 |
| 54402       | 3354     | SIERRA ALUMINUM COMPANY                  | 2345 FLEETWOOD              | RIVERSIDE      | 92509-2426 | 452778          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 257    | OVEN, OTHER                              | MONICA FERNANDEZ NEILD | (909) 396-2202 |
| 54402       | 3354     | SIERRA ALUMINUM COMPANY                  | 2345 FLEETWOOD              | RIVERSIDE      | 92509-2426 | 452779          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 1600   | FURNACE REVERB ALUMINUM                  | MONICA FERNANDEZ NEILD | (909) 396-2202 |
| 54402       | 3354     | SIERRA ALUMINUM COMPANY                  | 2345 FLEETWOOD              | RIVERSIDE      | 92509-2426 | 452780          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 1600   | FURNACE REVERB ALUMINUM                  | MONICA FERNANDEZ NEILD | (909) 396-2202 |
| 54402       | 3354     | SIERRA ALUMINUM COMPANY                  | 2345 FLEETWOOD              | RIVERSIDE      | 92509-2426 | 452782          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 302    | HEAT TREATING FURNACE                    | MONICA FERNANDEZ NEILD | (909) 396-2202 |
| 54402       | 3354     | SIERRA ALUMINUM COMPANY                  | 2345 FLEETWOOD              | RIVERSIDE      | 92509-2426 | 452783          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 302    | HEAT TREATING FURNACE                    | MONICA FERNANDEZ NEILD | (909) 396-2202 |
| 54402       | 3354     | SIERRA ALUMINUM COMPANY                  | 2345 FLEETWOOD              | RIVERSIDE      | 92509-2426 | 452784          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 302    | HEAT TREATING FURNACE                    | MONICA FERNANDEZ NEILD | (909) 396-2202 |
| 54402       | 3354     | SIERRA ALUMINUM COMPANY                  | 2345 FLEETWOOD              | RIVERSIDE      | 92509-2426 | 452785          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 302    | HEAT TREATING FURNACE                    | MONICA FERNANDEZ NEILD | (909) 396-2202 |
| 54402       | 3354     | SIERRA ALUMINUM COMPANY                  | 2345 FLEETWOOD              | RIVERSIDE      | 92509-2426 | 452786          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 302    | HEAT TREATING FURNACE                    | MONICA FERNANDEZ NEILD | (909) 396-2202 |
| 54402       | 3354     | SIERRA ALUMINUM COMPANY                  | 2345 FLEETWOOD              | RIVERSIDE      | 92509-2426 | 452787          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 302    | HEAT TREATING FURNACE                    | MONICA FERNANDEZ NEILD | (909) 396-2202 |
| 54402       | 3354     | SIERRA ALUMINUM COMPANY                  | 2345 FLEETWOOD              | RIVERSIDE      | 92509-2426 | 452789          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 302    | HEAT TREATING FURNACE                    | MONICA FERNANDEZ NEILD | (909) 396-2202 |
| 95000       | 4941     | THE GAGE CANAL COMPANY                   | SANTA ANA                   | SAN BERNARDINO | 92408      | 439777          | 25          | PERMIT TO CONSTRUCT GRANTED    | 2        | 10      | 1         | 0        | 40001  | I C E (50-500 HP) N-EM STAT NAT GAS ONLY | MARIA VIBAL            | (909) 396-2422 |
| 103586      | 7699     | PRAXAIR SERVICES, INC.                   | VARIOUS LOCATIONS IN SCAQMD | FONTANA        | 92337      | 428001          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 19903  | HEATER/FURNACE (5-20 MMBTU/HR) DIESEL    | RAY RONQUILLO          | (909) 396-3049 |
| 103618      | 5142     | SPECIALTY BRANDS INC                     | 3038 PLEASANT ST            | RIVERSIDE      | 92507-5554 | 439602          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 503714 | CORN PRODUCTS, REACT-DEEP FAT FRY        | REYNALDO R SANTOS      | (909) 396-3134 |
| 103618      | 5142     | SPECIALTY BRANDS INC                     | 3038 PLEASANT ST            | RIVERSIDE      | 92507-5554 | 439603          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 506714 | FLOUR, REACT-DEEP FAT FRY                | REYNALDO R SANTOS      | (909) 396-3134 |
| 115130      | 2752     | VERTIS, INC                              | 7190 JURUPA AVE             | RIVERSIDE      | 92504-1016 | 449523          | 25          | PERMIT TO CONSTRUCT GRANTED    | 8        | 7       | 0         | 0        |        |                                          | RICHARD L THRASH       | (909) 396-2397 |
| 119940      | 2952     | BUILDING MATERIALS MANUFACTURING CORP    | 11800 INDUSTRY AVE          | FONTANA        | 92337-6936 | 368002          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 703920 | STORAGE SILO LIME & LIMESTONE            | RICHARD H HAWRYLEW     | (909) 396-2657 |
| 119940      | 2952     | BUILDING MATERIALS MANUFACTURING CORP    | 11800 INDUSTRY AVE          | FONTANA        | 92337-6936 | 368088          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        |        |                                          | RICHARD H HAWRYLEW     | (909) 396-2657 |
| 119940      | 2952     | BUILDING MATERIALS MANUFACTURING CORP    | 11800 INDUSTRY AVE          | FONTANA        | 92337-6936 | 428212          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 340    | ASPHALT ROOFING LINE                     | RICHARD H HAWRYLEW     | (909) 396-2657 |
| 129659      | 4953     | NM COLTON GENCO LLC.                     | 21230 TROPICA RANCH RD      | COLTON         | 92324      | 425882          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 56737  | I C E (>500 HP) LANDFILL GAS             | TED KOWALCZYK          | (909) 396-2592 |
| 135782      |          | SAM'S CLUB FUELING STATION #6624         | 1057 HARRIMAN PL            | SAN BERNARDINO | 92408      | 450461          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 248915 | SERV STAT STORAGE & DISPENSING GASOLINE  | RANDY MATSUYAMA        | (909) 396-2551 |
| 137838      |          | IMPERIAL PIPE SERVICES LLC               | 12375 BROWN AVE             | COLTON         | 92324      | 444955          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 101920 | STORAGE SILO CEMENT                      | DEREK K HOLLINSHEAD    | (909) 396-2275 |
| 137838      |          | IMPERIAL PIPE SERVICES LLC               | 12375 BROWN AVE             | COLTON         | 92324      | 446481          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        |        |                                          | DEREK K HOLLINSHEAD    | (909) 396-2275 |
| 140315      | 5541     | VONS FUEL CENTER #2688                   | 6110 HAMNER AVE             | RIVERSIDE      | 92504      | 453247          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 248915 | SERV STAT STORAGE & DISPENSING GASOLINE  | RANDY MATSUYAMA        | (909) 396-2551 |
| 141477      |          | AGRICULTURAL WASTE SOLUTIONS (AWS)       | VARIOUS LOCATIONS IN SCAQMD | MORENO VALLEY  | 92557-7336 | 432828          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 707750 | MISC MINERALS SIZE REDUCTION             | HIRAM T FONG           | (909) 396-2718 |
| 142954      | 3471     | FONTANA POLISHING AND PLATING            | 130 W MINDANAO ST           | BLOOMINGTON    | 92316      | 438132          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 285    | TANK CHROME PLATING HEXAVALENT           | BELINDA C WAN          | (909) 396-2532 |
| 142954      | 3471     | FONTANA POLISHING AND PLATING            | 130 W MINDANAO ST           | BLOOMINGTON    | 92316      | 448363          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 285    | TANK CHROME PLATING HEXAVALENT           | BELINDA C WAN          | (909) 396-2532 |
| 144493      |          | RESTRUCTURE PETRO MARKETING SERVS OF CAL | 9009 MISSION BLVD           | RIVERSIDE      | 92509      | 443733          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 28000  | SOIL TREAT VAPOR EXTRACT GASOLINE UNDER  | HUI SUNG CHOE          | (909) 396-2259 |
| 145115      |          | UNICORN WINDOW COVERINGS, C. TIMM DBA    | 1660 CHICAGO AVE SUITE P-17 | RIVERSIDE      | 92507      | 445947          | 215         | APPLICATION ON HOLD            | 0        | 0       | 0         | 0        |        |                                          | JOE TUMAMBIN           | (909) 396-2462 |
| 145368      | 2951     | SEMMATERIALS L.P.                        | 14929 SLOVER AVE            | FONTANA        | 92337-7215 | 450875          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 214911 | STORAGE TANK, ASPHALT >50,000 GALLONS    | MARILYN MAXINE POTTER  | (909) 396-2376 |
| 145928      |          | PAVEMENT RECYCLING SYSTEMS, INC.         | 2130 AGUA MANS A RD         | COLTON         | 92324      | 448847          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 214751 | Asphalt Prod/Recycle <5000 tpd           | RAJENDRA SINGH         | (909) 396-3099 |
| 146716      | 5541     | CONOCOPHILLIPS COMPANY                   | 24891 REDLANDS BLVD         | LOMA LINDA     | 92354-4013 | 451573          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 28000  | SOIL TREAT VAPOR EXTRACT GASOLINE UNDER  | ABDI MAJIDIFAR         | (909) 396-2449 |
| 147344      |          | G&M OIL CO #133                          | 18745 VALLEY BLVD           | BLOOMINGTON    | 92316      | 454170          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 248915 | SERV STAT STORAGE & DISPENSING GASOLINE  | RANDY MATSUYAMA        | (909) 396-2551 |
| 147451      |          | SHELL OIL PRODUCTS US - HSE/S&E          | 677 W 4TH ST                | SAN BERNARDINO | 92410-3215 | 454640          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 28000  | SOIL TREAT VAPOR EXTRACT GASOLINE UNDER  | BELINDA C WAN          | (909) 396-2532 |
| 800022      | 5171     | CALNEV PIPE LINE, LLC                    | 2051 E SLOVER AVE           | BLOOMINGTON    | 92316      | 449693          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        |        |                                          | JOHNNY PAN             | (909) 396-3612 |
| 800129      | 5171     | SO PACIFIC PIPELINES INC (EIS USE)       | 2359 RIVERSIDE AVE          | BLOOMINGTON    | 92316-2931 | 446062          | 25          | PERMIT TO CONSTRUCT GRANTED    | 0        | 0       | 0         | 0        | 248904 | STORAGE TANK W/ EXT FLOAT ROOF GASOLINE  | KHANG NGUYEN           | (909) 396-3210 |
| 800129      | 5171     | SO PACIFIC PIPELINES INC (EIS USE)       | 2359 RIVERSIDE AVE          | BLOOMINGTON    | 92316-2931 | 447007          | 215         | APPLICATION ON HOLD            | 0        | 0       | 0         | 0        | 300106 | BULK LOAD TERM REC PIPELINE PET MID DIST | KHANG NGUYEN           | (909) 396-3210 |
| 800181      | 3241     | CALIFORNIA PORTLAND CEMENT CO (NSR USE)  | 695 S RANCHO AVE            | COLTON         | 92324      | 429153          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 17700  | KILN OTHER FUEL                          | RICHARD H HAWRYLEW     | (909) 396-2657 |
| 800181      | 3241     | CALIFORNIA PORTLAND CEMENT CO (NSR USE)  | 695 S RANCHO AVE            | COLTON         | 92324      | 429155          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 17700  | KILN OTHER FUEL                          | RICHARD H HAWRYLEW     | (909) 396-2657 |
| 800182      | 3241     | RIVERSIDE CEMENT CO (EIS USE)            | 1500 RUBIDOUX BLVD          | RIVERSIDE      | 92509-1841 | 436342          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 107125 | Aggregate Bulk Unloading                 | RICHARD H HAWRYLEW     | (909) 396-2657 |
| 800182      | 3241     | RIVERSIDE CEMENT CO (EIS USE)            | 1500 RUBIDOUX BLVD          | RIVERSIDE      | 92509-1841 | 438408          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 40901  | I C E (50-500 HP) N-EM STAT DIESEL       | RICHARD H HAWRYLEW     | (909) 396-2657 |
| 800182      | 3241     | RIVERSIDE CEMENT CO (EIS USE)            | 1500 RUBIDOUX BLVD          | RIVERSIDE      | 92509-1841 | 438409          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 43901  | I C E (50-500 HP) EM ELEC GEN-DIESEL     | RICHARD H HAWRYLEW     | (909) 396-2657 |
| 800397      | 5171     | BP WEST COAST PROD.,ARCO COLTON          | 2395 RIVERSIDE AVE          | BLOOMINGTON    | 92316      | 453402          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 248104 | BULK LOAD/UNLOAD (>200,000 G/D) GASOLINE | JEFF COX               | (909) 396-3092 |
| 800397      | 5171     | BP WEST COAST PROD.,ARCO COLTON          | 2395 RIVERSIDE AVE          | BLOOMINGTON    | 92316      | 453403          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 248104 | BULK LOAD/UNLOAD (>200,000 G/D) GASOLINE | JEFF COX               | (909) 396-3092 |
| 800397      | 5171     | BP WEST COAST PROD.,ARCO COLTON          | 2395 RIVERSIDE AVE          | BLOOMINGTON    | 92316      | 453404          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 248104 | BULK LOAD/UNLOAD (>200,000 G/D) GASOLINE | JEFF COX               | (909) 396-3092 |
| 800397      | 5171     | BP WEST COAST PROD.,ARCO COLTON          | 2395 RIVERSIDE AVE          | BLOOMINGTON    | 92316      | 453406          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 248104 | BULK LOAD/UNLOAD (>200,000 G/D) GASOLINE | JEFF COX               | (909) 396-3092 |
| 800397      | 5171     | BP WEST COAST PROD.,ARCO COLTON          | 2395 RIVERSIDE AVE          | BLOOMINGTON    | 92316      | 453411          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        |        |                                          | JEFF COX               | (909) 396-3092 |
| 800397      | 5171     | BP WEST COAST PROD.,ARCO COLTON          | 2395 RIVERSIDE AVE          | BLOOMINGTON    | 92316      | 453417          | 20          | ASSIGNED TO ENGINEER - CLASS I | 0        | 0       | 0         | 0        | 301900 | STORAGE TANK ORGANIC CHEMICALS MISC      | JEFF COX               | (909) 396-3092 |

APPENDIX 8.1F

## Mitigation

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# Mitigation

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Table 8.1F-1 presents the mitigation required for the project, based on the SCAQMD's regulations. Emissions shown in Table 8.1F-1 reflect only those offset requirements directly resulting from the SCAQMD's New Source Review permitting programs – Regulation XIII for VOC, CO, SO<sub>2</sub>, PM<sub>10</sub> and Rule 2005 for NO<sub>x</sub>. Since the VOC, CO, SO<sub>2</sub> and PM<sub>10</sub> emission reduction credit (ERC) requirements will be greater for normal operation, as shown in Table 8.1F-1, only the normal operation offset requirements are shown above. Since NO<sub>x</sub> emission offset requirements are based on actual emissions, both the RECLAIM Trading Credits (RTC) requirement for the commissioning phase and the normal operations are shown. ERC and RTCs calculated on the basis of 31 days per month, with RTCs assuming twelve 31-day months.

The AESH facility will participate in the NO<sub>x</sub> RECLAIM program. The New Source Review Rule requiring the offsets for AESH is the SCAQMD Rule 2005. Rule 2005 requires that sufficient RTCs be obtained to offset actual emissions for the first year of operation as a condition of receiving a permit under the NO<sub>x</sub> RECLAIM program. Each RTC represents a discreet pound of NO<sub>x</sub> and is valid only for the year of issue. The SCAQMD's RECLAIM program is divided into two cycles, Cycle 1 (January-December) and Cycle 2 (July-June). Likewise, RTCs are issued as Cycle 1 or Cycle 2 and the valid year to use them follows the corresponding January-December or July-June compliance period. There are two trading Zones within the RECLAIM program, known as Zone 1 or the Coastal Zone and Zone 2 or the Inland Zone. RTCs are designated as either Coastal or Inland. Coastal RTCs can be used by facilities in either the Coastal or Inland trading zones, but Inland RTCs can only be used by facilities in the Inland trading zone.

Table 8.1F-1 shows the NO<sub>x</sub> RTC requirement projected for the Commissioning phase and also projected for each year of normal operation of the AESH Project. As a project located in the Inland Trading Zone, the project will be eligible to use RTCs issued as both Coastal and Inland. AES plans to use excess Coastal Zone RTCs that it holds and to solicit RTCs from credit holders in the both Zones to satisfy the NO<sub>x</sub> offset requirement.

**TABLE 8.1F-1**  
NSR Emissions Offsets Required<sup>a</sup>

| Pollutant                     |                                           | RTCs <sup>b</sup><br>(lb) | ERCs <sup>c</sup><br>(lb/day) | Priority Reserve <sup>d</sup><br>(lb/day) |
|-------------------------------|-------------------------------------------|---------------------------|-------------------------------|-------------------------------------------|
| NO <sub>x</sub>               | First Year Project Emissions <sup>e</sup> | 212,144                   |                               |                                           |
|                               | Normal Project Emissions                  | 183,518                   |                               |                                           |
| VOC                           | Normal Project Emissions                  |                           | 138.6                         |                                           |
| CO <sup>f</sup>               | Normal Project Emissions                  |                           |                               | 814.9                                     |
| SO <sub>2</sub>               | Normal Project Emissions                  |                           |                               | 33.2                                      |
| PM <sub>10</sub> <sup>g</sup> | Normal Project Emissions                  |                           |                               | 333.3                                     |

<sup>a</sup> Project emissions offset requirements for each phase of the project operation, including Commissioning and Normal Operation.

<sup>b</sup> Proposed AES Highgrove facility will enter the SCAQMD NO<sub>x</sub> RECLAIM program (Regulation XX). NO<sub>x</sub> emissions will be offset through purchase of RTCs at a ratio of 1:1 to actual emissions per year.

<sup>c</sup> ERCs are emission offset credits issued as a stream of credits in units of lb/day. In Rule 1303, these credits are to be provided when offset thresholds, listed in Rule 1304 are exceeded and are to be provided at an offset ratio of 1.2 lb/day of ERCs per lb/day of emissions increases.

<sup>d</sup> Priority Reserve Credits are supplied by the SCAQMD as emission offsets for essential public services (schools, sewage plans, landfills, etc.) under Rule 1309.

<sup>e</sup> First year = 12 months of emissions plus commissioning emissions.

<sup>f</sup> CO Offsets may not be required if SCAQMD is redesignated attainment for the 8-hr CO ambient air quality standard. A redesignation request is pending.

<sup>g</sup> Because the cooling towers will be exempted from SCAQMD permitting requirements by Rule 219(e)(3) and Rule 219(s)(2), emission offsets are not required as indicated in Rule 1304(d)(3). In accordance with Rule 1303 and Rule 1309.1, ERCs are required at an offset ratio of 1.2:1.

The SCAQMD promulgated rule changes to Rule 2002 in January 2005 that will “shave” 7.7 tons per day or approximately 22.5 percent by the 2010 compliance year from the present 34.2 tons per day of NO<sub>x</sub> RTCs in the trading universe (Reference Figure 8.1F-1, which is taken from a February 2, 2005 SCAQMD RECLAIM presentation). Nevertheless, RTCs have readily been available when needed by projects and there is no anticipated problem in acquiring sufficient NO<sub>x</sub> RTCs to offset actual NO<sub>x</sub> emissions from the AESH Project. Note also that the January 2005 amendments to the RECLAIM program and the RECLAIM rules under Regulation XX extended the program to the 2028 compliance year.

Table 8.1F-2, included with this Appendix, is a listing of current SCAQMD ERCs and credit holders. Similar to the RECLAIM program, note that as a proposed project in the Inland Trading Zone, ERCs designated as either Coastal or Inland ERCs can be used to offset criteria pollutant emissions. AES has been aggressively pursuing CO, VOC, SO<sub>2</sub> and PM<sub>10</sub> ERCs from the open market through the existing emission credit broker network that has developed in the South Coast Air Basin.

In addition to Emission Reduction Credits or ERCs, the SCAQMD maintains a separate pool of emissions credits, known as Priority Reserve Credits. Priority Reserve Credits are reserved as emission offsets for essential public services (schools, sewage plans, landfills, etc.) under Rule 1309. During the power crisis that occurred in 2000-2001, the SCAQMD amended Rule 1309.1 to provide access for Priority Reserve Credits for new electrical generating facilities. This access has expired and recognizing that there is a critical need to site additional

electrical generating facilities, the SCAQMD has been developing a rule amendment to Rule 1309.1 that will again allow electrical generating facilities access to the Priority Reserve pool of credits. The SCAQMD has issued proposed amendments to Rule 1309.1, and currently plans on having the amendments considered for adoption at the July 2006 Governing Board Meeting. Similar to ERCs, the proposed Rule 1309.1 amendments would require that Priority Reserve Credits be used at an offset ratio of 1.2:1 for new electrical generating facilities. At this time, Priority Reserve Credit access is planned for SO<sub>2</sub> and PM<sub>10</sub>, with CO under consideration. Prices for purchase of these credits are listed in the proposed rule amendments as \$50,417 for PM<sub>10</sub>, \$15,083 for SO<sub>x</sub> and \$12,000 for CO. Since there are insufficient PM<sub>10</sub> ERCs available to satisfy the offset needs of this project and limited SO<sub>2</sub> and CO ERCs available, AES plans to complete the acquisition of its PM<sub>10</sub>, CO and SO<sub>2</sub> offsets through the Priority Reserve Credit availability.

## Non-New Source Review Emissions Increases

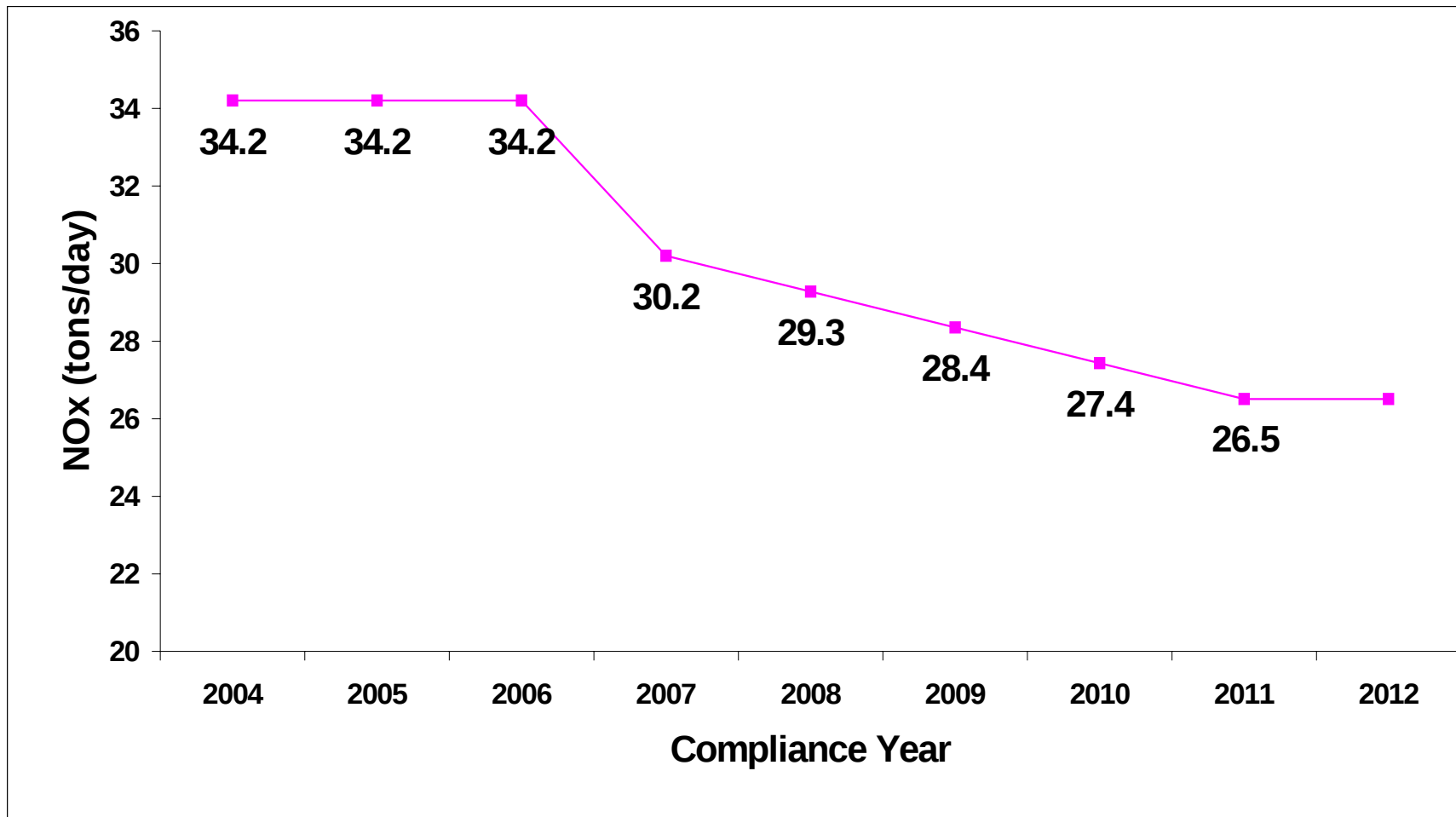
Currently, the cooling towers are exempted from SCAQMD permitting requirements by Rule 219(e)(4) and 219(s)(2). Rule 219(s)(2) is the requirement that the cooling towers not exceed the risk thresholds in SCAQMD Rule 1401 (Toxic New Source Review) as a condition of maintaining the permit exemption provided in Rule 219(e)(4). As the cooling towers are using non-contaminated groundwater, not toxic air contaminants are expected and the facility risk is well below the Rule 1401 permit exemption levels, thereby confirming the exemption status of the cooling towers. However, the CEC, as the CEQA Lead Agency, does traditionally require mitigation of these emissions. The SCAQMD Governing Board will consider proposed amendments to Rule 219 at its May 5, 2006 meeting. These amendments would remove the permit exemption for sources, such as the cooling towers if potential emissions exceed four tons per year. Since the AESH cooling towers will individually and collectively have potential PM<sub>10</sub> emissions well below the four ton per year threshold, it is not anticipated that this rule amendment would have any affect on cooling tower permit applicability.

Priority Reserve Credits are purchased or transferred to a project at a ratio of 1.2:1 (under the proposed rule) with average 30-day emissions. The precedent has been set to use this excess 20 percent emission credit deposit as the CEQA mitigation for the cooling tower PM<sub>10</sub> emissions. It is the intent of AES to likewise request that the extra emissions deposited by the SCAQMD be used as satisfaction of the CEQA mitigation requirement.

**TABLE 8.1F-3**  
Non-NSR Emission Increases (lb/day)\*

|               | NO <sub>x</sub> | CO | VOC | SO <sub>2</sub> | PM <sub>10</sub> |
|---------------|-----------------|----|-----|-----------------|------------------|
| Cooling tower | 0               | 0  | 0   | 0               | 2.3              |
| Total         | 0               | 0  | 0   | 0               | 2.3              |

\* Basis of average daily emissions over maximum 30-day period.



Source: SCAQMD Presentation - Public Informational Workshop, Amendments to RECLAIM Rules, February 2, 2005

**FIGURE 8.1F-1**  
SCAQMD NO<sub>x</sub> RECLAIM Program RTC Allocations for 2004 and On

Table 8.1F-2  
LIST OF ACTIVE SCAQMD ERCs - MARCH 2006

| FAC ID | ERC NBR  | COMPANY NAME                             | ADDRESS                         | CITY             | ZIP        | EMITTANT | AMOUNT | Zone    | ISSUED     |
|--------|----------|------------------------------------------|---------------------------------|------------------|------------|----------|--------|---------|------------|
| 22602  | AQ000015 | EXXON CO U.S.A., PROD. FAC TUA 1 & 2     | AVALON & WATER ST               | WILMINGTON       | 90744      | CO       | 1      | Coastal | 12/17/1990 |
| 22940  | AQ000091 | EASTERN MUN WATER DIST                   | SOUTH MURRIETA RD               | SUN CITY         | 92585      | CO       | 1      | Inland  | 12/17/1990 |
| 81347  | AQ000180 | YONEKYU INTERNATIONAL CORP               | 3615 E VERNON AVE               | LOS ANGELES      | 90058 1815 | CO       | 1      | Coastal | 5/22/1991  |
| 5875   | AQ000219 | MONIER LIFETILE                          | 3511 N RIVERSIDE AVE            | RIALTO           | 92376 1599 | CO       | 1      | Inland  | 6/3/1991   |
| 8980   | AQ000364 | ARCO (EIS USE)                           | 1801 E SEPULVEDA BLVD           | CARSON           | 90745      | CO       | 1      | Coastal | 6/10/1991  |
| 69530  | AQ000504 | DAN COPP CRUSHING CORP.                  | VARIOUS LOCATIONS IN SCAQMD     | ANAHEIM          | 92807      | CO       | 1      | Coastal | 7/4/1991   |
| 8220   | AQ000764 | PROVIDENCE ST JOSEPH MED CTR             | 501 S BUENA VISTA ST            | BURBANK          | 91505 4866 | CO       | 1      | Coastal | 2/6/1992   |
| 3873   | AQ000809 | LOCKHEED ADVANCED DEVELOPMENT CO         | 1705 VICTORY B 180/111 112 1064 | BURBANK          | 91506      | CO       | 1      | Coastal | 4/8/1992   |
| 40477  | AQ001019 | OSCAR MAYER FOODS CORP                   | 3301 E VERNON AVE               | VERNON           | 90058 1875 | CO       | 1      | Coastal | 11/2/1993  |
| 800264 | AQ001034 | EDGINGTON OIL COMPANY                    | 2400 E ARTESIA BLVD             | LONG BEACH       | 90805      | CO       | 1      | Coastal | 12/14/1993 |
| 88194  | AQ001270 | SOUTHERN CALIFORNIA EDISON CO            | 14700 RIVER RD                  | CORONA           | 92880      | CO       | 1      | Inland  | 6/16/1994  |
| 4477   | AQ001278 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD               | AVALON           | 90704      | CO       | 1      | Inland  | 6/16/1994  |
| 4477   | AQ001281 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD               | AVALON           | 90704      | CO       | 1      | Inland  | 6/16/1994  |
| 4477   | AQ001293 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD               | AVALON           | 90704      | CO       | 1      | Inland  | 6/16/1994  |
| 346    | AQ001317 | FRITO-LAY NORTH AMERICA, INC.            | 9535 ARCHIBALD AVE              | RANCHO CUCAMON   | 91730 5737 | CO       | 1      | Coastal | 6/21/1994  |
| 103888 | AQ003147 | SARGENT FLETCHER INC                     | 9400 E FLAIR DR                 | EL MONTE         | 91731 2909 | CO       | 1      | Coastal | 8/8/2000   |
| 56906  | AQ004657 | ROYALWEVE CARPET MILLS INC               | 2310 E 52ND ST                  | LOS ANGELES      | 90058 0285 | CO       | 1      | Coastal | 9/12/2002  |
| 131003 | AQ004891 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD           | CARSON           | 90745 6121 | CO       | 1      | Coastal | 3/6/2003   |
| 14502  | AQ004984 | VERNON CITY, LIGHT & POWER DEPT          | 2715 E 50TH ST                  | VERNON           | 90058 2901 | CO       | 1      | Coastal | 5/27/2003  |
| 800038 | AQ004986 | DOUGLAS PRODUCTS DIVISION                | 3855 LAKEWOOD & 2401 WARDLOW    | LONG BEACH       | 90846 0001 | CO       | 1      | Coastal | 5/29/2003  |
| 129816 | AQ005809 | INLAND EMPIRE ENERGY CENTER, LLC         | 26226 ANTELOPE RD               | ROMOLAND         | 92585      | CO       | 1      | Coastal | 8/5/2005   |
| 8582   | AQ005908 | SO CAL GAS CO/PLAYA DEL REY STORAGE FACI | 8141 GULANA AVE                 | PLAYA DEL REY    | 90293 7930 | CO       | 1      | Coastal | 10/19/2005 |
| 101337 | AQ006021 | NATIONAL OFFSETS                         | 6251 PARAMOUNT BLVD             | LONG BEACH       | 90248      | CO       | 1      | Inland  | 1/18/2006  |
| 89376  | AQ001273 | SOUTHERN CALIFORNIA EDISON CO            | END OF CENTER ST                | RIVERSIDE        | 92507      | CO       | 2      | Inland  | 6/16/1994  |
| 4477   | AQ001284 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD               | AVALON           | 90704      | CO       | 2      | Inland  | 6/16/1994  |
| 779    | AQ003510 | TRW INC                                  | 33000 AVENIDA PICO (CTS)        | SAN CLEMENTE     | 92672      | CO       | 2      | Coastal | 2/16/2001  |
| 800193 | AQ004396 | LA CITY, DWP VALLEY GENERATING STATION   | 11801 SHELTON ST                | SUN VALLEY       | 91352 1420 | CO       | 2      | Coastal | 2/1/2002   |
| 800074 | AQ004754 | LA CITY, DWP HAYNES GENERATING STATION   | 6801 2ND ST                     | LONG BEACH       | 90803 4324 | CO       | 2      | Coastal | 11/12/2002 |
| 88201  | AQ005210 | ADOHR FARMS INC                          | 1620 N SPRING ST                | LOS ANGELES      | 90012      | CO       | 2      | Coastal | 1/7/2004   |
| 800183 | AQ005600 | PARAMOUNT PETR CORP (EIS USE)            | 14700-08 DOWNEY AVE             | PARAMOUNT        | 90723 4526 | CO       | 2      | Coastal | 1/20/2005  |
| 101337 | AQ006019 | NATIONAL OFFSETS                         | 6251 PARAMOUNT BLVD             | LONG BEACH       | 90248      | CO       | 2      | Coastal | 1/18/2006  |
| 4477   | AQ001193 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD               | AVALON           | 90704      | CO       | 3      | Inland  | 6/16/1994  |
| 89176  | AQ001266 | SOUTHERN CALIFORNIA EDISON CO            | 1404 E CORAK ST                 | BALDWIN PARK     | 91706      | CO       | 3      | Inland  | 6/16/1994  |
| 90878  | AQ001276 | SOUTHERN CALIFORNIA EDISON               | 6871 MARTIN RD                  | RIALTO           | 92376      | CO       | 3      | Inland  | 6/16/1994  |
| 88196  | AQ001286 | SOUTHERN CALIFORNIA EDISON CO            | 1/2 MI EAST OF LAKEVIEW/RAMONA  | SAN JACINTO      | 92581      | CO       | 3      | Inland  | 6/16/1994  |
| 4477   | AQ001306 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD               | AVALON           | 90704      | CO       | 3      | Inland  | 6/16/1994  |
| 800183 | AQ002229 | PARAMOUNT PETR CORP (EIS USE)            | 14700-08 DOWNEY AVE             | PARAMOUNT        | 90723 4526 | CO       | 3      | Coastal | 1/14/1998  |
| 121737 | AQ004797 | MOUNTAINVIEW POWER COMPANY LLC           | 2492 W SAN BERNARDINO AVE       | REDLANDS         | 92374 5016 | CO       | 3      | Inland  | 12/12/2002 |
| 14502  | AQ005995 | VERNON CITY, LIGHT & POWER DEPT          | 2715 E 50TH ST                  | VERNON           | 90058 2901 | CO       | 3      | Coastal | 12/22/2005 |
| 29110  | AQ006047 | ORANGE COUNTY SANITATION DISTRICT        | 22212 BROOKHURST ST             | HUNTINGTON BEACH | 92646 8457 | CO       | 3      | Coastal | 2/16/2006  |
| 800016 | AQ005559 | BAKER COMMODITIES INC                    | 3848- 4100 BANDINI BLVD         | VERNON           | 90023 4532 | CO       | 4      | Coastal | 7/10/1991  |
| 88481  | AQ000675 | US GOV'T AIR FORCE DEPT,MARCH AIR F BASE | 24501 S FIGUEROA ST             | CARSON           | 90745      | CO       | 4      | Coastal | 10/24/1991 |
| 4477   | AQ001251 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD               | AVALON           | 90704      | CO       | 4      | Inland  | 6/16/1994  |
| 46268  | AQ002419 | CALIFORNIA STEEL INDUSTRIES INC          | 14000 SAN BERNARDINO AVE        | FONTANA          | 92335 5259 | CO       | 4      | Coastal | 6/9/1998   |
| 121737 | AQ004796 | MOUNTAINVIEW POWER COMPANY LLC           | 2492 W SAN BERNARDINO AVE       | REDLANDS         | 92374 5016 | CO       | 4      | Inland  | 12/12/2002 |
| 800183 | AQ005556 | PARAMOUNT PETR CORP (EIS USE)            | 14700-08 DOWNEY AVE             | PARAMOUNT        | 90723 4526 | CO       | 4      | Coastal | 12/14/2004 |
| 800183 | AQ005599 | PARAMOUNT PETR CORP (EIS USE)            | 14700-08 DOWNEY AVE             | PARAMOUNT        | 90723 4526 | CO       | 4      | Coastal | 1/20/2005  |
| 16978  | AQ000341 | CLOUGHERTY PACKING CO, FARMER JOHN MEATS | 3049 E VERNON AVE               | VERNON           | 90058 1882 | CO       | 5      | Coastal | 6/4/1991   |
| 800245 | AQ000525 | FAULT BLOCK III UNIT, WILMINGTON OIL FLD | 420 HENRY FORD AVE              | WILMINGTON       | 90744      | CO       | 5      | Coastal | 7/6/1991   |
| 90161  | AQ001309 | SOUTHERN CALIFORNIA EDISON CO            | NW CORNER OF TAYLOR/MAIN        | GRAND TERRACE    | 92324      | CO       | 5      | Inland  | 6/16/1994  |
| 4477   | AQ001254 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD               | AVALON           | 90704      | CO       | 6      | Inland  | 6/16/1994  |
| 90165  | AQ001257 | SOUTHERN CALIFORNIA EDISON CO            | 4921 SANTA ANITA                | EL MONTE         | 91731      | CO       | 6      | Inland  | 6/16/1994  |
| 90164  | AQ001260 | SOUTHERN CALIFORNIA EDISON CO            | 11828 RANCHITO ST               | EL MONTE         | 91732      | CO       | 6      | Inland  | 6/16/1994  |
| 29110  | AQ006045 | ORANGE COUNTY SANITATION DISTRICT        | 22212 BROOKHURST ST             | HUNTINGTON BEACH | 92646 8457 | CO       | 7      | Coastal | 2/16/2006  |
| 29110  | AQ006048 | ORANGE COUNTY SANITATION DISTRICT        | 22212 BROOKHURST ST             | HUNTINGTON BEACH | 92646 8457 | CO       | 7      | Coastal | 2/16/2006  |
| 90879  | AQ001203 | SOUTHERN CALIFORNIA EDISON               | 29250 LAKEVIEW AVE              | NUEVO            | 92567      | CO       | 8      | Inland  | 6/16/1994  |
| 90880  | AQ001208 | SOUTHERN CALIFORNIA EDISON               | MARVIN                          | LAKEVIEW         | 92367      | CO       | 8      | Inland  | 6/16/1994  |
| 29110  | AQ006049 | ORANGE COUNTY SANITATION DISTRICT        | 22212 BROOKHURST ST             | HUNTINGTON BEACH | 92646 8457 | CO       | 8      | Coastal | 2/16/2006  |
| 4477   | AQ001298 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD               | AVALON           | 90704      | CO       | 9      | Inland  | 6/16/1994  |
| 4477   | AQ001303 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD               | AVALON           | 90704      | CO       | 9      | Inland  | 6/16/1994  |
| 800074 | AQ004748 | LA CITY, DWP HAYNES GENERATING STATION   | 6801 2ND ST                     | LONG BEACH       | 90803 4324 | CO       | 9      | Coastal | 11/12/2002 |
| 84721  | AQ001321 | HUNTINGTON BEACH CO                      | 20031 GOLDENWEST ST             | HUNTINGTON BEACH | 92648      | CO       | 10     | Coastal | 6/21/1994  |
| 16639  | AQ002458 | SHULTZ STEEL CO                          | 5321 FIRESTONE BLVD             | SOUTH GATE       | 90280 3699 | CO       | 10     | Coastal | 8/20/1998  |
| 346    | AQ003184 | FRITO-LAY NORTH AMERICA, INC.            | 9535 ARCHIBALD AVE              | RANCHO CUCAMON   | 91730 5737 | CO       | 10     | Coastal | 9/29/2000  |
| 131003 | AQ004893 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD           | CARSON           | 90745 6121 | CO       | 11     | Coastal | 3/7/2003   |
| 91182  | AQ001213 | SOUTHERN CALIFORNIA EDISON COMPANY       | 1 MILE SOUTH OF HWY 74          | ROMOLAND         | 92585      | CO       | 11     | Inland  | 6/16/1994  |
| 4477   | AQ001232 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD               | AVALON           | 90704      | CO       | 16     | Inland  | 6/16/1994  |
| 58556  | AQ000855 | CROWN COACH INC                          | 13799 MONTE VISTA AVE           | CHINO            | 91710 5513 | CO       | 17     | Inland  | 8/25/1992  |
| 4477   | AQ001227 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD               | AVALON           | 90704      | CO       | 17     | Inland  | 6/16/1994  |
| 104017 | AQ005518 | AERA ENERGY LLC                          | 20101 GOLDENWEST ST             | HUNTINGTON BEACH | 92648 2628 | CO       | 18     | Coastal | 11/5/2004  |
| 800074 | AQ005560 | LA CITY, DWP HAYNES GENERATING STATION   | 6801 2ND ST                     | LONG BEACH       | 90803 4324 | CO       | 23     | Coastal | 12/16/2004 |
| 800183 | AQ005524 | PARAMOUNT PETR CORP (EIS USE)            | 14700-08 DOWNEY AVE             | PARAMOUNT        | 90723 4526 | CO       | 26     | Coastal | 11/19/2004 |
| 800183 | AQ005525 | PARAMOUNT PETR CORP (EIS USE)            | 14700-08 DOWNEY AVE             | PARAMOUNT        | 90723 4526 | CO       | 28     | Coastal | 11/19/2004 |
| 800183 | AQ005632 | PARAMOUNT PETR CORP (EIS USE)            | 14700-08 DOWNEY AVE             | PARAMOUNT        | 90723 4526 | CO       | 28     | Coastal | 2/10/2005  |
| 104017 | AQ005680 | AERA ENERGY LLC                          | 20101 GOLDENWEST ST             | HUNTINGTON BEACH | 92648 2628 | CO       | 28     | Coastal | 3/8/2005   |
| 13930  | AQ002061 | COMMERCIAL ENAMELING CO                  | 6200-04 S ALAMEDA ST            | HUNTINGTON PARK  | 90255 3503 | CO       | 30     | Coastal | 7/1/1997   |
| 800030 | AQ003171 | CHEVRON PRODUCTS CO.                     | 324 W EL SEGUNDO BLVD           | EL SEGUNDO       | 90245 3680 | CO       | 37     | Coastal | 9/1/2000   |
| 800305 | AQ001442 | UCLA                                     | 705 SO DR                       | LOS ANGELES      | 90024 8315 | CO       | 40     | Coastal | 4/19/1995  |
| 90881  | AQ001198 | SOUTHERN CALIFORNIA EDISON               | ON RESERVIOR                    | LAKEVIEW         | 92367      | CO       | 58     | Inland  | 6/16/1994  |
| 4477   | AQ001237 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD               | AVALON           | 90704      | CO       | 64     | Inland  | 6/16/1994  |
| 101337 | AQ006044 | NATIONAL OFFSETS                         | 6251 PARAMOUNT BLVD             | LONG BEACH       | 90248      | CO       | 65     | Coastal | 2/16/2006  |
| 44758  | AQ005036 | LA CITY, DWP                             | 111 N HOPE ST                   | LONG ANGELES     | 90012      | CO       | 70     | Coastal | 7/18/2003  |
| 29110  | AQ006046 | ORANGE COUNTY SANITATION DISTRICT        | 22212 BROOKHURST ST             | HUNTINGTON BEACH | 92646 8457 | CO       | 73     | Coastal | 2/16/2006  |
| 800028 | AQ003145 | CHEVRON CHEM CO, PETROCHEM DIV (EIS USE) | 3344 E MEDFORD ST               | LOS ANGELES      | 90063 2582 | CO       | 75     | Coastal | 8/8/2000   |
| 131003 | AQ004892 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD           | CARSON           | 90745 6121 | CO       | 77     | Coastal | 3/7/2003   |
| 800026 | AQ004080 | ULTRAMAR INC (NSR USE ONLY)              | 2402 E ANAHEIM ST               | WILMINGTON       | 90744      | CO       | 79     | Coastal | 7/18/2001  |
| 800362 | AQ002528 | CONOCOPHILLIPS COMPANY                   | 1520 E SEPULVEDA BLVD           | CARSON           | 90745      | CO       | 82     | Coastal | 12/18/1998 |
| 800170 | AQ004369 | LA CITY, DWP HARBOR GENERATING STATION   | 161 N ISLAND AVE                | WILMINGTON       | 90744 6303 | CO       | 98     | Coastal | 1/25/2002  |
| 87798  | AQ000787 | US GOV'T, AIR FORCE DEPT, MARCH AFB      | 1601 W 7TH ST                   | LONG BEACH       | 90813      | CO       | 115    | Coastal | 2/27/1992  |
| 91097  | AQ001325 | ULTRAMAR INC                             | 850 S SEPULVEDA BLVD            | EL SEGUNDO       | 90245      | CO       | 151    | Coastal | 6/23/1994  |
| 14926  | AQ005017 | SEMPRA ENERGY (THE GAS CO)               | 1801 S ATLANTIC BLVD            | MONTEREY PARK    | 91754 5298 | CO       | 202    | Coastal | 7/8/2003   |
| 104017 | AQ006034 | AERA ENERGY LLC                          | 20101 GOLDENWEST ST             | HUNTINGTON BEACH | 92648 2628 | CO       | 209    | Coastal | 2/14/2006  |
| 104017 | AQ005086 | AERA ENERGY LLC                          | 20101 GOLDENWEST ST             | HUNTINGTON BEACH | 92648 2628 | CO       | 310    | Coastal | 9/5/2003   |
| 41016  | AQ000026 | SEL-REX, DIV OMI INTL CORP               | 20801 NORDHOFF ST               | CHATSWORTH       | 91311      | NOX      | 1      | Coastal | 12/17/1990 |
| 53366  | AQ000084 | ENVIRONMENTAL METALS CORP                | 2950 E LA JOLLA                 | ANAHEIM          | 92806 1307 | NOX      | 1      | Coastal | 12/17/1990 |
| 22940  | AQ000090 | EASTERN MUN WATER DIST                   | SOUTH MURRIETA RD               | SUN CITY         | 92585      | NOX      | 1      | Inland  | 12/17/1990 |
| 13488  | AQ000316 | GCG CORP                                 | 608 RUBERTA AVE                 | GLENDALE         | 91201 2335 | NOX      | 1      | Coastal | 6/4/1991   |
| 88481  | AQ000788 | US GOV'T AIR FORCE DEPT,MARCH AIR F BASE | 24501 S FIGUEROA ST             | CARSON           | 90745      | NOX      | 1      | Coastal | 2/27/1992  |
| 37601  | AQ002724 | CENVEO ANDERSON LITHOGRAPH               | 3217 S GARFIELD AVE             | LOS ANGELES      | 90040 3219 | NOX      | 1      | Coastal | 8/3/1999   |
| 100154 | AQ002998 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR           | MECCA            | 92254 0758 | NOX      | 1      | Inland  | 3/8/2000   |
| 100154 | AQ003000 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR           | MECCA            | 92254 0758 | NOX      | 1      | Inland  | 3/8/2000   |
| 121727 | AQ005166 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                 | LONG BEACH       | 90805      | NOX      | 1      | Coastal | 11/13/2003 |
| 29110  | AQ005869 | ORANGE COUNTY SANITATION DISTRICT        | 22212 BROOKHURST ST             | HUNTINGTON BEACH | 92646 8457 | NOX      | 1      | Coastal | 9/14/2005  |

Table 8.1F-2  
LIST OF ACTIVE SCAQMD ERCs - MARCH 2006

| FAC ID | ERC NBR  | COMPANY NAME                             | ADDRESS                        | CITY               | ZIP        | EMITTANT | AMOUNT | Zone    | ISSUED     |
|--------|----------|------------------------------------------|--------------------------------|--------------------|------------|----------|--------|---------|------------|
| 101337 | AQ006004 | NATIONAL OFFSETS                         | 6251 PARAMOUNT BLVD            | LONG BEACH         | 90248      | NOX      | 1      | Coastal | 1/4/2006   |
| 144736 | AQ006057 | GREENWOOD ENTERPRISES                    | VARIOUS LOCATIONS IN SCAQMD    | DIAMOND BAR        | 91765      | NOX      | 1      | Coastal | 2/17/2006  |
| 5595   | AQ000055 | MAGIC CHEF, DIV MAGIC CHEF INC           | 245 N VINELAND AVE             | CITY OF INDUSTRY   | 91746 2319 | NOX      | 2      | Inland  | 12/17/1990 |
| 4882   | AQ000070 | KLP A GENLYTE CO                         | 13100 MARLAY AVE               | FONTANA            | 92335 6995 | NOX      | 2      | Inland  | 12/17/1990 |
| 90953  | AQ001250 | SOUTHERN CALIFORNIA EDISON               | 1 MI NW OF 17TH ST             | UPLAND             | 91786      | NOX      | 2      | Inland  | 6/16/1994  |
| 89176  | AQ001265 | SOUTHERN CALIFORNIA EDISON CO            | 1404 E CORAK ST                | BALDWIN PARK       | 91706      | NOX      | 2      | Inland  | 6/16/1994  |
| 21872  | AQ002058 | TROJAN BATTERY CO                        | 9440 ANN ST                    | SANTA FE SPRINGS   | 90670 2614 | NOX      | 2      | Coastal | 7/1/1997   |
| 37601  | AQ002726 | CENVEO ANDERSON LITHOGRAPH               | 3217 S GARFIELD AVE            | LOS ANGELES        | 90040 3219 | NOX      | 2      | Coastal | 8/5/1999   |
| 100154 | AQ002997 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 2      | Inland  | 3/8/2000   |
| 100154 | AQ002999 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 2      | Inland  | 3/8/2000   |
| 9305   | AQ000033 | FORTIFIBER CORP                          | 4489 BANDINI BLVD              | LOS ANGELES        | 90023 4777 | NOX      | 3      | Coastal | 12/17/1990 |
| 11920  | AQ000063 | US GOVT, GEN SERV ADM                    | 312 N SPRING ST                | LOS ANGELES        | 90012 4701 | NOX      | 3      | Coastal | 12/17/1990 |
| 10766  | AQ000175 | ALCO PACIFIC INC                         | 16908-32 S BROADWAY            | CARSON             | 90248      | NOX      | 3      | Coastal | 5/22/1991  |
| 54771  | AQ000603 | LAS VIRGENES MUNICIPAL WATER DISTRICT    | 23915 W AGOURA RD              | AGOURA HILLS       | 91301      | NOX      | 3      | Coastal | 8/1/1991   |
| 100154 | AQ002172 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 3      | Inland  | 11/18/1997 |
| 29110  | AQ005868 | ORANGE COUNTY SANITATION DISTRICT        | 22212 BROOKHURST ST            | HUNTINGTON BEACH   | 92646 8457 | NOX      | 3      | Coastal | 9/14/2005  |
| 145495 | AQ005906 | PACIFIC ENERGY GROUP LLC                 | 5900 CHERRY AVE                | LONG BEACH         | 90805      | NOX      | 3      | Coastal | 10/11/2005 |
| 100154 | AQ003001 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 4      | Inland  | 3/8/2000   |
| 100154 | AQ003002 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 4      | Inland  | 3/8/2000   |
| 100154 | AQ003003 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 4      | Inland  | 3/8/2000   |
| 100154 | AQ003004 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 4      | Inland  | 3/8/2000   |
| 100154 | AQ003005 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 4      | Inland  | 3/8/2000   |
| 121727 | AQ005165 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                | LONG BEACH         | 90805      | NOX      | 4      | Coastal | 11/13/2003 |
| 121727 | AQ005528 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                | LONG BEACH         | 90805      | NOX      | 4      | Coastal | 11/24/2004 |
| 37768  | AQ005950 | TOYOTA MOTOR SALES,U.S.A. INC            | 19001 S WESTERN AVE            | TORRANCE           | 90501      | NOX      | 4      | Coastal | 11/9/2005  |
| 121727 | AQ005164 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                | LONG BEACH         | 90805      | NOX      | 5      | Coastal | 11/13/2003 |
| 101337 | AQ005958 | NATIONAL OFFSETS                         | 6251 PARAMOUNT BLVD            | LONG BEACH         | 90248      | NOX      | 5      | Coastal | 11/10/2005 |
| 84721  | AQ001320 | HUNTINGTON BEACH CO                      | 20031 GOLDENWEST ST            | HUNTINGTON BEACH   | 92648      | NOX      | 6      | Coastal | 6/21/1994  |
| 15507  | AQ001792 | CALIFORNIA STATE UNIVERSITY, FULLERTON   | 800 N STATE COLLEGE BLVD       | FULLERTON          | 92831      | NOX      | 6      | Coastal | 10/18/1996 |
| 100154 | AQ002996 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 6      | Inland  | 3/8/2000   |
| 133632 | AQ004621 | COMMANDER NAVY REGION SOUTHWEST          | VARIOUS LOCATIONS IN SCAQMD    | COMMERCE           | 90040      | NOX      | 6      | Coastal | 8/16/2002  |
| 15794  | AQ004996 | NISSIN FOODS (USA) CO., INC.             | 2001 W ROSECRANS AVE           | GARDENA            | 90249 2994 | NOX      | 6      | Coastal | 6/19/2003  |
| 121727 | AQ005163 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                | LONG BEACH         | 90805      | NOX      | 6      | Coastal | 11/13/2003 |
| 100154 | AQ005844 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 6      | Inland  | 8/30/2005  |
| 105903 | AQ005495 | PRIME WHEEL                              | 17704 S BROADWAY ST            | CARSON             | 90746      | NOX      | 7      | Coastal | 10/5/2004  |
| 100154 | AQ005862 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 7      | Coastal | 9/7/2005   |
| 100154 | AQ002129 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 10     | Coastal | 9/9/1997   |
| 29110  | AQ005865 | ORANGE COUNTY SANITATION DISTRICT        | 22212 BROOKHURST ST            | HUNTINGTON BEACH   | 92646 8457 | NOX      | 10     | Coastal | 9/8/2005   |
| 800051 | AQ000623 | ARCO TERMINAL SERVICES CORPORATION       | 5905 PARAMOUNT BLVD            | LONG BEACH         | 90805      | NOX      | 12     | Coastal | 8/16/1991  |
| 56906  | AQ004658 | ROYALWEVE CARPET MILLS INC               | 2310 E 52ND ST                 | LOS ANGELES        | 90058 0285 | NOX      | 12     | Coastal | 9/12/2002  |
| 121727 | AQ005527 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                | LONG BEACH         | 90805      | NOX      | 14     | Coastal | 11/24/2004 |
| 89032  | AQ000686 | US GOVT, AIR FORCE DEPT, MARCH AFB       | 2700 TWEEDY BLVD               | SOUTH GATE         | 90280      | NOX      | 15     | Coastal | 12/3/1991  |
| 114458 | AQ004898 | ALL AMERICAN ASPHALT                     | 454 N MCPHERSON AVE            | ORANGE             | 92869      | NOX      | 15     | Coastal | 3/12/2003  |
| 100154 | AQ005843 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 15     | Inland  | 8/26/2005  |
| 121727 | AQ005162 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                | LONG BEACH         | 90805      | NOX      | 17     | Coastal | 11/13/2003 |
| 101337 | AQ005976 | NATIONAL OFFSETS                         | 6251 PARAMOUNT BLVD            | LONG BEACH         | 90248      | NOX      | 20     | Inland  | 12/8/2005  |
| 121727 | AQ005161 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                | LONG BEACH         | 90805      | NOX      | 21     | Coastal | 11/13/2003 |
| 37601  | AQ003027 | CENVEO ANDERSON LITHOGRAPH               | 3217 S GARFIELD AVE            | LOS ANGELES        | 90040 3219 | NOX      | 24     | Coastal | 3/21/2000  |
| 87798  | AQ002563 | US GOVT, AIR FORCE DEPT, MARCH AFB       | 1601 W 7TH ST                  | LONG BEACH         | 90813      | NOX      | 25     | Coastal | 2/11/1999  |
| 100154 | AQ005216 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 27     | Coastal | 1/14/2004  |
| 100154 | AQ005842 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 30     | Inland  | 9/1/1993   |
| 130231 | AQ005975 | CORAL ENERGY RESOURCES, LP               | VARIOUS LOCATIONS IN SCAQMD    | DIAMOND BAR        | 91765      | NOX      | 31     | Inland  | 12/7/2005  |
| 14966  | AQ000047 | U S GOVT, V A MEDICAL CENTER, WEST L A   | 11301 WILSHIRE BLVD            | LOS ANGELES        | 90073      | NOX      | 40     | Coastal | 12/17/1990 |
| 29110  | AQ005864 | ORANGE COUNTY SANITATION DISTRICT        | 22212 BROOKHURST ST            | HUNTINGTON BEACH   | 92646 8457 | NOX      | 40     | Coastal | 9/8/2005   |
| 121727 | AQ005160 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                | LONG BEACH         | 90805      | NOX      | 44     | Coastal | 11/13/2003 |
| 89632  | AQ000716 | U S GOVT AIR FORCE DEPT, MAFB            | 20101 GOLDEN WEST ST           | HUNTINGTON BEACH   | 92648      | NOX      | 49     | Coastal | 1/27/1992  |
| 100154 | AQ005228 | COLMAC ENERGY INC                        | 62-300 GENE WELMAS DR          | MECCA              | 92254 0758 | NOX      | 70     | Coastal | 1/29/2004  |
| 101337 | AQ005967 | NATIONAL OFFSETS                         | 6251 PARAMOUNT BLVD            | LONG BEACH         | 90248      | NOX      | 70     | Coastal | 12/2/2005  |
| 800305 | AQ001440 | UCLA                                     | 705 SO DR                      | LOS ANGELES        | 90024 8315 | NOX      | 75     | Coastal | 4/19/1995  |
| 121727 | AQ005158 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                | LONG BEACH         | 90805      | NOX      | 77     | Coastal | 11/13/2003 |
| 121727 | AQ005159 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                | LONG BEACH         | 90805      | NOX      | 115    | Coastal | 11/13/2003 |
| 121727 | AQ005157 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                | LONG BEACH         | 90805      | NOX      | 157    | Coastal | 11/13/2003 |
| 76386  | AQ000016 | BOSTIK INC                               | 500 W 17TH ST                  | LONG BEACH         | 90813 1514 | PM10     | 1      | Coastal | 12/17/1990 |
| 2185   | AQ000022 | BLUE DAISY CEMENT PROD. INC              | 306 & 314 E COMPTON BLVD       | GARDENA            | 90247      | PM10     | 1      | Coastal | 12/17/1990 |
| 21906  | AQ000065 | AJAX CEMENT CO INC                       | 4850 E LA PALMA AVE            | ANAHEIM            | 92807      | PM10     | 1      | Coastal | 12/17/1990 |
| 36254  | AQ000076 | CHEVRON U.S.A. INC, PLACERITA 26         | PLACERITA CYN SEC 6 RD         | LOS ANGELES COUNTY |            | PM10     | 1      | Coastal | 12/17/1990 |
| 395    | AQ000182 | FIBERITE, INC.                           | 645-691 N CYPRESS              | ORANGE             | 92666      | PM10     | 1      | Coastal | 5/22/1991  |
| 10955  | AQ000267 | DANCO METAL SURFACING, ANOMIL ENT., INC. | 36-44 LA PORTE ST              | ARCADIA            | 91006      | PM10     | 1      | Inland  | 6/4/1991   |
| 8980   | AQ000365 | ARCO (EIS USE)                           | 1801 E SEPULVEDA BLVD          | CARSON             | 90745      | PM10     | 1      | Coastal | 6/10/1991  |
| 39790  | AQ000553 | R-C ENVIRONMENTAL SERVICES & TECH.       | 1306 E EDINGER SUITE B         | SANTA ANA          | 92705      | PM10     | 1      | Coastal | 7/10/1991  |
| 800051 | AQ000624 | ARCO TERMINAL SERVICES CORPORATION       | 5905 PARAMOUNT BLVD            | LONG BEACH         | 90805      | PM10     | 1      | Coastal | 8/16/1991  |
| 6042   | AQ000670 | BARKEN'S HARDCHROME INC                  | 239 E GREENLEAF BLVD           | COMPTON            | 90220 4992 | PM10     | 1      | Coastal | 10/17/1991 |
| 12170  | AQ000777 | VACCO INDUSTRIES                         | 10350 VACCO ST                 | SOUTH EL MONTE     | 91733 3399 | PM10     | 1      | Inland  | 2/24/1992  |
| 9729   | AQ000841 | PGP INDUSTRIES INC                       | 13429 ALONDRA BLVD/15600 RESIN | SANTA FE SPRINGS   | 90670 5696 | PM10     | 1      | Coastal | 6/3/1992   |
| 4477   | AQ001294 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD              | AVALON             | 90704      | PM10     | 1      | Inland  | 6/16/1994  |
| 3361   | AQ001418 | BEHR PROCESS CORP                        | 1603 W ALTON AVE               | SANTA ANA          | 92704 7258 | PM10     | 1      | Coastal | 1/12/1995  |
| 7416   | AQ002173 | PRAXAIR INC                              | 2300 E PACIFIC COAST HWY       | WILMINGTON         | 90744 2919 | PM10     | 1      | Coastal | 11/18/1997 |
| 8547   | AQ002788 | QUEMETCO INC                             | 720 S 7TH AVE                  | CITY OF INDUSTRY   | 91746 3124 | PM10     | 1      | Coastal | 9/17/1999  |
| 110982 | AQ002990 | COMMONWEALTH ALUMINUM CONCAST            | 2211 E CARSON ST               | LONG BEACH         | 90810      | PM10     | 1      | Coastal | 3/7/2000   |
| 128954 | AQ004145 | NRG POWER MARKETING, INC.                | VARIOUS LOCATIONS IN SCAQMD    | DIAMOND BAR        | 91765      | PM10     | 1      | Coastal | 8/14/2001  |
| 3417   | AQ004153 | AIR PROD & CHEM INC                      | 23300 S ALAMEDA ST             | CARSON             | 90810 1921 | PM10     | 1      | Coastal | 8/21/2001  |
| 21887  | AQ004401 | KIMBERLY-CLARK WORLDWIDE INC.-FLTN MILL  | 2001 E ORANGETHORPE AVE        | FULLERTON          | 92831      | PM10     | 1      | Coastal | 2/19/2002  |
| 119907 | AQ004608 | BERRY PETROLEUM COMPANY                  | 25121 N SIERRA HWY             | SANTA CLARITA      | 91321 2007 | PM10     | 1      | Coastal | 8/9/2002   |
| 136516 | AQ005117 | BLACKSAND PARTNERS LP                    | 500 N KRAEMER BLVD             | BREA               | 92821      | PM10     | 1      | Coastal | 9/26/2003  |
| 121727 | AQ005445 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                | LONG BEACH         | 90805      | PM10     | 1      | Coastal | 7/20/2004  |
| 145464 | AQ005903 | SES TERMINAL LLC                         | PIER T, BERTH T126             | LONG BEACH         | 90802      | PM10     | 1      | Coastal | 10/6/2005  |
| 8582   | AQ005910 | SO CAL GAS CO/PLAYA DEL REY STORAGE FACI | 8141 GULANA AVE                | PLAYA DEL REY      | 90293 7930 | PM10     | 1      | Coastal | 10/19/2005 |
| 101337 | AQ006077 | NATIONAL OFFSETS                         | 6251 PARAMOUNT BLVD            | LONG BEACH         | 90248      | PM10     | 1      | Coastal | 2/23/2006  |
| 16618  | AQ000071 | LNPI/CI ADVANCED MATERIALS               | 1831 E CARNEGIE                | SANTA ANA          | 92705 5502 | PM10     | 2      | Coastal | 12/17/1990 |
| 18508  | AQ000162 | AIR PROD & CHEM INC                      | 3305 E 26TH ST                 | LOS ANGELES        | 90023 4501 | PM10     | 2      | Coastal | 5/22/1991  |
| 22004  | AQ000197 | ORGAN-O-SIL FIBER CO INC                 | 17616 GOTHARD ST UNIT B        | HUNTINGTON BEACH   | 92648      | PM10     | 2      | Coastal | 5/22/1991  |
| 51779  | AQ000202 | MULTI-FINELINE ELECTRONIX INC            | 1301-31 N DYNAMICS ST          | ANAHEIM            | 92806 1901 | PM10     | 2      | Coastal | 5/22/1991  |
| 18773  | AQ000218 | SPECTRA-TONE PAINT CORP                  | 9635-43 KLINGERMAN ST          | SOUTH EL MONTE     | 91733      | PM10     | 2      | Inland  | 6/3/1991   |
| 12213  | AQ000228 | SIZE CONTROL PLATING CO INC              | 13349 E TEMPLE AVE             | LA PUENTE          | 91746 1580 | PM10     | 2      | Inland  | 6/3/1991   |
| 10510  | AQ000588 | GREGG INDUSTRIES INC                     | 10460 HICKSON ST               | EL MONTE           | 91731      | PM10     | 2      | Inland  | 7/30/1991  |
| 15507  | AQ001793 | CALIFORNIA STATE UNIVERSITY, FULLERTON   | 800 N STATE COLLEGE BLVD       | FULLERTON          | 92831      | PM10     | 2      | Coastal | 10/18/1996 |
| 46268  | AQ002617 | CALIFORNIA STEEL INDUSTRIES INC          | 14000 SAN BERNARDINO AVE       | FONTANA            | 92335 5259 | PM10     | 2      | Inland  | 4/1/1999   |
| 16639  | AQ002835 | SHULTZ STEEL CO                          | 5321 FIRESTONE BLVD            | SOUTH GATE         | 90280 3699 | PM10     | 2      | Inland  | 10/20/1999 |
| 124808 | AQ003349 | INNOVENE POLYPROPYLENE LLC               | 2384 E 223RD ST                | CARSON             | 90745      | PM10     | 2      | Coastal | 12/19/2000 |
| 124808 | AQ003445 | INNOVENE POLYPROPYLENE LLC               | 2384 E 223RD ST                | CARSON             | 90745      | PM10     | 2      | Coastal | 2/2/2001   |
| 128954 | AQ003462 | NRG POWER MARKETING, INC.                | VARIOUS LOCATIONS IN SCAQMD    | DIAMOND BAR        | 91765      | PM10     | 2      | Coastal | 2/7/2001   |
| 128954 | AQ003550 | NRG POWER MARKETING, INC.                | VARIOUS LOCATIONS IN SCAQMD    | DIAMOND BAR        | 91765      | PM10     | 2      | Coastal | 3/21/2001  |
| 128954 | AQ004326 | NRG POWER MARKETING, INC.                | VARIOUS LOCATIONS IN SCAQMD    | DIAMOND BAR        | 91765      | PM10     | 2      | Coastal | 12/27/2001 |

Table 8.1F-2  
LIST OF ACTIVE SCAQMD ERCs - MARCH 2006

| FAC ID | ERC NBR  | COMPANY NAME                             | ADDRESS                      | CITY             | ZIP        | EMITTANT | AMOUNT | Zone    | ISSUED     |
|--------|----------|------------------------------------------|------------------------------|------------------|------------|----------|--------|---------|------------|
| 141891 | AQ005512 | AES HIGHGROVE, LLC                       | 12700 TAYLOR ST              | GRAND TERRACE    | 92313      | PM10     | 2      | Inland  | 10/29/2004 |
| 17953  | AQ005636 | PACIFIC CLAY PRODUCTS INC                | 14741- 14641 LAKE ST         | LAKE ELSINORE    | 92530 1610 | PM10     | 2      | Inland  | 2/15/2005  |
| 110982 | AQ005729 | COMMONWEALTH ALUMINUM CONCAST            | 2211 E CARSON ST             | LONG BEACH       | 90810      | PM10     | 2      | Coastal | 5/5/2005   |
| 145464 | AQ005983 | SES TERMINAL LLC                         | PIER T, BERTH T126           | LONG BEACH       | 90802      | PM10     | 2      | Coastal | 12/14/2005 |
| 45597  | AQ000035 | PACIFIC TANK LTD                         | 1015 E ELM AVE               | FULLERTON        | 92631 5021 | PM10     | 3      | Coastal | 12/17/1990 |
| 35194  | AQ000092 | MONTCLAIR BRONZE INC                     | 5621 STATE ST                | MONTCLAIR        | 91763      | PM10     | 3      | Inland  | 12/17/1990 |
| 24647  | AQ000301 | J. B. I. INC                             | 18521- 18601S SANTA FE AVE   | COMPTON          | 90221 5624 | PM10     | 3      | Coastal | 6/4/1991   |
| 6345   | AQ000334 | V & M PLATING CO                         | 14024 S AVALON BLVD          | LOS ANGELES      | 90061 2692 | PM10     | 3      | Coastal | 6/4/1991   |
| 3873   | AQ000810 | LOCKHEED ADVANCED DEVELOPMENT CO         | 1705 VICTORY B 180/111 112   | BURBANK          | 91506      | PM10     | 3      | Coastal | 4/8/1992   |
| 4063   | AQ002481 | DAMERON ALLOY FOUNDRIES INC              | 927 S SANTA FE AVE           | COMPTON          | 90221      | PM10     | 3      | Coastal | 9/9/1998   |
| 800089 | AQ002818 | EXXONMOBIL OIL CORPORATION               | 3700 W 190TH ST              | TORRANCE         | 90504 5790 | PM10     | 3      | Coastal | 10/7/1999  |
| 128954 | AQ003568 | NRG POWER MARKETING, INC.                | VARIOUS LOCATIONS IN SCAQMD  | DIAMOND BAR      | 91765      | PM10     | 3      | Coastal | 4/3/2001   |
| 128954 | AQ004323 | NRG POWER MARKETING, INC.                | VARIOUS LOCATIONS IN SCAQMD  | DIAMOND BAR      | 91765      | PM10     | 3      | Coastal | 12/27/2001 |
| 125474 | AQ004408 | VERTEX MICROWAVE PRODUCT, VERTEX RSI/DBA | 3111 FUJITA ST               | TORRANCE         | 90505      | PM10     | 3      | Coastal | 3/1/2002   |
| 131003 | AQ004911 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD        | CARSON           | 90745 6121 | PM10     | 3      | Coastal | 3/28/2003  |
| 141891 | AQ005490 | AES HIGHGROVE, LLC                       | 12700 TAYLOR ST              | GRAND TERRACE    | 92313      | PM10     | 3      | Inland  | 9/9/2004   |
| 145464 | AQ005904 | SES TERMINAL LLC                         | PIER T, BERTH T126           | LONG BEACH       | 90802      | PM10     | 3      | Coastal | 10/6/2005  |
| 8873   | AQ000551 | ATCHISON, TOPEKA & SANTA FE RAILWAY CO   | 470 N L ST                   | SAN BERNARDINO   | 92411      | PM10     | 4      | Inland  | 7/10/1991  |
| 800016 | AQ000693 | BAKER COMMODITIES INC                    | 3848- 4100 BANDINI BLVD      | VERNON           | 90023 4532 | PM10     | 4      | Coastal | 12/10/1991 |
| 4477   | AQ001218 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD            | AVAILON          | 90704      | PM10     | 4      | Inland  | 6/16/1994  |
| 4477   | AQ001228 | SO CAL EDISON CO                         | 1 PEBBLY BEACH RD            | AVAILON          | 90704      | PM10     | 4      | Inland  | 6/16/1994  |
| 124808 | AQ003350 | INNOVENE POLYPROPYLENE LLC               | 2384 E 223RD ST              | CARSON           | 90745      | PM10     | 4      | Coastal | 12/19/2000 |
| 131003 | AQ004907 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD        | CARSON           | 90745 6121 | PM10     | 4      | Coastal | 3/21/2003  |
| 131003 | AQ004908 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD        | CARSON           | 90745 6121 | PM10     | 4      | Coastal | 3/21/2003  |
| 131003 | AQ004909 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD        | CARSON           | 90745 6121 | PM10     | 4      | Coastal | 3/21/2003  |
| 131003 | AQ004910 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD        | CARSON           | 90745 6121 | PM10     | 4      | Coastal | 3/21/2003  |
| 121727 | AQ005440 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE              | LONG BEACH       | 90805      | PM10     | 4      | Coastal | 7/13/2004  |
| 121727 | AQ005452 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE              | LONG BEACH       | 90805      | PM10     | 4      | Coastal | 7/22/2004  |
| 121727 | AQ005453 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE              | LONG BEACH       | 90805      | PM10     | 4      | Coastal | 7/22/2004  |
| 800183 | AQ005654 | PARAMOUNT PETR CORP (EIS USE)            | 14700-08 DOWNEY AVE          | PARAMOUNT        | 90723 4526 | PM10     | 4      | Coastal | 2/18/2005  |
| 13930  | AQ005726 | COMMERCIAL ENAMELING CO                  | 6200-04 S ALAMEDA ST         | HUNTINGTON PARK  | 90255 3503 | PM10     | 4      | Coastal | 5/5/2005   |
| 145464 | AQ005905 | SES TERMINAL LLC                         | PIER T, BERTH T126           | LONG BEACH       | 90802      | PM10     | 4      | Coastal | 10/6/2005  |
| 114458 | AQ005920 | ALL AMERICAN ASPHALT                     | 454 N MCPHERSON AVE          | ORANGE           | 92869      | PM10     | 4      | Coastal | 10/26/2005 |
| 3704   | AQ005947 | ALL AMERICAN ASPHALT, UNIT NO.01         | 1776 ALL AMERICAN WAY        | CORONA           | 92879      | PM10     | 4      | Coastal | 11/8/2005  |
| 3057   | AQ000215 | THOROCK METALS COMPANY INC               | 431 E WEBER AVE              | COMPTON          | 90222 1424 | PM10     | 5      | Coastal | 5/28/1991  |
| 94237  | AQ004084 | ULTRAMAR INC                             | 1401 WATER ST                | LONG BEACH       | 90802      | PM10     | 5      | Coastal | 7/22/2001  |
| 128954 | AQ004322 | NRG POWER MARKETING, INC.                | VARIOUS LOCATIONS IN SCAQMD  | DIAMOND BAR      | 91765      | PM10     | 5      | Coastal | 12/27/2001 |
| 56906  | AQ004659 | ROYALWEVE CARPET MILLS INC               | 2310 E 52ND ST               | LOS ANGELES      | 90058 0285 | PM10     | 5      | Coastal | 9/12/2002  |
| 108701 | AQ005668 | SAINT-GOBAIN CONTAINERS, INC.            | 4000 ARDEN DR                | EL MONTE         | 91731 1806 | PM10     | 5      | Inland  | 2/24/2005  |
| 14966  | AQ000049 | U S GOV'T, V A MEDICAL CENTER, WEST L A  | 11301 WILSHIRE BLVD          | LOS ANGELES      | 90073      | PM10     | 6      | Coastal | 12/17/1990 |
| 128954 | AQ003352 | NRG POWER MARKETING, INC.                | VARIOUS LOCATIONS IN SCAQMD  | DIAMOND BAR      | 91765      | PM10     | 6      | Coastal | 12/21/2000 |
| 14855  | AQ004254 | MILLER BREWING CO                        | 15801 E 1ST ST               | IRVINDALE        | 91706 2069 | PM10     | 7      | Inland  | 10/26/2001 |
| 3968   | AQ005213 | TABC, INC                                | 6375 PARAMOUNT BLVD          | LONG BEACH       | 90805 3301 | PM10     | 7      | Coastal | 1/8/2004   |
| 141891 | AQ005489 | AES HIGHGROVE, LLC                       | 12700 TAYLOR ST              | GRAND TERRACE    | 92313      | PM10     | 7      | Inland  | 9/9/2004   |
| 5875   | AQ000220 | MONIER LIFELITE                          | 3511 N RIVERSIDE AVE         | RIALTO           | 92376 1599 | PM10     | 8      | Inland  | 6/3/1991   |
| 10055  | AQ005917 | G-P GYPSUM CORP                          | 1401 PIER D ST               | LONG BEACH       | 90802 1091 | PM10     | 8      | Coastal | 10/20/2005 |
| 800088 | AQ000512 | 3M COMPANY                               | 18750 MINNESOTA RD           | CORONA           | 92882      | PM10     | 10     | Inland  | 7/6/1991   |
| 800153 | AQ000958 | US GOVT, NAVY DEPT LB SHIPYARD           | LONG BEACH NAVAL SHIPYARD    | LONG BEACH       | 90822 5077 | PM10     | 10     | Coastal | 6/29/1993  |
| 800150 | AQ002747 | US GOVT, AF DEPT, MARCH AIR RESERVE BASE | MARCH AFB                    | RIVERSIDE        | 92518      | PM10     | 10     | Coastal | 8/11/1999  |
| 2942   | AQ004061 | BARRY CONTROLS 093399                    | 2323 VALLEY ST               | BURBANK          | 91505 1336 | PM10     | 10     | Coastal | 7/11/2001  |
| 47232  | AQ002437 | ARCO CQC KILN                            | 1175 CARRACK AVE             | WILMINGTON       | 90744      | PM10     | 11     | Coastal | 7/16/1998  |
| 1159   | AQ000394 | TEXACO'S MONTEBELLO TECHNOLOGY CENTER    | 329 N DUFFEE AVE             | SOUTH EL MONTE   | 91733      | PM10     | 12     | Inland  | 6/15/1991  |
| 16978  | AQ000342 | CLOUGHERTY PACKING CO, FARMER JOHN MEATS | 3049 E VERNON AVE            | VERNON           | 90058 1882 | PM10     | 13     | Coastal | 6/4/1991   |
| 35302  | AQ004119 | OWENS CORNING                            | 1501 N TAMARIND AVE          | COMPTON          | 90222 4130 | PM10     | 14     | Coastal | 7/31/2001  |
| 800030 | AQ004940 | CHEVRON PRODUCTS CO.                     | 324 W EL SEGUNDO BLVD        | EL SEGUNDO       | 90245 3680 | PM10     | 14     | Coastal | 4/9/2003   |
| 131003 | AQ005936 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD        | CARSON           | 90745 6121 | PM10     | 14     | Coastal | 11/2/2005  |
| 44758  | AQ004085 | LA CITY, DWP                             | 111 N HOPE ST                | LOS ANGELES      | 90012      | PM10     | 15     | Coastal | 7/22/2001  |
| 104017 | AQ001171 | AERA ENERGY LLC                          | 20101 GOLDENWEST ST          | HUNTINGTON BEACH | 92648 2628 | PM10     | 18     | Coastal | 6/1/1994   |
| 800026 | AQ002842 | ULTRAMAR INC (NSR USE ONLY)              | 2402 E ANAHEIM ST            | WILMINGTON       | 90744      | PM10     | 18     | Coastal | 10/29/1999 |
| 800362 | AQ002530 | CONOCOPHILLIPS COMPANY                   | 1520 E SEPULVEDA BLVD        | CARSON           | 90745      | PM10     | 19     | Coastal | 12/18/1998 |
| 95156  | AQ001326 | ULTRAMAR INC                             | 6251 N PARAMOUNT BLVD        | LONG BEACH       | 90805      | PM10     | 20     | Coastal | 6/23/1994  |
| 800305 | AQ001443 | UCLA                                     | 705 SO DR                    | LOS ANGELES      | 90024 8315 | PM10     | 20     | Coastal | 4/19/1995  |
| 117006 | AQ002716 | EQUILON ENTERPRISES, LLC                 | 20945 S WILMINGTON AVE       | CARSON           | 90749      | PM10     | 20     | Coastal | 7/23/1999  |
| 800149 | AQ005884 | US BORAX INC                             | 300 FALCON ST                | WILMINGTON       | 90744 6495 | PM10     | 20     | Coastal | 9/20/2005  |
| 800182 | AQ004029 | RIVERSIDE CEMENT CO (EIS USE)            | 1500 RUBIDOUX BLVD           | RIVERSIDE        | 92509 1841 | PM10     | 21     | Inland  | 5/29/2001  |
| 800074 | AQ004756 | LA CITY, DWP HAYNES GENERATING STATION   | 6801 2ND ST                  | LONG BEACH       | 90803 4324 | PM10     | 31     | Coastal | 11/12/2002 |
| 101521 | AQ001173 | ULTRAMAR INC                             | 420 HENRY FORD AVE           | WILMINGTON       | 90744      | PM10     | 102    | Coastal | 6/1/1994   |
| 131003 | AQ004894 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD        | CARSON           | 90745 6121 | PM10     | 114    | Coastal | 3/7/2003   |
| 77468  | AQ000023 | ACTION CRANE MAINTENANCE                 | 13477 YORBA AVE              | CHINO            | 91710 5055 | ROG      | 1      | Inland  | 12/17/1990 |
| 5143   | AQ000045 | SOUTH BAY PETR CO                        | 5899 W IMPERIAL HWY          | LOS ANGELES      | 90009      | ROG      | 1      | Coastal | 12/17/1990 |
| 50242  | AQ000051 | REMET CORP                               | 16511 KNOTT AVE              | LA MIRADA        | 90638 6011 | ROG      | 1      | Coastal | 12/17/1990 |
| 29549  | AQ000066 | FOUR MEDIA LABORATORY                    | 3611 SAN FERNANDO RD         | BURBANK          | 91505 1043 | ROG      | 1      | Coastal | 12/17/1990 |
| 61546  | AQ000086 | K T INDUSTRIES INC                       | 3203 FLETCHER DR             | LOS ANGELES      | 90065 2919 | ROG      | 1      | Coastal | 12/17/1990 |
| 64362  | AQ000087 | BREA CANON OIL CO INC                    | 17001 E CARBON CANYON RD     | BREA             | 92621 6903 | ROG      | 1      | Coastal | 12/17/1990 |
| 22940  | AQ000089 | EASTERN MUN WATER DIST                   | SOUTH MURRIETA RD            | SUN CITY         | 92585      | ROG      | 1      | Inland  | 12/17/1990 |
| 9126   | AQ000094 | ENGINEERED FIBERGLASS INC                | 3122 S RIVERSIDE AVE         | RIALTO           | 92376      | ROG      | 1      | Inland  | 12/17/1990 |
| 83891  | AQ000198 | HARTMAN INDUSTRIES INC                   | 2424 PORTER ST               | LOS ANGELES      | 90021 2598 | ROG      | 1      | Coastal | 5/22/1991  |
| 78364  | AQ000213 | PACIFIC ENERGY RESOURCES                 | 1065 W PIER E ST             | LONG BEACH       | 90802      | ROG      | 1      | Coastal | 5/22/1991  |
| 16978  | AQ000338 | CLOUGHERTY PACKING CO, FARMER JOHN MEATS | 3049 E VERNON AVE            | VERNON           | 90058 1882 | ROG      | 1      | Coastal | 6/4/1991   |
| 14928  | AQ000374 | ENERGY & ENVIRONMENTAL RESEARCH CORP     | 8001 IRVINE BLVD             | SANTA ANA        | 92705      | ROG      | 1      | Coastal | 6/15/1991  |
| 18074  | AQ000748 | FOASBERG LAUNDRY & CLEANERS INC          | 640 E WARDLOW RD             | LONG BEACH       | 90807 4696 | ROG      | 1      | Coastal | 2/3/1992   |
| 79087  | AQ000819 | LEWIS CLEANERS                           | 4945 WARNER AVE              | HUNTINGTON BEACH | 92649 4406 | ROG      | 1      | Coastal | 4/8/1992   |
| 62223  | AQ000858 | CONDI, A DIV. OF AMERICAN SEATING CO.    | 1965 E VISTA BELLA WAY       | COMPTON          | 90220 6106 | ROG      | 1      | Coastal | 10/14/1992 |
| 93418  | AQ001176 | GRANITE CONSTRUCTION COMPANY             | 38-155 MONROE ST             | INDIO            | 92201      | ROG      | 1      | Inland  | 6/8/1994   |
| 90882  | AQ001190 | SOUTHERN CALIFORNIA EDISON               | BRIDGE AND RAMONA EXPRESSWAY | SAN JACINTO      | 92367      | ROG      | 1      | Inland  | 6/16/1994  |
| 90881  | AQ001195 | SOUTHERN CALIFORNIA EDISON               | ON RESERVIOR                 | LAKEVIEW         | 92367      | ROG      | 1      | Inland  | 6/16/1994  |
| 90879  | AQ001200 | SOUTHERN CALIFORNIA EDISON               | 29250 LAKEVIEW AVE           | NUERO            | 92567      | ROG      | 1      | Inland  | 6/16/1994  |
| 91182  | AQ001210 | SOUTHERN CALIFORNIA EDISON COMPANY       | 1 MILE SOUTH OF HWY 74       | ROMOLAND         | 92585      | ROG      | 1      | Inland  | 6/16/1994  |
| 1561   | AQ001333 | TEXACO EXPLORATION AND PRODUCTION, INC.  | BUENA                        | PLACENTIA        | 92670      | ROG      | 1      | Coastal | 6/27/1994  |
| 23451  | AQ001378 | HINDERLITER HEAT TREATING INC            | 1025 N PAULINE ST            | ANAHEIM          | 92801 2553 | ROG      | 1      | Coastal | 9/22/1994  |
| 800144 | AQ001586 | UNION OIL CO OF CAL (NSR USE ONLY)       | 1660 W ANAHEIM ST 1480 W ANA | WILMINGTON       | 90744 2304 | ROG      | 1      | Inland  | 4/26/1996  |
| 88178  | AQ001592 | UNION OIL OF CALIFORNIA                  | 301 N PALM CANYON DR         | PALM SPRINGS     | 92262      | ROG      | 1      | Inland  | 4/26/1996  |
| 800144 | AQ001661 | UNION OIL CO OF CAL (NSR USE ONLY)       | 1660 W ANAHEIM ST 1480 W ANA | WILMINGTON       | 90744 2304 | ROG      | 1      | Inland  | 4/26/1996  |
| 15507  | AQ001791 | CALIFORNIA STATE UNIVERSITY, FULLERTON   | 800 N STATE COLLEGE BLVD     | FULLERTON        | 92831      | ROG      | 1      | Coastal | 10/18/1996 |
| 61201  | AQ001851 | JAMES HARDIE BUILDING PRODUCTS INC       | 10901 ELM AVE                | FONTANA          | 92337 7348 | ROG      | 1      | Coastal | 1/2/1997   |
| 11119  | AQ001993 | THE GAS CO./ SEMPRA ENERGY               | 8101 S ROSEMEAD BLVD         | PICO RIVERA      | 90660      | ROG      | 1      | Coastal | 6/6/1997   |
| 800040 | AQ002165 | DOW CHEM U.S.A. (NSR USE)                | 305 HENRY FORD AVE           | LONG BEACH       | 90802 1037 | ROG      | 1      | Coastal | 10/23/1997 |
| 7416   | AQ002176 | PRAXAIR INC                              | 2300 E PACIFIC COAST HWY     | WILMINGTON       | 90744 2919 | ROG      | 1      | Coastal | 11/18/1997 |
| 800144 | AQ002194 | UNION OIL CO OF CAL (NSR USE ONLY)       | 1660 W ANAHEIM ST 1480 W ANA | WILMINGTON       | 90744 2304 | ROG      | 1      | Inland  | 12/9/1997  |
| 46268  | AQ002423 | CALIFORNIA STEEL INDUSTRIES INC          | 14000 SAN BERNARDINO AVE     | FONTANA          | 92335 5259 | ROG      | 1      | Coastal | 6/9/1998   |
| 18241  | AQ002499 | PACIFIC STEEL TREATING CO                | 6829 FARMDALE AVE            | NORTH HOLLYWOOD  | 91605 6292 | ROG      | 1      | Coastal | 11/10/1998 |
| 38519  | AQ002503 | LAGUNA HILLS CARWASH, B SCHERRER CORP    | 24795 ALICIA PKY             | LAGUNA HILLS     | 92653      | ROG      | 1      | Coastal | 11/18/1998 |
| 118690 | AQ002683 | MAGNETEK, INC.                           | 8966 MASON AVE               | CHATS WORTH      | 91311      | ROG      | 1      | Coastal | 6/11/1999  |

Table 8.1F-2  
LIST OF ACTIVE SCAQMD ERCs - MARCH 2006

| FAC ID | ERC NBR  | COMPANY NAME                             | ADDRESS                      | CITY              | ZIP        | EMITTANT | AMOUNT | Zone    | ISSUED     |
|--------|----------|------------------------------------------|------------------------------|-------------------|------------|----------|--------|---------|------------|
| 800363 | AQ002899 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST            | WILMINGTON        | 90744      | ROG      | 1      | Coastal | 1/4/2000   |
| 800363 | AQ002900 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST            | WILMINGTON        | 90744      | ROG      | 1      | Coastal | 1/4/2000   |
| 800363 | AQ002901 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST            | WILMINGTON        | 90744      | ROG      | 1      | Coastal | 1/4/2000   |
| 800363 | AQ002902 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST            | WILMINGTON        | 90744      | ROG      | 1      | Coastal | 1/4/2000   |
| 800363 | AQ002903 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST            | WILMINGTON        | 90744      | ROG      | 1      | Coastal | 1/6/2000   |
| 110982 | AQ002992 | COMMONWEALTH ALUMINUM CONCAST            | 2211 E CARSON ST             | LONG BEACH        | 90810      | ROG      | 1      | Coastal | 3/7/2000   |
| 103888 | AQ003156 | SARGENT FLETCHER INC                     | 9400 E FLAIR DR              | EL MONTE          | 91731 2909 | ROG      | 1      | Coastal | 8/8/2000   |
| 1206   | AQ003198 | ROYAL RUBBER & MFG CO                    | 5951 E FIRESTONE BLVD        | SOUTH GATE        | 90280 3795 | ROG      | 1      | Coastal | 10/10/2000 |
| 18455  | AQ003804 | ROYALTY CARPET MILLS INC                 | 17352 DERIAN AVE             | IRVINE            | 92614      | ROG      | 1      | Coastal | 5/19/2001  |
| 106009 | AQ004102 | VENOCO INC                               | 9865 OLYMPIC BLVD            | BEVERLY HILLS     | 90212 3760 | ROG      | 1      | Coastal | 7/27/2001  |
| 3417   | AQ004128 | AIR PROD & CHEM INC                      | 23300 S ALAMEDA ST           | CARSON            | 90810 1921 | ROG      | 1      | Coastal | 8/3/2001   |
| 42059  | AQ004142 | ARCO PROD CO/PRESTIGE STATIONS #5202     | 12502 HARBOR BLVD            | GARDEN GROVE      | 92640      | ROG      | 1      | Inland  | 8/10/2001  |
| 110982 | AQ004194 | COMMONWEALTH ALUMINUM CONCAST            | 2211 E CARSON ST             | LONG BEACH        | 90810      | ROG      | 1      | Inland  | 9/26/2001  |
| 800335 | AQ004259 | LA CITY, DEPT OF AIRPORT                 | 275 CENTER WAY               | LOS ANGELES       | 90045 5834 | ROG      | 1      | Coastal | 10/30/2001 |
| 48522  | AQ004553 | INTERNATIONAL RECTIFIER HEXFET AMERICA   | 41915 BUSINESS PARK DR       | TEMECULA          | 92590 3603 | ROG      | 1      | Coastal | 6/24/2002  |
| 60849  | AQ004558 | ARCO DLR                                 | 5777 HOLLYWOOD BLVD          | LOS ANGELES       | 90028      | ROG      | 1      | Coastal | 6/26/2002  |
| 127749 | AQ004631 | ULTRAMAR, INC                            | 1220 N ALAMEDA ST            | WILMINGTON        | 90744 2847 | ROG      | 1      | Coastal | 9/3/2002   |
| 127749 | AQ004633 | ULTRAMAR, INC                            | 1220 N ALAMEDA ST            | WILMINGTON        | 90744 2847 | ROG      | 1      | Coastal | 9/3/2002   |
| 127749 | AQ004635 | ULTRAMAR, INC                            | 1220 N ALAMEDA ST            | WILMINGTON        | 90744 2847 | ROG      | 1      | Coastal | 9/3/2002   |
| 127749 | AQ004637 | ULTRAMAR, INC                            | 1220 N ALAMEDA ST            | WILMINGTON        | 90744 2847 | ROG      | 1      | Coastal | 9/3/2002   |
| 127749 | AQ004639 | ULTRAMAR, INC                            | 1220 N ALAMEDA ST            | WILMINGTON        | 90744 2847 | ROG      | 1      | Coastal | 9/3/2002   |
| 127749 | AQ004641 | ULTRAMAR, INC                            | 1220 N ALAMEDA ST            | WILMINGTON        | 90744 2847 | ROG      | 1      | Coastal | 9/3/2002   |
| 127749 | AQ004643 | ULTRAMAR, INC                            | 1220 N ALAMEDA ST            | WILMINGTON        | 90744 2847 | ROG      | 1      | Coastal | 9/3/2002   |
| 127749 | AQ004650 | ULTRAMAR, INC                            | 1220 N ALAMEDA ST            | WILMINGTON        | 90744 2847 | ROG      | 1      | Coastal | 9/11/2002  |
| 127648 | AQ004651 | ULTRAMAR INC/MARINE TANK FARM            | 130 W A ST                   | WILMINGTON        | 90744      | ROG      | 1      | Coastal | 9/11/2002  |
| 56906  | AQ004660 | ROYALWEVE CARPET MILLS INC               | 2310 E 52ND ST               | LOS ANGELES       | 90058 0285 | ROG      | 1      | Coastal | 9/12/2002  |
| 82675  | AQ004713 | RUDOLPH FOODS WEST INC                   | 1010 S SIERRA AVE            | SAN BERNARDINO    | 92408      | ROG      | 1      | Coastal | 10/11/2002 |
| 131003 | AQ004912 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD        | CARSON            | 90745 6121 | ROG      | 1      | Coastal | 3/28/2003  |
| 129460 | AQ004959 | WORLD OIL MARKETING CO #102              | 2002 DEL AMO BLVD            | LONG BEACH        | 90807      | ROG      | 1      | Coastal | 4/22/2003  |
| 129460 | AQ004960 | WORLD OIL MARKETING CO #102              | 2002 DEL AMO BLVD            | LONG BEACH        | 90807      | ROG      | 1      | Coastal | 4/22/2003  |
| 129460 | AQ004961 | WORLD OIL MARKETING CO #102              | 2002 DEL AMO BLVD            | LONG BEACH        | 90807      | ROG      | 1      | Coastal | 4/22/2003  |
| 800080 | AQ004978 | LUNDAY-THAGARD OIL CO                    | 9301 GARFIELD AVE            | SOUTH GATE        | 90280 3898 | ROG      | 1      | Coastal | 5/13/2003  |
| 124528 | AQ005138 | GRAPHIC PRESS INC                        | 6100 MALT AVE                | LOS ANGELES       | 90040      | ROG      | 1      | Coastal | 10/17/2003 |
| 800362 | AQ005155 | CONOCOPHILLIPS COMPANY                   | 1520 E SEPULVEDA BLVD        | CARSON            | 90745      | ROG      | 1      | Coastal | 11/7/2003  |
| 42630  | AQ005280 | PRAXAIR INC                              | 5705 AIRPORT DR              | ONTARIO           | 91761 8611 | ROG      | 1      | Coastal | 4/1/2004   |
| 800370 | AQ005344 | EQUILON ENTER., LLC, SHELL OIL PROD. U S | 2101 E PACIFIC COAST HWY     | WILMINGTON        | 90744 2914 | ROG      | 1      | Coastal | 5/6/2004   |
| 15544  | AQ005383 | REICHHOLD INC                            | 237 S MOTOR AVE              | AZUSA             | 91702 3228 | ROG      | 1      | Inland  | 5/25/2004  |
| 132633 | AQ005427 | ARCO FAC #05996, BP WEST COAST PRODS LLC | 11768 FOOTHILL BLVD          | RANCHO CUCAMON    | 91730      | ROG      | 1      | Coastal | 6/29/2004  |
| 800037 | AQ005469 | DEMENNO/KERDON                           | 2000 N ALAMEDA ST            | COMPTON           | 90222      | ROG      | 1      | Coastal | 8/12/2004  |
| 116572 | AQ005477 | EQUILON DLR, GARDEN GROVE SHELL #1, J HU | 10971 CHAPMAN                | GARDEN GROVE      | 92840      | ROG      | 1      | Coastal | 8/26/2004  |
| 139869 | AQ005586 | COSTCO WHOLESALE CORP                    | 10901 WALKER ST              | CYPRESS           | 90630 5014 | ROG      | 1      | Coastal | 1/11/2005  |
| 124182 | AQ005617 | AGED TIMBER CO                           | 12432 FOOTHILL BLVD          | SYLMAR            | 91342      | ROG      | 1      | Coastal | 1/21/2005  |
| 141012 | AQ005624 | MILLER BREWERIES WEST LP                 | 15801 E 1ST ST               | IRVINDALE         | 91706 2069 | ROG      | 1      | Inland  | 1/28/2005  |
| 25513  | AQ005762 | SIX FLAGS THEMES PKS INC,SIX FLAGS MAGIC | 26101 MAGIC MOUNTAIN PKY     | VALENCIA          | 91355 1095 | ROG      | 1      | Coastal | 7/12/2005  |
| 50300  | AQ005783 | PARALLEL PRODUCTS                        | 12281 ARROW ROUTE            | RANCHO CUCAMON    | 91739 9601 | ROG      | 1      | Inland  | 7/28/2005  |
| 139986 | AQ005927 | ENERGY INITIATIVES GROUP LP              | VARIOUS LOCATIONS IN SCAQMD  | DIAMOND BAR       | 91765      | ROG      | 1      | Coastal | 10/28/2005 |
| 131003 | AQ005934 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD        | CARSON            | 90745 6121 | ROG      | 1      | Coastal | 11/2/2005  |
| 111945 | AQ005945 | GOGLANIAN BAKERIES, INC.                 | 3401 W SEGERSTROM AVE        | SANTA ANA         | 92704      | ROG      | 1      | Coastal | 11/4/2005  |
| 132137 | AQ005965 | BP WEST COAST PRODUCTS LLC/ MARINE TER 1 | 620 PIER T ST BERTH 121      | LONG BEACH        | 90802      | ROG      | 1      | Coastal | 11/29/2005 |
| 144736 | AQ006058 | GREENWOOD ENTERPRISES                    | VARIOUS LOCATIONS IN SCAQMD  | DIAMOND BAR       | 91765      | ROG      | 1      | Coastal | 2/17/2006  |
| 800026 | AQ006063 | ULTRAMAR INC (NSR USE ONLY)              | 2402 E ANAHEIM ST            | WILMINGTON        | 90744      | ROG      | 1      | Coastal | 2/22/2006  |
| 7183   | AQ000025 | CLASSIC METAL FINISHING INC              | 11927 RIVERA DR              | SANTA FE SPRINGS  | 90670 2209 | ROG      | 2      | Coastal | 12/17/1990 |
| 11433  | AQ000034 | LITTLEJOHN-REULAND CORP                  | 4575 PACIFIC BLVD            | VERNON            | 90058 2271 | ROG      | 2      | Coastal | 12/17/1990 |
| 14966  | AQ000046 | U S GOVT. V A MEDICAL CENTER, WEST L A   | 11301 WILSHIRE BLVD          | LOS ANGELES       | 90073      | ROG      | 2      | Coastal | 12/17/1990 |
| 4327   | AQ000073 | AUDIO MAGNETICS CORP                     | 2606 MICHELSON DR            | IRVINE            | 92664      | ROG      | 2      | Coastal | 12/17/1990 |
| 47448  | AQ000081 | ELECTRORACK PRODUCTS INC                 | 1443 S SUNKIST ST            | ANAHEIM           | 92806 5626 | ROG      | 2      | Coastal | 12/17/1990 |
| 8325   | AQ000194 | SEATING PRODUCTS INDUSTRIES              | 8765 S AVALON                | LOS ANGELES       | 90003 3544 | ROG      | 2      | Coastal | 5/22/1991  |
| 47169  | AQ000226 | LUSTRO CORP OF CA                        | 25525 STANFORD AVE           | VALENCIA          | 91355      | ROG      | 2      | Coastal | 6/3/1991   |
| 3887   | AQ000268 | JAN-KENS ENAMELING CO INC                | 715 E CYPRESS AVE            | MONROVIA          | 91016 4254 | ROG      | 2      | Inland  | 6/4/1991   |
| 8582   | AQ000272 | SO CAL GAS CO/PLAYA DEL REY STORAGE FACI | 8141 GULANA AVE              | PLAYA DEL REY     | 90293 7930 | ROG      | 2      | Coastal | 6/4/1991   |
| 94236  | AQ000859 | COMPLIANT SPRAY PAINTING INC             | 9758 KLINGERMAN ST           | SOUTH EL MONTE    | 91733      | ROG      | 2      | Inland  | 10/21/1992 |
| 90880  | AQ001205 | SOUTHERN CALIFORNIA EDISON               | MARVIN                       | LAKEVIEW          | 92367      | ROG      | 2      | Inland  | 6/16/1994  |
| 15744  | AQ001349 | MOLE-RICHARDSON CO                       | 937 N SYCAMORE AVE           | HOLLYWOOD         | 90038 2384 | ROG      | 2      | Coastal | 8/1/1994   |
| 66224  | AQ001465 | PRO LITHOGRAPHICS, G. COON PRNTG         | 3000 W MAGNOLIA BLVD         | BURBANK           | 91505 3043 | ROG      | 2      | Coastal | 5/15/1995  |
| 95351  | AQ001584 | UNOCAL CORPORATION                       | 21008 E ARROW HIGHWAY        | COVINA            | 91722 2216 | ROG      | 2      | Inland  | 4/26/1996  |
| 88182  | AQ001603 | UNION OIL OF CALIFORNIA                  | 7304 S PAINTER AVE           | WHITTIER          | 90606      | ROG      | 2      | Inland  | 4/26/1996  |
| 99107  | AQ001621 | UNOCAL CORP                              | 9408 RUSH ST                 | EL MONTE          | 91733      | ROG      | 2      | Inland  | 4/26/1996  |
| 99101  | AQ001623 | UNOCAL CORP                              | 1320 N ALTADENA DR           | PASADENA          | 91107      | ROG      | 2      | Inland  | 4/26/1996  |
| 93480  | AQ001636 | UNOCAL CORPORATION                       | 420 N AZUSA AVE              | COVINA            | 91722      | ROG      | 2      | Inland  | 4/26/1996  |
| 101074 | AQ001668 | UNOCAL CORP                              | 700 FOOTHILL BLVD            | LA CANADA FLINTRI | 91011 3404 | ROG      | 2      | Inland  | 4/26/1996  |
| 38929  | AQ001671 | LUNADA BAY AUTOMOTIVE                    | 2133 PALOS VERDES DR WEST    | PALOS VERDES EST. | 90274 2704 | ROG      | 2      | Coastal | 4/26/1996  |
| 99446  | AQ001684 | UNOCAL CORP                              | 240 S GARFIELD AVE           | ALHAMBRA          | 91801 3833 | ROG      | 2      | Inland  | 4/27/1996  |
| 3968   | AQ001928 | TABC, INC                                | 6375 PARAMOUNT BLVD          | LONG BEACH        | 90805 3301 | ROG      | 2      | Coastal | 4/1/1997   |
| 800362 | AQ002000 | CONOCOPHILLIPS COMPANY                   | 1520 E SEPULVEDA BLVD        | CARSON            | 90745      | ROG      | 2      | Coastal | 6/9/1997   |
| 800363 | AQ002033 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST            | WILMINGTON        | 90744      | ROG      | 2      | Coastal | 6/9/1997   |
| 800363 | AQ002034 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST            | WILMINGTON        | 90744      | ROG      | 2      | Coastal | 6/9/1997   |
| 800363 | AQ002035 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST            | WILMINGTON        | 90744      | ROG      | 2      | Coastal | 6/9/1997   |
| 800363 | AQ002036 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST            | WILMINGTON        | 90744      | ROG      | 2      | Coastal | 6/9/1997   |
| 800363 | AQ003210 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST            | WILMINGTON        | 90744      | ROG      | 2      | Coastal | 10/25/2000 |
| 115389 | AQ003408 | AES HUNTINGTON BEACH, LLC                | 21730 NEWLAND ST             | HUNTINGTON BEACH  | 92646      | ROG      | 2      | Coastal | 11/8/2001  |
| 101843 | AQ003551 | MCWHORTER TECHNOLOGIES INC               | 2801 LYNNWOOD RD             | LYNNWOOD          | 90262 4093 | ROG      | 2      | Coastal | 3/21/2001  |
| 115389 | AQ003834 | AES HUNTINGTON BEACH, LLC                | 21730 NEWLAND ST             | HUNTINGTON BEACH  | 92646      | ROG      | 2      | Coastal | 5/19/2001  |
| 800144 | AQ004338 | UNION OIL CO OF CAL (NSR USE ONLY)       | 1660 W ANAHEIM ST 1480 W ANA | WILMINGTON        | 90744 2304 | ROG      | 2      | Inland  | 1/4/2002   |
| 800144 | AQ004342 | UNION OIL CO OF CAL (NSR USE ONLY)       | 1660 W ANAHEIM ST 1480 W ANA | WILMINGTON        | 90744 2304 | ROG      | 2      | Inland  | 1/4/2002   |
| 128179 | AQ004360 | PALM SPRINGS OIL COMPANY                 | 7511 E ROSECRANS AVE         | PARAMOUNT         | 90723      | ROG      | 2      | Coastal | 1/15/2002  |
| 800397 | AQ004432 | BP WEST COAST PROD.,ARCO COLTON          | 2395 RIVERSIDE AVE           | BLOOMINGTON       | 92316      | ROG      | 2      | Coastal | 3/29/2002  |
| 93560  | AQ004500 | CHEVRON USA PRODUCTS CO #201596          | 40635 WINCHESTER RD          | TEMECULA          | 92591 5505 | ROG      | 2      | Inland  | 5/16/2002  |
| 24887  | AQ004536 | PACIFIC TUBE CO                          | 5710 SMITHWAY ST             | LOS ANGELES       | 90040 1585 | ROG      | 2      | Coastal | 6/11/2002  |
| 110924 | AQ004555 | WESTWAY TERMINAL COMPANY                 | BERTHS 70-71 SIGNAL ST       | SAN PEDRO         | 90731      | ROG      | 2      | Coastal | 6/25/2002  |
| 137897 | AQ004850 | EQUILON ENTERPRISE LLC                   | 4437 SEPULVEDA               | TORRANCE          | 90503      | ROG      | 2      | Coastal | 1/28/2003  |
| 69407  | AQ004863 | GULFSTREAM AEROSPACE CORP                | 4150 DONALD DOUGLAS DR       | LONG BEACH        | 90808      | ROG      | 2      | Coastal | 1/30/2003  |
| 132506 | AQ004881 | ARCO FAC #05110, BP WEST COAST PRODS LLC | 5731 FIRESTONE BLVD #5110    | SOUTH GATE        | 90280 3703 | ROG      | 2      | Coastal | 2/20/2003  |
| 138810 | AQ005200 | EQUILON ENTERPRISES LLC                  | 19706 VENTURA BLVD           | WOODLAND HILLS    | 91364 2622 | ROG      | 2      | Coastal | 12/17/2003 |
| 138121 | AQ005233 | EQUILON ENTER., SHELL OIL PROD US, DBA   | 12313 W JEFFERSON            | CULVER CITY       | 90230      | ROG      | 2      | Coastal | 1/29/2004  |
| 114925 | AQ005373 | MAGNESS PETROLEUM COMPANY                | 625 E ANAHEIM ST             | WILMINGTON        | 90744 4652 | ROG      | 2      | Coastal | 5/21/2004  |
| 112976 | AQ005422 | SOUTHWEST GREASE BUSINESS EXXON CO USA   | 19530 S ALAMEDA ST           | RANCHO DOMINGUE   | 90221      | ROG      | 2      | Coastal | 6/25/2004  |
| 112976 | AQ005423 | SOUTHWEST GREASE BUSINESS EXXON CO USA   | 19530 S ALAMEDA ST           | RANCHO DOMINGUE   | 90221      | ROG      | 2      | Coastal | 6/25/2004  |
| 25318  | AQ005485 | PREMIER INDUSTRIES INC., INSULFOAM       | 5635 SCHAEFER AVE            | CHINO             | 91710 9048 | ROG      | 2      | Inland  | 9/3/2004   |
| 141987 | AQ005523 | EQUILON ENTERPRISES LLC                  | 4647 LAUREL CANYON           | NORTH HOLLYWOOD   | 91607      | ROG      | 2      | Coastal | 11/18/2004 |
| 800367 | AQ005557 | IPS CORP                                 | 17109 S MAIN ST              | GARDENA           | 90248      | ROG      | 2      | Coastal | 12/15/2004 |
| 25318  | AQ005697 | PREMIER INDUSTRIES INC., INSULFOAM       | 5635 SCHAEFER AVE            | CHINO             | 91710 9048 | ROG      | 2      | Inland  | 3/22/2005  |
| 25318  | AQ005895 | PREMIER INDUSTRIES INC., INSULFOAM       | 5635 SCHAEFER AVE            | CHINO             | 91710 9048 | ROG      | 2      | Inland  | 9/27/2005  |
| 25318  | AQ005900 | PREMIER INDUSTRIES INC., INSULFOAM       | 5635 SCHAEFER AVE            | CHINO             | 91710 9048 | ROG      | 2      | Inland  | 9/29/2005  |

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| FAC ID | ERC NBR  | COMPANY NAME                             | ADDRESS                         | CITY             | ZIP        | EMITTANT | AMOUNT | Zone    | ISSUED     |
|--------|----------|------------------------------------------|---------------------------------|------------------|------------|----------|--------|---------|------------|
| 17953  | AQ005928 | PACIFIC CLAY PRODUCTS INC                | 14741- 14641 LAKE ST            | LAKE ELSINORE    | 92530 1610 | ROG      | 2      | Coastal | 10/28/2005 |
| 131003 | AQ005935 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD           | CARSON           | 90745 6121 | ROG      | 2      | Coastal | 11/2/2005  |
| 131003 | AQ005937 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD           | CARSON           | 90745 6121 | ROG      | 2      | Coastal | 11/2/2005  |
| 800417 | AQ006010 | PACIFIC TERMINALS LLC                    | 2500 E VICTORIA ST              | COMPTON          | 90220 6013 | ROG      | 2      | Coastal | 1/6/2006   |
| 2083   | AQ006056 | SUPERIOR INDUSTRIES INTERNATIONAL INC    | 7800 WOODLEY AVE                | VAN NUYS         | 91406 1788 | ROG      | 2      | Coastal | 2/17/2006  |
| 59033  | AQ000072 | WEST COAST METAL CRAFTS                  | 3980 CHERRY AVE                 | LONG BEACH       | 90807 3727 | ROG      | 3      | Coastal | 12/17/1990 |
| 58370  | AQ000196 | J & L CUSTOM PLASTIC EXTRUSIONS INC      | 1532 SANTA ANITA AVE            | SOUTH EL MONTE   | 91733 3314 | ROG      | 3      | Inland  | 5/22/1991  |
| 800187 | AQ000500 | AMF TIRE EQUIP, DIV AMF VOIT (EIS USE)   | 3715 SUNFLOWER AVE              | SANTA ANA        | 92704      | ROG      | 3      | Coastal | 7/4/1991   |
| 38440  | AQ000734 | COOPER & BRAIN - BREA                    | 1390 SITE DR                    | BREA             | 92821      | ROG      | 3      | Coastal | 2/1/1992   |
| 83515  | AQ001282 | SOUTHERN CALIFORNIA EDISON               | 2 & OAK GLEN RD                 | YUCAIPA          | 92399      | ROG      | 3      | Inland  | 6/16/1994  |
| 90885  | AQ001295 | SOUTHERN CALIFORNIA EDISON               | 35750 RAMONA EXPRESSWAY         | SAN JACINTO      | 92582      | ROG      | 3      | Inland  | 6/16/1994  |
| 2096   | AQ001343 | AUTO WAREHOUSING L A INC                 | 760 EARLE ST                    | TERMINAL ISLAND  | 90731 7352 | ROG      | 3      | Coastal | 7/28/1994  |
| 800305 | AQ001439 | UCLA                                     | 705 SO DR                       | LOS ANGELES      | 90024 8315 | ROG      | 3      | Coastal | 4/19/1995  |
| 800144 | AQ001581 | UNION OIL CO OF CAL (NSR USE ONLY)       | 1660 W ANAHEIM ST 1480 W ANA    | WILMINGTON       | 90744 2304 | ROG      | 3      | Inland  | 4/26/1996  |
| 800144 | AQ001585 | UNION OIL CO OF CAL (NSR USE ONLY)       | 1660 W ANAHEIM ST 1480 W ANA    | WILMINGTON       | 90744 2304 | ROG      | 3      | Coastal | 4/26/1996  |
| 98420  | AQ001597 | UNOCAL CORP                              | 10565 VALLEY BLVD               | EL MONTE         | 91731      | ROG      | 3      | Inland  | 4/26/1996  |
| 800144 | AQ001601 | UNION OIL CO OF CAL (NSR USE ONLY)       | 1660 W ANAHEIM ST 1480 W ANA    | WILMINGTON       | 90744 2304 | ROG      | 3      | Inland  | 4/26/1996  |
| 99105  | AQ001625 | UNOCAL CORP                              | 20373 VALLEY BLVD               | WALNUT           | 91789      | ROG      | 3      | Inland  | 4/26/1996  |
| 99106  | AQ001626 | UNOCAL CORP                              | 9977 E LAS TUNAS DR             | TEMPLE CITY      | 91780      | ROG      | 3      | Inland  | 4/26/1996  |
| 800144 | AQ001633 | UNION OIL CO OF CAL (NSR USE ONLY)       | 1660 W ANAHEIM ST 1480 W ANA    | WILMINGTON       | 90744 2304 | ROG      | 3      | Coastal | 4/26/1996  |
| 98682  | AQ001650 | UNOCAL CORP                              | 4550 LARK ELLEN AVE SS 6051     | COVINA           | 91722      | ROG      | 3      | Inland  | 4/26/1996  |
| 800144 | AQ001662 | UNION OIL CO OF CAL (NSR USE ONLY)       | 1660 W ANAHEIM ST 1480 W ANA    | WILMINGTON       | 90744 2304 | ROG      | 3      | Inland  | 4/26/1996  |
| 800144 | AQ001666 | UNION OIL CO OF CAL (NSR USE ONLY)       | 1660 W ANAHEIM ST 1480 W ANA    | WILMINGTON       | 90744 2304 | ROG      | 3      | Inland  | 4/26/1996  |
| 800362 | AQ002001 | CONOCOPHILLIPS COMPANY                   | 1520 E SEPULVEDA BLVD           | CARSON           | 90745      | ROG      | 3      | Coastal | 6/9/1997   |
| 800362 | AQ002002 | CONOCOPHILLIPS COMPANY                   | 1520 E SEPULVEDA BLVD           | CARSON           | 90745      | ROG      | 3      | Coastal | 6/9/1997   |
| 800363 | AQ002031 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST               | WILMINGTON       | 90744      | ROG      | 3      | Coastal | 6/9/1997   |
| 800363 | AQ002032 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST               | WILMINGTON       | 90744      | ROG      | 3      | Coastal | 6/9/1997   |
| 102333 | AQ002053 | PORTION PAC, INC                         | 9140 LURLINE AVE                | CHATS WORTH      | 91311 5994 | ROG      | 3      | Inland  | 6/20/1997  |
| 27433  | AQ002197 | UNION OIL CO OF CAL                      | 450 S BIXBY                     | LOS ANGELES      | 90017      | ROG      | 3      | Coastal | 12/9/1997  |
| 346    | AQ002251 | FRITO-LAY NORTH AMERICA, INC.            | 9535 ARCHIBALD AVE              | RANCHO CUCAMON   | 91730 5737 | ROG      | 3      | Coastal | 2/18/1998  |
| 15794  | AQ002577 | NISSIN FOODS (USA) CO., INC.             | 2001 W ROSECRANS AVE            | GARDENA          | 90249 2994 | ROG      | 3      | Coastal | 2/26/1999  |
| 109879 | AQ002982 | BESTFOODS BAKING CO                      | 480 S VAIL AVE                  | MONTEBELLO       | 90640      | ROG      | 3      | Coastal | 2/25/2000  |
| 109879 | AQ002983 | BESTFOODS BAKING CO                      | 480 S VAIL AVE                  | MONTEBELLO       | 90640      | ROG      | 3      | Coastal | 2/25/2000  |
| 109879 | AQ002984 | BESTFOODS BAKING CO                      | 480 S VAIL AVE                  | MONTEBELLO       | 90640      | ROG      | 3      | Coastal | 2/25/2000  |
| 109879 | AQ002985 | BESTFOODS BAKING CO                      | 480 S VAIL AVE                  | MONTEBELLO       | 90640      | ROG      | 3      | Coastal | 2/25/2000  |
| 109879 | AQ002986 | BESTFOODS BAKING CO                      | 480 S VAIL AVE                  | MONTEBELLO       | 90640      | ROG      | 3      | Coastal | 2/25/2000  |
| 18455  | AQ003034 | ROYALTY CARPET MILLS INC                 | 17352 DERIAN AVE                | IRVINE           | 92614      | ROG      | 3      | Coastal | 3/24/2000  |
| 800363 | AQ003249 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST               | WILMINGTON       | 90744      | ROG      | 3      | Coastal | 11/9/2000  |
| 110982 | AQ004195 | COMMONWEALTH ALUMINUM CONCAST            | 2211 E CARSON ST                | LONG BEACH       | 90810      | ROG      | 3      | Inland  | 9/26/2001  |
| 800144 | AQ004340 | UNION OIL CO OF CAL (NSR USE ONLY)       | 1660 W ANAHEIM ST 1480 W ANA    | WILMINGTON       | 90744 2304 | ROG      | 3      | Inland  | 1/4/2002   |
| 136516 | AQ005116 | BLACKSAND PARTNERS LP                    | 500 N KRAEMER BLVD              | BREA             | 92821      | ROG      | 3      | Coastal | 9/26/2003  |
| 800080 | AQ005449 | LUNDAY-THAGARD OIL CO                    | 9301 GARFIELD AVE               | SOUTH GATE       | 90280 3898 | ROG      | 3      | Coastal | 7/20/2004  |
| 141453 | AQ005488 | EQUILON ENTERPRISES LLC                  | 3010 S BUNDY DR                 | LOS ANGELES      | 90066      | ROG      | 3      | Coastal | 9/7/2004   |
| 124808 | AQ005828 | INNOVENE POLYPROPYLENE LLC               | 2384 E 223RD ST                 | CARSON           | 90745      | ROG      | 3      | Coastal | 8/23/2005  |
| 131003 | AQ005938 | BP WEST COAST PROD. LLC, CARSON REFINERY | 1801 E SEPULVEDA BLVD           | CARSON           | 90745 6121 | ROG      | 3      | Coastal | 11/2/2005  |
| 3487   | AQ000004 | CHEVRON U.S.A. INC, DAMERON FEE          | BEACH/MEMPHIS                   | HUNTINGTON BEACH | 90631      | ROG      | 4      | Coastal | 12/17/1990 |
| 51849  | AQ000008 | ELIMINATOR CUSTOM BOATS                  | 10795 SAN SEVAINE WAY           | MIRA LOMA        | 91752 1146 | ROG      | 4      | Inland  | 12/17/1990 |
| 4909   | AQ000169 | VIRCO MFG CORP                           | 15134 S VERMONT                 | LOS ANGELES      | 90044      | ROG      | 4      | Coastal | 5/22/1991  |
| 5818   | AQ000284 | AMERICAN BROADCASTING CO                 | 4151 PROSPECT AVE               | LOS ANGELES      | 90027 4524 | ROG      | 4      | Coastal | 6/4/1991   |
| 42840  | AQ000310 | S. A. K. IND INC                         | 148 E OLIVE ST                  | MONROVIA         | 91016 3408 | ROG      | 4      | Inland  | 6/4/1991   |
| 50575  | AQ000604 | GRAPHIDYNE CORP                          | 3600 S HILL ST                  | LOS ANGELES      | 90007      | ROG      | 4      | Coastal | 8/1/1991   |
| 19726  | AQ000794 | FAULT BLOCK I UNIT, WILMINGTON OIL FLD   | 420 HENRY FORD AVE              | WILMINGTON       | 90744      | ROG      | 4      | Coastal | 2/27/1992  |
| 7980   | AQ001144 | MICROMETALS INC                          | 1190 N HAWK CIR                 | ANAHEIM          | 92807 1788 | ROG      | 4      | Coastal | 5/3/1994   |
| 90878  | AQ001274 | SOUTHERN CALIFORNIA EDISON               | 6871 MARTIN RD                  | RIALTO           | 92376      | ROG      | 4      | Inland  | 6/16/1994  |
| 17834  | AQ001554 | NORTHROP GRUMMAN CORP, AIRCRAFT DIV      | 3201 W 131ST ST                 | HAWTHORNE        | 90245      | ROG      | 4      | Coastal | 4/1/1996   |
| 800144 | AQ001634 | UNION OIL CO OF CAL (NSR USE ONLY)       | 1660 W ANAHEIM ST 1480 W ANA    | WILMINGTON       | 90744 2304 | ROG      | 4      | Inland  | 4/26/1996  |
| 800271 | AQ001767 | INTL RECTIFIER CORP                      | 222-348 KANSAS & 1521 GRAND AVE | SEGUNDO          | 90245      | ROG      | 4      | Coastal | 7/16/1996  |
| 100844 | AQ002429 | MEDALLION CALIFORNIA PROPERTIES CO       | 26835 PICO CANYON RD            | NEWHALL          | 91381 1800 | ROG      | 4      | Coastal | 7/1/1998   |
| 16639  | AQ002837 | SHULTZ STEEL CO                          | 5321 FIRESTONE BLVD             | SOUTH GATE       | 90280 3699 | ROG      | 4      | Coastal | 10/20/1999 |
| 109879 | AQ002977 | BESTFOODS BAKING CO                      | 480 S VAIL AVE                  | MONTEBELLO       | 90640      | ROG      | 4      | Coastal | 2/25/2000  |
| 109879 | AQ002987 | BESTFOODS BAKING CO                      | 480 S VAIL AVE                  | MONTEBELLO       | 90640      | ROG      | 4      | Coastal | 2/25/2000  |
| 109879 | AQ002988 | BESTFOODS BAKING CO                      | 480 S VAIL AVE                  | MONTEBELLO       | 90640      | ROG      | 4      | Coastal | 2/25/2000  |
| 109879 | AQ002989 | BESTFOODS BAKING CO                      | 480 S VAIL AVE                  | MONTEBELLO       | 90640      | ROG      | 4      | Coastal | 2/25/2000  |
| 800363 | AQ003257 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST               | WILMINGTON       | 90744      | ROG      | 4      | Coastal | 11/15/2000 |
| 16978  | AQ003364 | CLOUGHERTY PACKING CO, FARMER JOHN MEATS | 3049 E VERNON AVE               | VERNON           | 90058 1882 | ROG      | 4      | Coastal | 1/3/2001   |
| 115389 | AQ003392 | AES HUNTINGTON BEACH, LLC                | 21730 NEWLAND ST                | HUNTINGTON BEACH | 92646      | ROG      | 4      | Coastal | 1/18/2001  |
| 115389 | AQ003393 | AES HUNTINGTON BEACH, LLC                | 21730 NEWLAND ST                | HUNTINGTON BEACH | 92646      | ROG      | 4      | Coastal | 1/18/2001  |
| 115389 | AQ003394 | AES HUNTINGTON BEACH, LLC                | 21730 NEWLAND ST                | HUNTINGTON BEACH | 92646      | ROG      | 4      | Coastal | 1/18/2001  |
| 115389 | AQ003395 | AES HUNTINGTON BEACH, LLC                | 21730 NEWLAND ST                | HUNTINGTON BEACH | 92646      | ROG      | 4      | Coastal | 1/18/2001  |
| 104221 | AQ003752 | LEADWAY PLASTICS CORP                    | 9408 STEWART & GRAY RD          | DOWNEY           | 90241      | ROG      | 4      | Coastal | 5/19/2001  |
| 7591   | AQ003904 | THE BOEING COMPANY                       | 8900 DE SOTO AVE                | CANOGA PARK      | 91304 1960 | ROG      | 4      | Coastal | 5/20/2001  |
| 115389 | AQ004040 | AES HUNTINGTON BEACH, LLC                | 21730 NEWLAND ST                | HUNTINGTON BEACH | 92646      | ROG      | 4      | Coastal | 6/7/2001   |
| 112664 | AQ004141 | ARCO/PRESTIGE STATIONS, INC. #9522       | 3550 ROSECRANS BLVD             | HAWTHORNE        | 90250 8230 | ROG      | 4      | Coastal | 8/10/2001  |
| 68117  | AQ004304 | TIDELANDS OIL PRODUCTION COMPANY ETAL    | 552 PIER T AVE                  | LONG BEACH       | 90802 6211 | ROG      | 4      | Coastal | 11/16/2001 |
| 78148  | AQ004564 | LAXFUEL CORP UNIT NO.12                  | 9900 LAXFUEL RD                 | LOS ANGELES      | 90045      | ROG      | 4      | Coastal | 7/9/2002   |
| 17301  | AQ004619 | ORANGE COUNTY SANITATION DISTRICT        | 10844 ELLIS AVE                 | FOUNTAIN VALLEY  | 92708 7018 | ROG      | 4      | Coastal | 8/9/2002   |
| 110672 | AQ004711 | PRIMARY COLOR PRINTING, LLC              | 5750 HANNUM AVE                 | CULVER CITY      | 90230      | ROG      | 4      | Coastal | 10/10/2002 |
| 129460 | AQ004965 | WORLD OIL MARKETING CO #102              | 2002 DEL AMO BLVD               | LONG BEACH       | 90807      | ROG      | 4      | Coastal | 4/22/2003  |
| 6362   | AQ005224 | JACUZZI WHIRLPOOL BATH INC               | 3000 W SEGERSTROM AVE           | SANTA ANA        | 92704 6526 | ROG      | 4      | Coastal | 1/23/2004  |
| 138122 | AQ005230 | EQUILON ENTER., SHELL OIL PRODUCTS US    | 11755 E IMPERIAL HWY            | NORWALK          | 90650      | ROG      | 4      | Coastal | 1/29/2004  |
| 116383 | AQ005355 | EQUILON ENTERPRISES, LLC, L.A. TERMINAL  | 2015 LONG BEACH AVE             | LOS ANGELES      | 90058      | ROG      | 4      | Coastal | 5/11/2004  |
| 116383 | AQ005356 | EQUILON ENTERPRISES, LLC, L.A. TERMINAL  | 2015 LONG BEACH AVE             | LOS ANGELES      | 90058      | ROG      | 4      | Coastal | 5/12/2004  |
| 116383 | AQ005357 | EQUILON ENTERPRISES, LLC, L.A. TERMINAL  | 2015 LONG BEACH AVE             | LOS ANGELES      | 90058      | ROG      | 4      | Coastal | 5/12/2004  |
| 17301  | AQ005493 | ORANGE COUNTY SANITATION DISTRICT        | 10844 ELLIS AVE                 | FOUNTAIN VALLEY  | 92708 7018 | ROG      | 4      | Coastal | 10/1/2004  |
| 128078 | AQ005637 | WOODWORK CREATIONS                       | 134 MALBERT ST                  | PERRIS           | 92570      | ROG      | 4      | Inland  | 2/16/2005  |
| 800051 | AQ005832 | ARCO TERMINAL SERVICES CORPORATION       | 5905 PARAMOUNT BLVD             | LONG BEACH       | 90805      | ROG      | 4      | Coastal | 8/23/2005  |
| 800372 | AQ005959 | EQUILON ENTER. LLC, SHELL OIL PROD. US   | 20945 S WILMINGTON              | CARSON           | 90810      | ROG      | 4      | Coastal | 11/22/2005 |
| 101337 | AQ006050 | NATIONAL OFFSETS                         | 6251 PARAMOUNT BLVD             | LONG BEACH       | 90248      | ROG      | 4      | Coastal | 2/16/2006  |
| 58876  | AQ000044 | VESPER CORP                              | 4411 KATELLA AVE                | LOS ALAMITOS     | 90720 3599 | ROG      | 5      | Coastal | 12/17/1990 |
| 10348  | AQ000064 | TRIANGLE BRASS MFG CO                    | 3520-38 EMERY ST                | LOS ANGELES      | 90023      | ROG      | 5      | Coastal | 12/17/1990 |
| 4882   | AQ000069 | KLP A GENLYTE CO                         | 13100 MARLAY AVE                | FONTANA          | 92335 6995 | ROG      | 5      | Inland  | 12/17/1990 |
| 14369  | AQ000085 | GEBE ELECTRONICS SERV INC                | 4112 W JEFFERSON BLVD           | LOS ANGELES      | 90016 4190 | ROG      | 5      | Coastal | 12/17/1990 |
| 54771  | AQ000602 | LAS VIRGENES MUNICIPAL WATER DISTRICT    | 23915 W AGOURA RD               | AGOURA HILLS     | 91301      | ROG      | 5      | Coastal | 8/1/1991   |
| 83086  | AQ001146 | QUAD/GRAPHICS                            | 1174 N GROVE ST                 | ANAHEIM          | 92806      | ROG      | 5      | Coastal | 5/4/1994   |
| 109879 | AQ002979 | BESTFOODS BAKING CO                      | 480 S VAIL AVE                  | MONTEBELLO       | 90640      | ROG      | 5      | Coastal | 2/25/2000  |
| 109879 | AQ002980 | BESTFOODS BAKING CO                      | 480 S VAIL AVE                  | MONTEBELLO       | 90640      | ROG      | 5      | Coastal | 2/25/2000  |
| 109879 | AQ002981 | BESTFOODS BAKING CO                      | 480 S VAIL AVE                  | MONTEBELLO       | 90640      | ROG      | 5      | Coastal | 2/25/2000  |
| 800259 | AQ003192 | THE BOEING COMPANY                       | 6620-33 CANOGA AVE              | CANOGA PARK      | 91303      | ROG      | 5      | Coastal | 10/5/2000  |
| 114860 | AQ003211 | ARCO/PRESTIGE STATIONS, INC              | 8204 E GARVEY BLVD              | ROSEMEAD         | 91770 2552 | ROG      | 5      | Inland  | 10/25/2000 |
| 55526  | AQ003212 | ARCO DLR, EDUARDO V BUNDANG              | 14614 DALEWOOD AVE              | BALDWIN PARK     | 91706 6010 | ROG      | 5      | Inland  | 10/25/2000 |
| 800363 | AQ003263 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST               | WILMINGTON       | 90744      | ROG      | 5      | Coastal | 11/16/2000 |
| 74503  | AQ003341 | 3D SYSTEMS INC                           | 26081 AVENUE HALL               | VALENCIA         | 91355 1241 | ROG      | 5      | Coastal | 12/2/2000  |
| 89153  | AQ003726 | GATX RAIL CORP                           | 1640 S SINCLAIR                 | ANAHEIM          | 92806      | ROG      | 5      | Coastal | 5/19/2001  |

Table 8.1F-2  
LIST OF ACTIVE SCAQMD ERCs - MARCH 2006

| FAC ID | ERC NBR  | COMPANY NAME                             | ADDRESS | CITY                            | ZIP              | EMITTANT   | AMOUNT | Zone    | ISSUED    |            |
|--------|----------|------------------------------------------|---------|---------------------------------|------------------|------------|--------|---------|-----------|------------|
| 53853  | AQ003732 | SHELL OIL CO                             | GNRL    | 20945 S WILMINGTON AVE          | CARSON           | 90745      | ROG    | 5       | Coastal   | 5/19/2001  |
| 3061   | AQ003818 | HILLCREST BEVERLY OIL CORP               |         | 9996 W PICO BLVD                | WEST LOS ANGELES | 90064      | ROG    | 5       | Coastal   | 5/19/2001  |
| 51693  | AQ003820 | RELIANCE UPHOLSTERY SUPPLY CO INC        |         | 15700 AVALON BLVD               | COMPTON          | 90220 3209 | ROG    | 5       | Coastal   | 5/19/2001  |
| 108701 | AQ004116 | SAINT-GOBAIN CONTAINERS, INC.            |         | 4000 ARDEN DR                   | EL MONTE         | 91731 1806 | ROG    | 5       | Coastal   | 7/31/2001  |
| 68766  | AQ004139 | ARCO DLR/ARCO #5181, PSI #671            |         | 572 S MT VERNON AVE             | SAN BERNARDINO   | 92410      | ROG    | 5       | Coastal   | 8/10/2001  |
| 3134   | AQ004188 | THUMS LONG BEACH CO, UNIT NO.05          |         | ISLAND WHITE                    | SAN PEDRO        | 90801      | ROG    | 5       | Coastal   | 9/20/2001  |
| 40095  | AQ004372 | LONZA INC                                |         | 1922 - 2031E 64TH & 65TH ST     | LOS ANGELES      | 90001 2100 | ROG    | 5       | Coastal   | 1/26/2002  |
| 800330 | AQ004496 | THUMS LONG BEACH                         |         | 1105 HARBOR SCENIC DR PIERS J1- | LONG BEACH       | 90802      | ROG    | 5       | Coastal   | 5/9/2002   |
| 135426 | AQ004542 | BP WEST COAST PRODUCTS LLC               |         | 4 CENTERPOINTE DR               | LA PALMA         | 90623      | ROG    | 5       | Inland    | 6/12/2002  |
| 133070 | AQ004578 | AVALON LABORATORIES, INC.                |         | 2610 E HOMESTEAD                | RANCHO DOMINGUE  | 90220      | ROG    | 5       | Coastal   | 7/31/2002  |
| 101977 | AQ004849 | SIGNAL HILL PETROLEUM INC                |         | 2901 ORANGE AVE                 | LONG BEACH       | 90806      | ROG    | 5       | Coastal   | 1/21/2003  |
| 8936   | AQ005205 | FLEETWOOD MOTOR HOMES OF CAL INC         |         | 5300 VIA RICARDO                | RIVERSIDE        | 92509 2413 | ROG    | 5       | Inland    | 12/24/2003 |
| 6362   | AQ005222 | JACUZZI WHIRLPOOL BATH INC               |         | 3000 W SEGERSTROM AVE           | SANTA ANA        | 92704 6526 | ROG    | 5       | Coastal   | 1/23/2004  |
| 6362   | AQ005223 | JACUZZI WHIRLPOOL BATH INC               |         | 3000 W SEGERSTROM AVE           | SANTA ANA        | 92704 6526 | ROG    | 5       | Coastal   | 1/23/2004  |
| 800370 | AQ005272 | EQUILON ENTER., LLC, SHELL OIL PROD. U S |         | 2101 E PACIFIC COAST HWY        | WILMINGTON       | 90744 2914 | ROG    | 5       | Coastal   | 3/23/2004  |
| 125281 | AQ005719 | ALCO CAD-NICKEL PLATING, MODERN PLATING  |         | 5400 W 104TH                    | LOS ANGELES      | 90045 0007 | ROG    | 5       | Coastal   | 4/22/2005  |
| 136757 | AQ005776 | TRAVIS AMERICAN                          |         | 15651 MOSHER AVE                | TUSTIN           | 92780 6426 | ROG    | 5       | Coastal   | 7/27/2005  |
| 25318  | AQ005896 | PREMIER INDUSTRIES INC., INSULFOAM       |         | 5635 SCHAEFER AVE               | CHINO            | 91710 9048 | ROG    | 5       | Coastal   | 9/27/2005  |
| 25133  | AQ001307 | SOUTHERN CALIFORNIA EDISON CO            |         | 2305 S RIVERSIDE AVE            | BLOOMINGTON      | 92316 2931 | ROG    | 6       | Inland    | 5/22/1991  |
| 800362 | AQ002003 | CONOCOPHILLIPS COMPANY                   |         | NW CORNER OF TAYLOR/MAIN        | GRAND TERRACE    | 92324      | ROG    | 6       | Inland    | 6/16/1994  |
| 800170 | AQ003471 | LA CITY, DWP HARBOR GENERATING STATION   |         | 1520 E SEPULVEDA BLVD           | CARSON           | 90745      | ROG    | 6       | Coastal   | 6/9/1997   |
| 110924 | AQ003564 | WESTWAY TERMINAL COMPANY                 |         | 161 N ISLAND AVE                | WILMINGTON       | 90744 6303 | ROG    | 6       | Coastal   | 2/7/2001   |
| 114191 | AQ003635 | ARCO DLR,MOSTAFA RAHGOZAR,SS#1076        |         | BERTHS 70-71 SIGNAL ST          | SAN PEDRO        | 90731      | ROG    | 6       | Coastal   | 4/3/2001   |
| 2235   | AQ003705 | DEL MAR WINDOW COVERINGS,(LEVOLOR HOME)  |         | 9500 DE SOTO AVE                | CHATSWORTH       | 91311 5010 | ROG    | 6       | Coastal   | 5/10/2001  |
| 1041   | AQ003709 | H. P. METAL FINISHING CO                 |         | 7400 HAZARD AVE.                | WESTMINSTER      | 92683      | ROG    | 6       | Coastal   | 5/19/2001  |
| 18508  | AQ003840 | AIR PROD & CHEM INC                      |         | 5954 MAYWOOD AVE                | HUNTINGTON PARK  | 90255 3258 | ROG    | 6       | Coastal   | 5/19/2001  |
| 1177   | AQ003886 | TEXACO INC, P.C.P.L.                     |         | 3305 E 26TH ST                  | LOS ANGELES      | 90023 4501 | ROG    | 6       | Coastal   | 5/19/2001  |
| 61372  | AQ004132 | ARCO DLR, VAHAN PAPAIZIAN                |         | 17292 GOTHARD ST                | HUNTINGTON BEACH | 90746      | ROG    | 6       | Coastal   | 5/20/2001  |
| 65281  | AQ004143 | ARCO DLR, R C SERVICE GAS STN #6176      |         | 3291 W FLORIDA                  | HEMET            | 92545 3638 | ROG    | 6       | Inland    | 8/7/2001   |
| 112692 | AQ004144 | ARCO/PRESTIGE STATIONS, INC. #9737       |         | 1001 E AMAR RD                  | WEST COVINA      | 91792 1300 | ROG    | 6       | Coastal   | 8/10/2001  |
| 800396 | AQ004364 | BP WEST COAST PROD/ARCO VINVALE TERMINAL |         | 14472 BROOKHURST ST             | GARDEN GROVE     | 92640      | ROG    | 6       | Coastal   | 8/10/2001  |
| 135426 | AQ004539 | BP WEST COAST PRODUCTS LLC               |         | 8601 S GARFIELD AVE             | SOUTH GATE       | 90280 3709 | ROG    | 6       | Coastal   | 1/17/2002  |
| 119907 | AQ004610 | BERRY PETROLEUM COMPANY                  |         | 4 CENTERPOINTE DR               | LA PALMA         | 90623      | ROG    | 6       | Coastal   | 6/12/2002  |
| 131003 | AQ004913 | BP WEST COAST PROD. LLC, CARSON REFINERY |         | 25121 N SIERRA HWY              | SANTA CLARITA    | 91321 2007 | ROG    | 6       | Coastal   | 8/9/2002   |
| 800193 | AQ005031 | LA CITY, DWP VALLEY GENERATING STATION   |         | 1801 E SEPULVEDA BLVD           | CARSON           | 90745 6121 | ROG    | 6       | Coastal   | 3/28/2003  |
| 142185 | AQ005609 | BP WEST COAST PRODUCTS LLC               |         | SUN VALLEY                      | 91352 1420       | ROG        | 6      | Coastal | 7/15/2003 |            |
| 142183 | AQ005677 | BP WEST COAST PRODUCTS LLC               |         | 104 N SAN JACINTO               | HEMET            | 92543      | ROG    | 6       | Inland    | 1/21/2005  |
| 131003 | AQ005933 | BP WEST COAST PROD. LLC, CARSON REFINERY |         | 101 E WHITTIER BLVD             | MONTEBELLO       | 90640      | ROG    | 6       | Coastal   | 3/3/2005   |
| 131003 | AQ005939 | BP WEST COAST PROD. LLC, CARSON REFINERY |         | 1801 E SEPULVEDA BLVD           | CARSON           | 90745 6121 | ROG    | 6       | Coastal   | 11/2/2005  |
| 131003 | AQ005949 | BP WEST COAST PROD. LLC, CARSON REFINERY |         | 1801 E SEPULVEDA BLVD           | CARSON           | 90745 6121 | ROG    | 6       | Inland    | 11/9/2005  |
| 83376  | AQ001616 | HENRY'S UNOCAL 76                        |         | 9972 BOLSA AVE                  | WESTMINSTER      | 92683 6002 | ROG    | 7       | Coastal   | 4/26/1996  |
| 35882  | AQ003717 | HERTZ RENT-A-CAR                         |         | 9029 AIRPORT BLVD               | LOS ANGELES      | 90045 4589 | ROG    | 7       | Coastal   | 5/19/2001  |
| 27992  | AQ003748 | SAFETY-KLEEN (LOS ANGELES), INC.         |         | 5756 ALBA ST                    | LOS ANGELES      | 90058 3808 | ROG    | 7       | Coastal   | 5/19/2001  |
| 109879 | AQ003852 | BESTFOODS BAKING CO                      |         | 480 S VAIL AVE                  | MONTEBELLO       | 90640      | ROG    | 7       | Coastal   | 5/19/2001  |
| 68117  | AQ004302 | TIDELANDS OIL PRODUCTION COMPANY ETAL    |         | 552 PIER T AVE                  | LONG BEACH       | 90802 6211 | ROG    | 7       | Coastal   | 11/16/2001 |
| 14217  | AQ004332 | MODERN FAUCET MFG COMPANY                |         | 1700 E 58TH PL                  | LOS ANGELES      | 90001 1491 | ROG    | 7       | Coastal   | 1/4/2002   |
| 135426 | AQ004544 | BP WEST COAST PRODUCTS LLC               |         | 4 CENTERPOINTE DR               | LA PALMA         | 90623      | ROG    | 7       | Coastal   | 6/12/2002  |
| 135426 | AQ004883 | BP WEST COAST PRODUCTS LLC               |         | 4 CENTERPOINTE DR               | LA PALMA         | 90623      | ROG    | 7       | Coastal   | 2/28/2003  |
| 116383 | AQ005354 | EQUILON ENTERPRISES, LLC, L.A. TERMINAL  |         | 2015 LONG BEACH AVE             | LOS ANGELES      | 90058      | ROG    | 7       | Coastal   | 5/11/2004  |
| 128552 | AQ005396 | COSTCO WHOLESALE INC                     |         | 17550 CASTLETON RD              | CITY OF INDUSTRY | 91745      | ROG    | 7       | Coastal   | 5/28/2004  |
| 37768  | AQ005827 | TOYOTA MOTOR SALES,U.S.A. INC            |         | 19001 S WESTERN AVE             | TORRANCE         | 90501      | ROG    | 7       | Coastal   | 8/23/2005  |
| 131003 | AQ005942 | BP WEST COAST PROD. LLC, CARSON REFINERY |         | 1801 E SEPULVEDA BLVD           | CARSON           | 90745 6121 | ROG    | 7       | Coastal   | 11/2/2005  |
| 90884  | AQ001252 | SOUTHERN CALIFORNIA EDISON               |         | 906 INDUSTRIAL WAY              | SAN JACINTO      | 92582      | ROG    | 8       | Inland    | 6/16/1994  |
| 37356  | AQ001338 | ARCO DLR, HOSKIN HOGAN                   |         | 9922 S                          | LOS ANGELES      | 90003      | ROG    | 8       | Coastal   | 6/28/1994  |
| 91183  | AQ001410 | SOUTHERN CALIFORNIA EDISON               |         | 2001 PACIFIC COAST HWY          | SEAL BEACH       | 90740      | ROG    | 8       | Coastal   | 11/4/1994  |
| 58057  | AQ003679 | ELECTROFILM MANUFACTURING CO             |         | 27727 AVENUE SCOTT              | VALENCIA         | 91355 1264 | ROG    | 8       | Coastal   | 5/19/2001  |
| 20983  | AQ003683 | TRI LITE MFG CO INC                      |         | 19780 PACIFIC GATEWAY DR        | TORRANCE         | 90502 1137 | ROG    | 8       | Coastal   | 5/19/2001  |
| 4231   | AQ003864 | ARMCO INC                                |         | 1524 BORDER AVE                 | TORRANCE         | 90501      | ROG    | 8       | Coastal   | 5/20/2001  |
| 94203  | AQ004092 | ALLIED SIGNAL CORP                       |         | 12950 SAN FERNANDO RD           | SYLMAR           | 91350      | ROG    | 8       | Coastal   | 7/27/2001  |
| 11501  | AQ004328 | MILUM TEXTILE SERV CO                    |         | 443 S RAYMOND AVE               | PASADENA         | 91105 2630 | ROG    | 8       | Inland    | 1/4/2002   |
| 800170 | AQ005033 | LA CITY, DWP HARBOR GENERATING STATION   |         | 161 N ISLAND AVE                | WILMINGTON       | 90744 6303 | ROG    | 8       | Coastal   | 7/18/2003  |
| 800038 | AQ005112 | DOUGLAS PRODUCTS DIVISION                |         | 3855 LAKEWOOD & 2401 WARDLOW    | LONG BEACH       | 90846 0001 | ROG    | 8       | Coastal   | 9/23/2003  |
| 116383 | AQ005348 | EQUILON ENTERPRISES, LLC, L.A. TERMINAL  |         | 2015 LONG BEACH AVE             | LOS ANGELES      | 90058      | ROG    | 8       | Coastal   | 5/11/2004  |
| 116383 | AQ005358 | EQUILON ENTERPRISES, LLC, L.A. TERMINAL  |         | 2015 LONG BEACH AVE             | LOS ANGELES      | 90058      | ROG    | 8       | Coastal   | 5/12/2004  |
| 54264  | AQ006011 | CHEVRON USA INC                          |         | 601&751 S VAIL AVE              | MONTEBELLO       | 90640 4951 | ROG    | 8       | Coastal   | 1/10/2006  |
| 8980   | AQ000361 | ARCO (EIS USE)                           |         | 1801 E SEPULVEDA BLVD           | CARSON           | 90745      | ROG    | 9       | Coastal   | 6/10/1991  |
| 104058 | AQ003677 | FONTANA PAPER MILLS                      |         | 1840 E 29TH ST                  | SIGNAL HILL      | 90806      | ROG    | 9       | Coastal   | 5/19/2001  |
| 800002 | AQ003681 | ALLIED SIGNAL,GARRETT CORP (EIS USE)     |         | 19800 S VAN NESS BLVD #20       | TORRANCE         | 90501      | ROG    | 9       | Coastal   | 5/19/2001  |
| 3089   | AQ003822 | PASCOE BUILDING SYS                      |         | 1301 E LEXINGTON                | POMONA           | 91766      | ROG    | 9       | Inland    | 5/19/2001  |
| 800026 | AQ004383 | ULTRAMAR INC (NSR USE ONLY)              |         | 2402 E ANAHEIM ST               | WILMINGTON       | 90744      | ROG    | 9       | Coastal   | 1/31/2002  |
| 135426 | AQ004541 | BP WEST COAST PRODUCTS LLC               |         | 4 CENTERPOINTE DR               | LA PALMA         | 90623      | ROG    | 9       | Coastal   | 6/12/2002  |
| 135426 | AQ004545 | BP WEST COAST PRODUCTS LLC               |         | 4 CENTERPOINTE DR               | LA PALMA         | 90623      | ROG    | 9       | Inland    | 6/12/2002  |
| 131819 | AQ005482 | MODERN GRAPHICS, INC                     |         | 18600 E SAN JOSE AVE            | CITY OF INDUSTRY | 91748      | ROG    | 9       | Coastal   | 9/2/2004   |
| 800408 | AQ005520 | NORTHROP GRUMMAN SPACE & MISSION SYSTEMS |         | 3301 1700 AVIATION & ROSECRANS  | MANHATTAN BEACH  | 90266      | ROG    | 9       | Coastal   | 11/5/2004  |
| 139796 | AQ005765 | CITY OF RIVERSIDE PUBLIC UTILITIES DEPT  |         | JURUPA & PAYTON AVE             | RIVERSIDE        | 92504      | ROG    | 9       | Coastal   | 7/14/2005  |
| 37768  | AQ005830 | TOYOTA MOTOR SALES,U.S.A. INC            |         | 19001 S WESTERN AVE             | TORRANCE         | 90501      | ROG    | 9       | Coastal   | 8/23/2005  |
| 87798  | AQ000803 | US GOVT, AIR FORCE DEPT, MARCH AFB       |         | 1601 W 7TH ST                   | LONG BEACH       | 90813      | ROG    | 10      | Coastal   | 3/12/1992  |
| 104221 | AQ002323 | LEADWAY PLASTICS CORP                    |         | 9408 STEWART & GRAY RD          | DOWNEY           | 90241      | ROG    | 10      | Coastal   | 3/25/1998  |
| 18501  | AQ003711 | AIR CARGO EQUIPMENT CORP                 |         | 17923 S SANTA FE AVE            | COMPTON          | 90220      | ROG    | 10      | Coastal   | 5/19/2001  |
| 17697  | AQ003734 | WHITCOMB PLATING INC                     |         | 649-655 S ALBERTON AVE          | CITY OF INDUSTRY | 91744      | ROG    | 10      | Inland    | 5/19/2001  |
| 115618 | AQ003850 | BEAR OIL COMPANY LLC                     |         | 24913 REDLANDS BLVD             | LOMA LINDA       | 92350      | ROG    | 10      | Coastal   | 5/19/2001  |
| 55879  | AQ003866 | RINGIER AMERICA, INC                     |         | 1600 E ORANGETHORPE AVE         | FULLERTON        | 92831      | ROG    | 10      | Coastal   | 5/20/2001  |
| 68117  | AQ004305 | TIDELANDS OIL PRODUCTION COMPANY ETAL    |         | 552 PIER T AVE                  | LONG BEACH       | 90802 6211 | ROG    | 10      | Coastal   | 11/16/2001 |
| 128954 | AQ005366 | NRG POWER MARKETING, INC.                |         | VARIOUS LOCATIONS IN SCAQMD     | DIAMOND BAR      | 91765      | ROG    | 10      | Coastal   | 5/14/2004  |
| 106810 | AQ005393 | INTERSTATE BRANDS CORP                   |         | 2801 S TOWNE AVE                | POMONA           | 91766 6208 | ROG    | 10      | Inland    | 5/28/2004  |
| 129497 | AQ005901 | THUMS LONG BEACH CO                      |         | 1411 PIER D ST                  | LONG BEACH       | 90802 1025 | ROG    | 10      | Coastal   | 10/4/2005  |
| 101337 | AQ005989 | NATIONAL OFFSETS                         |         | 6251 PARAMOUNT BLVD             | LONG BEACH       | 90248      | ROG    | 10      | Coastal   | 12/21/2005 |
| 800417 | AQ006061 | PACIFIC TERMINALS LLC                    |         | 2500 E VICTORIA ST              | COMPTON          | 90220 6013 | ROG    | 10      | Coastal   | 2/21/2006  |
| 106600 | AQ003685 | BURKE INDUSTRIES INC, SFS DIVISION       |         | 13767 FREEWAY DR                | SANTA FE SPRINGS | 90670      | ROG    | 11      | Coastal   | 5/19/2001  |
| 15915  | AQ003736 | CONTINENTAL MFG CO, DIV CONTICO INTL INC |         | 15605 CORNET AVE                | SANTA FE SPR     |            |        |         |           |            |

Table 8.1F-2  
LIST OF ACTIVE SCAQMD ERCs - MARCH 2006

| FAC ID | ERC NBR  | COMPANY NAME                              | ADDRESS                        | CITY              | ZIP        | EMITTANT | AMOUNT | Zone    | ISSUED     |
|--------|----------|-------------------------------------------|--------------------------------|-------------------|------------|----------|--------|---------|------------|
| 133632 | AQ005778 | COMMANDER NAVY REGION SOUTHWEST           | VARIOUS LOCATIONS IN SCAQMD    | COMMERCE          | 90040      | ROG      | 12     | Coastal | 7/27/2005  |
| 800124 | AQ001009 | SO CAL EDISON CO                          | 2685 SEASIDE BLVD              | LONG BEACH        | 90802      | ROG      | 13     | Coastal | 10/21/1993 |
| 24618  | AQ003924 | NUWAY LINEN & INDUSTRIAL RENTAL SERVICE   | 1351 ORIZABA AVE               | LONG BEACH        | 90804 2439 | ROG      | 13     | Coastal | 5/20/2001  |
| 79397  | AQ003938 | OWENS-BROCKWAY GLASS CONTAINER INC        | 1331 E PHILADELPHIA ST         | POMONA            | 91766 5564 | ROG      | 13     | Inland  | 5/20/2001  |
| 137722 | AQ005329 | VOPAK TERMINAL LONG BEACH INC, A DELAWARE | 3601 DOCK ST                   | SAN PEDRO         | 90731 7540 | ROG      | 13     | Coastal | 4/30/2004  |
| 139986 | AQ006059 | ENERGY INITIATIVES GROUP LP               | VARIOUS LOCATIONS IN SCAQMD    | DIAMOND BAR       | 91765      | ROG      | 13     | Coastal | 2/21/2006  |
| 3912   | AQ003858 | PASHA INDUSTRIES INC 038908               | 756 CARRACK AVE                | LONG BEACH        | 90813 2658 | ROG      | 14     | Coastal | 5/20/2001  |
| 113572 | AQ003990 | PACIFIC PIPELINE SYSTEM, INC.             | 111 N FIRST ST                 | BURBANK           | 91502      | ROG      | 14     | Coastal | 5/20/2001  |
| 12761  | AQ003994 | ANTHONY MFG CORP                          | 1000 W SIERRA MADRE AVE        | AZUSA             | 91702 1752 | ROG      | 14     | Inland  | 5/20/2001  |
| 47232  | AQ004361 | ARCO CQC KILN                             | 1175 CARRACK AVE               | WILMINGTON        | 90744      | ROG      | 14     | Coastal | 1/17/2002  |
| 130231 | AQ004561 | CORAL ENERGY RESOURCES, LP                | VARIOUS LOCATIONS IN SCAQMD    | DIAMOND BAR       | 91765      | ROG      | 14     | Inland  | 6/28/2002  |
| 105903 | AQ004707 | PRIME WHEEL                               | 17704 S BROADWAY ST            | CARSON            | 90746      | ROG      | 14     | Coastal | 10/3/2002  |
| 137380 | AQ005058 | BP WEST COAST PRODUCTS LLC                | 6454 FOOTHILL BLVD             | TUJUNGA           | 91042 2729 | ROG      | 14     | Inland  | 8/13/2003  |
| 133632 | AQ005473 | COMMANDER NAVY REGION SOUTHWEST           | VARIOUS LOCATIONS IN SCAQMD    | COMMERCE          | 90040      | ROG      | 14     | Inland  | 8/13/2004  |
| 80373  | AQ006076 | MISSION RUBBER CO                         | 1660 LEESON LN                 | CORONA            | 92879      | ROG      | 14     | Inland  | 2/22/2006  |
| 57756  | AQ001925 | TEXACO REFINING & MARKETING INC GNRL      | 2101 E PACIFIC COAST HWY       | WILMINGTON        | 90744 2994 | ROG      | 15     | Coastal | 4/1/1997   |
| 115618 | AQ002498 | BEAR OIL COMPANY LLC                      | 24913 REDLANDS BLVD            | LOMA LINDA        | 92350      | ROG      | 15     | Coastal | 10/29/1998 |
| 800170 | AQ003470 | LA CITY, DWP HARBOR GENERATING STATION    | 161 N ISLAND AVE               | WILMINGTON        | 90744 6303 | ROG      | 15     | Coastal | 2/7/2001   |
| 47847  | AQ003814 | VALLEY PRINTERS INC                       | 2180 IOWA AVE                  | RIVERSIDE         | 92507 2424 | ROG      | 15     | Inland  | 5/19/2001  |
| 57111  | AQ003860 | ODYSSEY ENGINEERING, INC.                 | 27820 FREMONT CT UNIT 1        | VALENCIA          | 91355 1141 | ROG      | 15     | Coastal | 5/20/2001  |
| 46969  | AQ003862 | STA-RITE IND INC                          | 3301 N GILMAN RD               | EL MONTE          | 91732      | ROG      | 15     | Inland  | 5/20/2001  |
| 800330 | AQ003976 | THUMS LONG BEACH                          | 1105 HARBOR SCENIC DR PERS 31- | LONG BEACH        | 90802      | ROG      | 15     | Coastal | 5/20/2001  |
| 11766  | AQ003988 | BP EXP & OIL INC, BP MARINE AMERICAS DIV  | 1363 N GAFFEY ST               | SAN PEDRO         | 90731      | ROG      | 15     | Coastal | 5/20/2001  |
| 59526  | AQ003992 | BFM ENERGY PRODUCTS CORP                  | 2040 E DYER RD                 | SANTA ANA         | 92705 5777 | ROG      | 15     | Coastal | 5/20/2001  |
| 8851   | AQ004629 | BECKMAN COULTER, INC.                     | 4300 N HARBOR BLVD             | FULLERTON         | 92835 1091 | ROG      | 15     | Coastal | 8/30/2005  |
| 800365 | AQ005736 | CONOCOPHILLIPS CO. L A TERMINAL           | 13500 S BROADWAY               | LOS ANGELES       | 90061 1008 | ROG      | 15     | Coastal | 5/24/2005  |
| 45203  | AQ005877 | POLY PAK AMERICA INC                      | 2939 E WASHINGTON BLVD         | LOS ANGELES       | 90023 4277 | ROG      | 15     | Coastal | 9/14/2005  |
| 14502  | AQ005999 | VERNON CITY, LIGHT & POWER DEPT           | 2715 E 50TH ST                 | VERNON            | 90058 2901 | ROG      | 15     | Coastal | 1/4/2006   |
| 144736 | AQ006053 | GREENWOOD ENTERPRISES                     | VARIOUS LOCATIONS IN SCAQMD    | DIAMOND BAR       | 91765      | ROG      | 15     | Inland  | 2/17/2006  |
| 800026 | AQ004384 | ULTRAMAR INC (NSR USE ONLY)               | 2402 E ANAHEIM ST              | WILMINGTON        | 90744      | ROG      | 16     | Coastal | 1/31/2002  |
| 130231 | AQ005142 | CORAL ENERGY RESOURCES, LP                | VARIOUS LOCATIONS IN SCAQMD    | DIAMOND BAR       | 91765      | ROG      | 16     | Coastal | 10/23/2003 |
| 141236 | AQ005433 | CHINA TIMES PRINTING, INC                 | 333 W MISSION RD               | SAN GABRIEL       | 91776      | ROG      | 16     | Coastal | 7/6/2004   |
| 8582   | AQ005912 | SO CAL GAS CO/PLAYA DEL REY STORAGE FACI  | 8141 GULANA AVE                | PLAYA DEL REY     | 90293 7930 | ROG      | 16     | Coastal | 10/19/2005 |
| 145127 | AQ006079 | SAM'S WEST INC/SAM'S CLUB #4824           | 26468 CARL BOYER DR            | SANTA CLARITA     | 91355      | ROG      | 16     | Coastal | 2/28/2006  |
| 40724  | AQ003884 | THIEM IND INC                             | 1918 W ARTESIA BLVD            | TORRANCE          | 90504 3598 | ROG      | 17     | Coastal | 5/20/2001  |
| 20528  | AQ003896 | BRISTOL FIBERLITE IND                     | 401 E GOETZ AVE                | SANTA ANA         | 92705      | ROG      | 17     | Coastal | 5/20/2001  |
| 800417 | AQ006007 | PACIFIC TERMINALS LLC                     | 2500 E VICTORIA ST             | COMPTON           | 90220 6013 | ROG      | 17     | Coastal | 1/4/2006   |
| 800170 | AQ003469 | LA CITY, DWP HARBOR GENERATING STATION    | 161 N ISLAND AVE               | WILMINGTON        | 90744 6303 | ROG      | 18     | Coastal | 2/7/2001   |
| 59765  | AQ003914 | ARAMARK UNIFORM SERVICES                  | 4422 4440E DUNHAM ST           | LOS ANGELES       | 90023      | ROG      | 18     | Coastal | 5/20/2001  |
| 800079 | AQ005816 | PETRO DIAMOND TERMINAL CO                 | 1920 LUGGER BERTH 83 WAY       | LONG BEACH        | 90813 2634 | ROG      | 18     | Coastal | 8/9/2005   |
| 139986 | AQ006078 | ENERGY INITIATIVES GROUP LP               | VARIOUS LOCATIONS IN SCAQMD    | DIAMOND BAR       | 91765      | ROG      | 18     | Coastal | 2/24/2006  |
| 20106  | AQ003687 | MALLIN CO INC                             | 2665 LEONIS BLVD               | VERNON            | 90058 2282 | ROG      | 19     | Coastal | 5/19/2001  |
| 88556  | AQ003784 | MINSON CORPORATION                        | 2665 LEONIS BLVD               | LOS ANGELES       | 90058 2282 | ROG      | 19     | Coastal | 5/19/2001  |
| 13084  | AQ003790 | BAXTER HEALTHCARE CORP, PHARMASEAL DIV    | 4401 FOXDALE AVE               | IRVINDALE         | 91706 2161 | ROG      | 19     | Inland  | 5/19/2001  |
| 16865  | AQ003794 | AMVAC CHEMICAL CORP GNRL                  | 4100 E WASHINGTON BLVD         | LOS ANGELES       | 90023 4406 | ROG      | 19     | Coastal | 5/19/2001  |
| 800089 | AQ006024 | EXXONMOBIL OIL CORPORATION                | 3700 W 190TH ST                | TORRANCE          | 90504 5790 | ROG      | 19     | Coastal | 1/24/2006  |
| 800089 | AQ006060 | EXXONMOBIL OIL CORPORATION                | 3700 W 190TH ST                | TORRANCE          | 90504 5790 | ROG      | 19     | Coastal | 2/21/2006  |
| 57756  | AQ002430 | TEXACO REFINING & MARKETING INC GNRL      | 2101 E PACIFIC COAST HWY       | WILMINGTON        | 90744 2994 | ROG      | 20     | Coastal | 7/8/1998   |
| 800170 | AQ003649 | LA CITY, DWP HARBOR GENERATING STATION    | 161 N ISLAND AVE               | WILMINGTON        | 90744 6303 | ROG      | 20     | Coastal | 5/18/2001  |
| 128954 | AQ004580 | NRG POWER MARKETING, INC.                 | VARIOUS LOCATIONS IN SCAQMD    | DIAMOND BAR       | 91765      | ROG      | 20     | Coastal | 7/31/2002  |
| 131003 | AQ004914 | BP WEST COAST PROD. LLC, CARSON REFINERY  | 1801 E SEPULVEDA BLVD          | CARSON            | 90745 6121 | ROG      | 20     | Coastal | 3/28/2003  |
| 111464 | AQ005042 | COMPOSITE STRUCTURES LLC                  | 801 ROYAL OAK DR               | MONROVIA          | 91016      | ROG      | 20     | Coastal | 8/5/2003   |
| 98566  | AQ001327 | ULTRAMAR INC                              | 21000 S FIGUEROA ST            | CARSON            | 90745      | ROG      | 21     | Coastal | 6/23/1994  |
| 800026 | AQ004394 | ULTRAMAR INC (NSR USE ONLY)               | 2402 E ANAHEIM ST              | WILMINGTON        | 90744      | ROG      | 21     | Coastal | 1/31/2002  |
| 135892 | AQ005136 | LAGRAPHICO, INC                           | 3800 VANOWEN ST                | BURBANK           | 91505      | ROG      | 21     | Coastal | 10/17/2003 |
| 800171 | AQ005436 | EXXONMOBIL OIL CORPORATION (EIS USE)      | 2619 E 37TH ST                 | VERNON            | 90058      | ROG      | 21     | Coastal | 7/13/2004  |
| 800030 | AQ004374 | CHEVRON PRODUCTS CO.                      | 324 W EL SEGUNDO BLVD          | EL SEGUNDO        | 90245 3680 | ROG      | 22     | Coastal | 1/29/2002  |
| 128243 | AQ005068 | MAGNOLIA POWER PROJECT, SCPPA             | 164 W MAGNOLIA BLVD            | BURBANK           | 91502 1720 | ROG      | 22     | Coastal | 8/13/2003  |
| 9301   | AQ000036 | CHEVRON U.S.A. INC                        | 2040 CENTURY PARK EAST         | WEST LOS ANGELES  | 90212      | ROG      | 23     | Coastal | 12/17/1990 |
| 5560   | AQ003774 | SPARKLETT'S DRINKING WATER CORP           | 1449 N AVENUE 46               | LOS ANGELES       | 90041 3410 | ROG      | 23     | Coastal | 5/19/2001  |
| 5646   | AQ003778 | HITCO CARBON COMPOSITES INC               | 1600 W 135TH ST                | GARDENA           | 90249 2506 | ROG      | 23     | Coastal | 5/19/2001  |
| 130231 | AQ005079 | CORAL ENERGY RESOURCES, LP                | VARIOUS LOCATIONS IN SCAQMD    | DIAMOND BAR       | 91765      | ROG      | 23     | Inland  | 8/21/2003  |
| 800026 | AQ005088 | ULTRAMAR INC (NSR USE ONLY)               | 2402 E ANAHEIM ST              | WILMINGTON        | 90744      | ROG      | 23     | Coastal | 9/5/2003   |
| 800393 | AQ004130 | VALERO WILMINGTON ASPHALT PLANT           | 1651 ALAMEDA ST                | WILMINGTON        | 90744      | ROG      | 24     | Coastal | 8/3/2001   |
| 87659  | AQ005134 | GOLDEN WEST HOMES                         | 3100 N PERRIS BLVD             | PERRIS            | 92571      | ROG      | 24     | Coastal | 10/14/2003 |
| 69216  | AQ003892 | CREATIVE WEB SYS                          | 2029 E CASHDAN DR              | COMPTON           | 90220 6438 | ROG      | 25     | Coastal | 5/20/2001  |
| 800393 | AQ004125 | VALERO WILMINGTON ASPHALT PLANT           | 1651 ALAMEDA ST                | WILMINGTON        | 90744      | ROG      | 25     | Coastal | 8/3/2001   |
| 128954 | AQ004686 | NRG POWER MARKETING, INC.                 | VARIOUS LOCATIONS IN SCAQMD    | DIAMOND BAR       | 91765      | ROG      | 25     | Coastal | 9/25/2002  |
| 2044   | AQ004931 | G B MFG INC/CALIF ACRYLIC, DBA CAL SPAS   | 1462 & 1481E NINTH ST          | POMONA            | 91766 3833 | ROG      | 25     | Coastal | 4/8/2003   |
| 800367 | AQ005414 | IPS CORP                                  | 17109 S MAIN ST                | GARDENA           | 90248      | ROG      | 25     | Coastal | 6/16/2004  |
| 14014  | AQ003908 | AB PLASTICS CORP                          | 15730 S FIGUEROA ST            | GARDENA           | 90248 2429 | ROG      | 26     | Coastal | 5/20/2001  |
| 11692  | AQ003770 | BERT-CO INDUSTRIES, BERT-CO GRAPHICS DBA  | 1819-1855 GLENDALE BLVD        | LOS ANGELES       | 90026 1729 | ROG      | 27     | Coastal | 5/19/2001  |
| 133987 | AQ005769 | PLAINS EXPLORATION & PRODUCTION CO, LP    | 5640 S FAIRFAX AVE             | LOS ANGELES       | 90056      | ROG      | 27     | Coastal | 7/21/2005  |
| 122858 | AQ005986 | SEKISUI T.A. INDUSTRIES, INC              | 100 S PUENTE ST                | BREA              | 92821      | ROG      | 27     | Coastal | 12/15/2005 |
| 101337 | AQ005988 | NATIONAL OFFSETS                          | 6251 PARAMOUNT BLVD            | LONG BEACH        | 90248      | ROG      | 27     | Coastal | 12/21/2005 |
| 18294  | AQ001912 | NORTHROP GRUMMAN CORP, AIRCRAFT DIV       | 500-800 N DOUGLAS ST           | EL SEGUNDO        | 90245      | ROG      | 28     | Coastal | 2/26/1997  |
| 4242   | AQ005022 | SAN DIEGO GAS & ELECTRIC                  | 14601 VIRGINIA ST              | MORENO VALLEY     | 92555 8100 | ROG      | 28     | Inland  | 7/10/2003  |
| 29110  | AQ000990 | ORANGE COUNTY SANITATION DISTRICT         | 22212 BROOKHURST ST            | HUNTINGTON BEACH  | 92646 8457 | ROG      | 30     | Coastal | 9/20/1993  |
| 121727 | AQ005458 | PACIFIC PIPELINE SYSTEM LLC               | 5900 CHERRY AVE                | LONG BEACH        | 90805      | ROG      | 30     | Coastal | 7/28/2004  |
| 800079 | AQ005686 | PETRO DIAMOND TERMINAL CO                 | 1920 LUGGER BERTH 83 WAY       | LONG BEACH        | 90813 2634 | ROG      | 30     | Coastal | 3/9/2005   |
| 134587 | AQ005327 | NESTLE USA - PREPARED FOODS DIVISION INC  | 9601 CANOGA AVE                | CHATSWORTH        | 91311      | ROG      | 31     | Coastal | 4/30/2004  |
| 46646  | AQ003756 | ARLON, MATERIALS FOR ELECTRONICS DIV      | 9433 HYSSOP DR                 | RANCHO CUCAMON    | 91730 6107 | ROG      | 32     | Inland  | 5/19/2001  |
| 800030 | AQ005350 | CHEVRON PRODUCTS CO.                      | 324 W EL SEGUNDO BLVD          | EL SEGUNDO        | 90245 3680 | ROG      | 32     | Coastal | 5/11/2004  |
| 77014  | AQ004791 | SARA LEE FRESH, INC                       | 5200 S ALAMEDA ST              | VERNON            | 90058 3420 | ROG      | 33     | Coastal | 12/11/2002 |
| 129816 | AQ005811 | INLAND EMPIRE ENERGY CENTER, LLC          | 26226 ANTELOPE RD              | ROMOLAND          | 92585      | ROG      | 33     | Coastal | 8/5/2005   |
| 24644  | AQ003776 | SHERWIN-WILLIAMS CO, SPRAYON PROD DIV     | 3818 E CORONADO ST             | ANAHEIM           | 92807 1694 | ROG      | 35     | Coastal | 5/19/2001  |
| 49805  | AQ005856 | LA CITY, BUREAU OF SANITATION             | 11950 LOPEZ CANYON RD          | LAKE VIEW TERRACE | 91342      | ROG      | 35     | Inland  | 9/6/2005   |
| 15544  | AQ003764 | REICHOLD INC                              | 237 S MOTOR AVE                | AZUSA             | 91702 3228 | ROG      | 36     | Inland  | 5/19/2001  |
| 53729  | AQ005894 | TREND OFFSET PRINTING SERVICES, INC       | 3722-382 CATALINA ST           | LOS ALAMITOS      | 90720 2475 | ROG      | 36     | Coastal | 9/23/2005  |
| 133987 | AQ005898 | PLAINS EXPLORATION & PRODUCTION CO, LP    | 5640 S FAIRFAX AVE             | LOS ANGELES       | 90056      | ROG      | 36     | Coastal | 9/28/2005  |
| 800041 | AQ003707 | DOW CHEM U.S.A. (NSR USE)                 | 305 S CRENSHAW BLVD            | TORRANCE          | 90503 1791 | ROG      | 37     | Coastal | 5/19/2001  |
| 14502  | AQ004982 | VERNON CITY, LIGHT & POWER DEPT           | 2715 E 50TH ST                 | VERNON            | 90058 2901 | ROG      | 37     | Coastal | 5/27/2003  |
| 800370 | AQ005771 | EQUILON ENTER., LLC, SHELL OIL PROD. U S  | 2101 E PACIFIC COAST HWY       | WILMINGTON        | 90744 2914 | ROG      | 37     | Coastal | 7/22/2005  |
| 84721  | AQ003754 | HUNTINGTON BEACH CO                       | 20031 GOLDENWEST ST            | HUNTINGTON BEACH  | 92648      | ROG      | 38     | Coastal | 5/19/2001  |
| 14502  | AQ005994 | VERNON CITY, LIGHT & POWER DEPT           | 2715 E 50TH ST                 | VERNON            | 90058 2901 | ROG      | 38     | Coastal | 12/22/2005 |
| 50829  | AQ002413 | NATL RV INC                               | 3411 N PERRIS BLVD             | PERRIS            | 92571 3100 | ROG      | 40     | Inland  | 6/3/1998   |
| 800009 | AQ003746 | AMERON PROTECTIVE COAT DIV (EIS&NSR USE)  | 201 N BERRY ST                 | BREA              | 92821      | ROG      | 40     | Coastal | 5/19/2001  |
| 20409  | AQ003912 | COAST INDUSTRIAL SUPPLY CO INC            | 15959 PIUMA AVE                | CERRITOS          | 90701 1595 | ROG      | 42     | Coastal | 5/20/2001  |
| 15872  | AQ003701 | SO CAL EDISON CO                          | 12700 TAYLOR ST                | COLTON            | 92324      | ROG      | 43     | Inland  | 5/19/2001  |
| 127749 | AQ004647 | ULTRAMAR, INC                             | 12220 N ALAMEDA ST             | WILMINGTON        | 90744 2847 | ROG      | 43     | Coastal | 9/6/2002   |
| 60342  | AQ004186 | UNITED STATES CAN CO                      | 5650 E GRACE PL                | COMMERCE          | 90022 4119 | ROG      | 46     | Coastal | 9/20/2001  |
| 800098 | AQ003918 | NEWHALL REF CO INC (EIS USE)              | 22674 N CLAMPT RD              | NEWHALL           | 91321      | ROG      | 48     | Coastal | 5/20/2001  |
| 132451 | AQ005538 | WEYERHAEUSER COMPANY                      | 19615 S SUSANA RD              | COMPTON           | 90221      | ROG      | 50     | Coastal | 12/3/2004  |

Table 8.1F-2  
LIST OF ACTIVE SCAQMD ERCs - MARCH 2006

| FAC ID | ERC NBR  | COMPANY NAME                             | ADDRESS                         | CITY             | ZIP        | EMITTANT | AMOUNT | Zone    | ISSUED     |
|--------|----------|------------------------------------------|---------------------------------|------------------|------------|----------|--------|---------|------------|
| 14502  | AQ005992 | VERNON CITY, LIGHT & POWER DEPT          | 2715 E 50TH ST                  | VERNON           | 90058 2901 | ROG      | 50     | Coastal | 12/22/2005 |
| 800089 | AQ006032 | EXXONMOBIL OIL CORPORATION               | 3700 W 190TH ST                 | TORRANCE         | 90504 5790 | ROG      | 50     | Coastal | 2/13/2006  |
| 35302  | AQ003697 | OWENS CORNING                            | 1501 N TAMARIND AVE             | COMPTON          | 90222 4130 | ROG      | 51     | Coastal | 5/19/2001  |
| 129520 | AQ004211 | MINKA-LAVERY/AMBIENCE LIGHTING           | 2640 DEL AMO BLVD               | CARSON           | 90221      | ROG      | 54     | Coastal | 10/4/2001  |
| 127749 | AQ004649 | ULTRAMAR, INC                            | 1220 N ALAMEDA ST               | WILMINGTON       | 90744 2847 | ROG      | 56     | Coastal | 9/6/2002   |
| 2982   | AQ004263 | SO CAL EDISON CO UNIT NO. 1              | 2500 E VICTORIA ST              | COMPTON          | 90220      | ROG      | 57     | Coastal | 11/6/2001  |
| 17301  | AQ004614 | ORANGE COUNTY SANITATION DISTRICT        | 10844 ELLIS AVE                 | FOUNTAIN VALLEY  | 92708 7018 | ROG      | 57     | Coastal | 8/9/2002   |
| 101337 | AQ006020 | NATIONAL OFFSETS                         | 6251 PARAMOUNT BLVD             | LONG BEACH       | 90248      | ROG      | 59     | Coastal | 1/18/2006  |
| 141891 | AQ006015 | AES HIGHGROVE, LLC                       | 12700 TAYLOR ST                 | GRAND TERRACE    | 92313      | ROG      | 60     | Inland  | 1/12/2006  |
| 6753   | AQ003928 | WHITTAKER CORP.                          | 22116 W SOLEDAD CANYON RD       | SAUGUS           | 91350      | ROG      | 63     | Coastal | 5/20/2001  |
| 136994 | AQ005021 | HIGH DESERT II, LLC                      | 19000 PERIMETER RD              | VICTORVILLE      | 92394 7958 | ROG      | 64     | Coastal | 7/9/2003   |
| 44916  | AQ003894 | HEAD WEST INC                            | 1829-69 W EL SEGUNDO (1901 CONT | COMPTON          | 90222      | ROG      | 66     | Coastal | 5/20/2001  |
| 12879  | AQ003888 | CYTEC ENGINEERED MATERIALS, INC          | 21444 GOLDEN TRIANGLE RD        | SAUGUS           | 91350 2911 | ROG      | 67     | Coastal | 5/20/2001  |
| 2605   | AQ006008 | 3M PHARMACEUTICALS                       | 19901 NORDHOFF ST               | NORTHBRIDGE      | 91324 3213 | ROG      | 70     | Coastal | 1/5/2006   |
| 14502  | AQ005993 | VERNON CITY, LIGHT & POWER DEPT          | 2715 E 50TH ST                  | VERNON           | 90058 2901 | ROG      | 73     | Coastal | 12/22/2005 |
| 800022 | AQ003876 | CALNEV PIPE LINE, LLC                    | 2051 E SLOVER AVE               | BLOOMINGTON      | 92316      | ROG      | 74     | Coastal | 5/20/2001  |
| 128590 | AQ006067 | MULTIFUELS LP                            | VARIOUS LOCATIONS IN SCAQMD     | DIAMOND BAR      | 91765      | ROG      | 75     | Inland  | 2/22/2006  |
| 800026 | AQ004336 | ULTRAMAR INC (NSR USE ONLY)              | 2402 E ANAHEIM ST               | WILMINGTON       | 90744      | ROG      | 78     | Coastal | 1/4/2002   |
| 800363 | AQ003970 | CONOCOPHILLIPS COMPANY                   | 1660 W ANAHEIM ST               | WILMINGTON       | 90744      | ROG      | 80     | Coastal | 5/20/2001  |
| 101337 | AQ006055 | NATIONAL OFFSETS                         | 6251 PARAMOUNT BLVD             | LONG BEACH       | 90248      | ROG      | 80     | Coastal | 2/17/2006  |
| 11272  | AQ003868 | STEWART FILMSCREEN CORP                  | 1161 W SEPULVEDA & 2311 ALEXAN  | TORRANCE         | 90502 2797 | ROG      | 86     | Coastal | 5/20/2001  |
| 20502  | AQ003878 | UMC PETROLEUM CORP                       | 14737 SAN FERNANDO RD           | SYLMAR           | 91342      | ROG      | 86     | Coastal | 5/20/2001  |
| 6262   | AQ003956 | THE HON CO                               | 2323 E FIRESTONE BLVD           | SOUTH GATE       | 90280 2699 | ROG      | 86     | Coastal | 5/20/2001  |
| 3968   | AQ003724 | TABC, INC                                | 6375 PARAMOUNT BLVD             | LONG BEACH       | 90805 3301 | ROG      | 89     | Coastal | 5/19/2001  |
| 5170   | AQ005734 | KINDER MORGAN LIQUIDS TERMINALS LLC      | 2000 E SEPULVEDA BLVD           | CARSON           | 90745      | ROG      | 92     | Coastal | 5/20/2005  |
| 115663 | AQ003722 | EL SEGUNDO POWER, LLC                    | 301 VISTA DEL MAR               | EL SEGUNDO       | 90245      | ROG      | 95     | Coastal | 5/19/2001  |
| 800067 | AQ005486 | BOEING SATELLITE SYSTEMS INC             | IMPERIAL MAPLE NASH & SELBY     | EL SEGUNDO       | 90245      | ROG      | 102    | Coastal | 9/3/2004   |
| 800150 | AQ003984 | US GOVT, AF DEPT, MARCH AIR RESERVE BASE | MARCH AFB                       | RIVERSIDE        | 92518      | ROG      | 114    | Inland  | 5/20/2001  |
| 40034  | AQ006070 | BENTLEY PRINCE STREET INC                | 14641 E DON JULIAN RD           | CITY OF INDUSTRY | 91746      | ROG      | 115    | Inland  | 2/22/2006  |
| 800372 | AQ005961 | EQUILON ENTER. LLC, SHELL OIL PROD. US   | 20945 S WILMINGTON              | CARSON           | 90810      | ROG      | 130    | Coastal | 11/23/2005 |
| 124374 | AQ004313 | NATIONAL RV INC.                         | 100 SINCLAIR                    | PERRIS           | 92571      | ROG      | 131    | Inland  | 12/8/2001  |
| 145464 | AQ005907 | SES TERMINAL LLC                         | PIER T, BERTH T126              | LONG BEACH       | 90802      | ROG      | 133    | Coastal | 10/13/2005 |
| 122858 | AQ005954 | SEKISU T.A. INDUSTRIES, INC              | 100 S PUENTE ST                 | BREA             | 92821      | ROG      | 133    | Coastal | 11/10/2005 |
| 136994 | AQ005020 | HIGH DESERT II, LLC                      | 19000 PERIMETER RD              | VICTORVILLE      | 92394 7958 | ROG      | 136    | Coastal | 7/9/2003   |
| 145495 | AQ006038 | PACIFIC ENERGY GROUP LLC                 | 5900 CHERRY AVE                 | LONG BEACH       | 90805      | ROG      | 136    | Coastal | 2/14/2006  |
| 59560  | AQ001156 | OR. CO., SANITATION DISTRICT NO.1        | 4100 E WASHINGTON BLVD          | LOS ANGELES      | 90023 4406 | ROG      | 149    | Coastal | 5/9/1994   |
| 18294  | AQ003720 | NORTHROP GRUMMAN CORP, AIRCRAFT DIV      | 500-800 N DOUGLAS ST            | EL SEGUNDO       | 90245      | ROG      | 151    | Coastal | 5/19/2001  |
| 18943  | AQ005732 | KINDER MORGAN LIQUIDS TERMINALS, LLC     | 2000 E SEPULVEDA BLVD           | CARSON           | 90810 1937 | ROG      | 152    | Coastal | 5/20/2005  |
| 800170 | AQ003661 | LA CITY, DWP HARBOR GENERATING STATION   | 161 N ISLAND AVE                | WILMINGTON       | 90744 6303 | ROG      | 154    | Coastal | 5/18/2001  |
| 12362  | AQ006075 | ACCESS BUSINESS GROUP LLC, NUTRILITE     | 19600 6TH ST                    | LAKEVIEW         | 92567 8401 | ROG      | 154    | Inland  | 2/22/2006  |
| 59560  | AQ001421 | OR. CO., SANITATION DISTRICT NO.1        | 4100 E WASHINGTON BLVD          | LOS ANGELES      | 90023 4406 | ROG      | 155    | Coastal | 1/23/1995  |
| 23196  | AQ006026 | SUNKIST GROWERS, INC                     | 616 E SUNKIST                   | ONTARIO          | 91761 1750 | ROG      | 182    | Inland  | 1/27/2006  |
| 800264 | AQ005991 | EDGINGTON OIL COMPANY                    | 2400 E ARTESIA BLVD             | LONG BEACH       | 90805      | ROG      | 189    | Coastal | 12/22/2005 |
| 800030 | AQ004923 | CHEVRON PRODUCTS CO.                     | 324 W EL SEGUNDO BLVD           | EL SEGUNDO       | 90245 3680 | ROG      | 197    | Coastal | 4/2/2003   |
| 21482  | AQ005375 | VOPAK TERMINAL LOS ANGELES, INC.         | 2200 PACIFIC COAST HWY          | WILMINGTON       | 90744 2921 | ROG      | 250    | Coastal | 5/21/2004  |
| 104015 | AQ001105 | AERA ENERGY LLC                          | 4024 VALLEY VIEW AVE            | YORBA LINDA      | 92886      | ROG      | 260    | Coastal | 3/9/1994   |
| 133536 | AQ005029 | HIGH DESERT POWER TRUST                  | 19000 PERIMETER RD              | VICTORVILLE      | 92394      | ROG      | 348    | Coastal | 7/14/2003  |
| 800396 | AQ005262 | BP WEST COAST PROD/ARCO VINVALE TERMINAL | 8601 S GARFIELD AVE             | SOUTH GATE       | 90280 3709 | ROG      | 363    | Coastal | 3/17/2004  |
| 70276  | AQ003934 | COUNTY SANITATION DISTRICTS OF ORANGE CO | 2200 S YALE ST                  | SANTA ANA        | 92704 4427 | ROG      | 366    | Coastal | 5/20/2001  |
| 81756  | AQ000632 | DART CONTAINER CORP OF CALIFORNIA        | 150 S MAPLE ST                  | CORONA           | 92880      | ROG      | 408    | Coastal | 8/21/1991  |
| 104017 | AQ005660 | AERA ENERGY LLC                          | 20101 GOLDENWEST ST             | HUNTINGTON BEACH | 92648 2628 | ROG      | 437    | Coastal | 2/22/2005  |
| 133536 | AQ005019 | HIGH DESERT POWER TRUST                  | 19000 PERIMETER RD              | VICTORVILLE      | 92394      | ROG      | 501    | Coastal | 7/8/2003   |
| 145495 | AQ006006 | PACIFIC ENERGY GROUP LLC                 | 5900 CHERRY AVE                 | LONG BEACH       | 90805      | ROG      | 583    | Coastal | 1/4/2006   |
| 128954 | AQ006037 | NRG POWER MARKETING, INC.                | VARIOUS LOCATIONS IN SCAQMD     | DIAMOND BAR      | 91765      | ROG      | 614    | Coastal | 2/14/2006  |
| 3721   | AQ004209 | DART CONTAINER CORP OF CALIFORNIA        | 150 S MAPLE ST.                 | CORONA           | 92880 1704 | ROG      | 650    | Coastal | 10/2/2001  |
| 136994 | AQ005030 | HIGH DESERT II, LLC                      | 19000 PERIMETER RD              | VICTORVILLE      | 92394 7958 | ROG      | 727    | Coastal | 7/14/2003  |
| 23194  | AQ000331 | CITY OF HOPE MEDICAL CENTER              | 1500 E DUARTE RD                | DUARTE           | 91010 3012 | SOX      | 1      | Inland  | 6/4/1991   |
| 90882  | AQ001192 | SOUTHERN CALIFORNIA EDISON               | BRIDGE AND RAMONA EXPRESSWAY    | SAN JACINTO      | 92367      | SOX      | 1      | Inland  | 6/16/1994  |
| 88196  | AQ001285 | SOUTHERN CALIFORNIA EDISON CO            | 1/2 MI EAST OF LAKEVIEW/RAMONA  | SAN JACINTO      | 92581      | SOX      | 1      | Inland  | 6/16/1994  |
| 90166  | AQ001289 | SOUTHERN CALIFORNIA EDISON CO            | NW CRNR ROMONA EXPWY/POTTER     | SAN JACINTO      | 92582      | SOX      | 1      | Inland  | 6/16/1994  |
| 800236 | AQ003130 | LA CO. SANITATION DIST                   | 24501 S FIGUEROA ST             | CARSON           | 90745 6311 | SOX      | 1      | Coastal | 7/25/2000  |
| 119907 | AQ004612 | BERRY PETROLEUM COMPANY                  | 25121 N SIERRA HWY              | SANTA CLARITA    | 91321 2007 | SOX      | 1      | Coastal | 8/9/2002   |
| 121727 | AQ005359 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                 | LONG BEACH       | 90805      | SOX      | 1      | Coastal | 5/12/2004  |
| 121727 | AQ005360 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                 | LONG BEACH       | 90805      | SOX      | 1      | Coastal | 5/12/2004  |
| 141891 | AQ005589 | AES HIGHGROVE, LLC                       | 12700 TAYLOR ST                 | GRAND TERRACE    | 92313      | SOX      | 1      | Coastal | 1/18/2005  |
| 5779   | AQ000038 | US GOVT, MARINE CORPS, CAMP PENDLETON    | USMCB CAMP PENDLETON            | SAN CLEMENTE     | 92672      | SOX      | 2      | Coastal | 12/17/1990 |
| 8980   | AQ000363 | ARCO (EIS USE)                           | 1801 E SEPULVEDA BLVD           | CARSON           | 90745      | SOX      | 2      | Coastal | 6/10/1991  |
| 58556  | AQ000854 | CROWN COACH INC                          | 13799 MONTE VISTA AVE           | CHINO            | 91710 5513 | SOX      | 2      | Inland  | 8/25/1992  |
| 93418  | AQ001177 | GRANITE CONSTRUCTION COMPANY             | 38-155 MONROE ST                | INDIO            | 92201      | SOX      | 2      | Inland  | 6/8/1994   |
| 91178  | AQ001231 | SOUTHERN CALIFORNIA EDISON COMPANY       | EVERETT RESERVOIR/HWY 371       | ANZA             | 92583      | SOX      | 2      | Inland  | 6/16/1994  |
| 800193 | AQ003673 | LA CITY, DWP VALLEY GENERATING STATION   | 11801 SHELTON ST                | SUN VALLEY       | 91352 1420 | SOX      | 2      | Coastal | 5/18/2001  |
| 141891 | AQ006017 | AES HIGHGROVE, LLC                       | 12700 TAYLOR ST                 | GRAND TERRACE    | 92313      | SOX      | 2      | Coastal | 1/12/2006  |
| 10766  | AQ000176 | ALCO PACIFIC INC                         | 16908-32 S BROADWAY             | CARSON           | 90248      | SOX      | 3      | Coastal | 5/22/1991  |
| 90880  | AQ001207 | SOUTHERN CALIFORNIA EDISON               | MARVIN                          | LAKEVIEW         | 92367      | SOX      | 3      | Inland  | 6/16/1994  |
| 121727 | AQ005349 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                 | LONG BEACH       | 90805      | SOX      | 3      | Coastal | 5/11/2004  |
| 145495 | AQ005823 | PACIFIC ENERGY GROUP LLC                 | 5900 CHERRY AVE                 | LONG BEACH       | 90805      | SOX      | 3      | Coastal | 8/12/2005  |
| 8220   | AQ000763 | PROVIDENCE ST JOSEPH MED CTR             | 501 S BUENA VISTA ST            | BURBANK          | 91505 4866 | SOX      | 4      | Coastal | 2/6/1992   |
| 91182  | AQ001212 | SOUTHERN CALIFORNIA EDISON COMPANY       | 1 MILE SOUTH OF HWY 74          | ROMOLAND         | 92585      | SOX      | 4      | Inland  | 6/16/1994  |
| 800183 | AQ004451 | PARAMOUNT PETR CORP (EIS USE)            | 14700-08 DOWNEY AVE             | PARAMOUNT        | 90723 4526 | SOX      | 4      | Coastal | 4/5/2002   |
| 141891 | AQ005706 | AES HIGHGROVE, LLC                       | 12700 TAYLOR ST                 | GRAND TERRACE    | 92313      | SOX      | 4      | Coastal | 4/1/2005   |
| 800084 | AQ000526 | MARLEX OIL & REF INC (EIS USE)           | 1825 E SPRING ST                | LONG BEACH       | 90806 1919 | SOX      | 5      | Coastal | 7/6/1991   |
| 800153 | AQ000957 | US GOVT, NAVY DEPT LB SHIPYARD           | LONG BEACH NAVAL SHIPYARD       | LONG BEACH       | 90822 5077 | SOX      | 5      | Coastal | 6/29/1993  |
| 90881  | AQ001197 | SOUTHERN CALIFORNIA EDISON               | ON RESERVIOR                    | LAKEVIEW         | 92367      | SOX      | 5      | Inland  | 6/16/1994  |
| 90883  | AQ001216 | SOUTHERN CALIFORNIA EDISON               | 1/4 MI E ALLESANDRO/MN/RAMONA   | SAN JACINTO      | 92582      | SOX      | 5      | Inland  | 6/16/1994  |
| 91179  | AQ001226 | SOUTHERN CALIFORNIA EDISON COMPANY       | HOME RESERVOIR/HWY 371          | ANZA             | 92583      | SOX      | 5      | Inland  | 6/16/1994  |
| 800074 | AQ003637 | LA CITY, DWP HAYNES GENERATING STATION   | 6801 2ND ST                     | LONG BEACH       | 90803 4324 | SOX      | 5      | Coastal | 5/11/2001  |
| 12062  | AQ000114 | W. L. CHAPMAN CO INC                     | 950 S TURNBULL CYN RD           | CITY OF INDUSTRY | 91745 1404 | SOX      | 6      | Inland  | 1/26/1991  |
| 89453  | AQ001240 | SO CALIFORNIA EDISON, MITCHEL RESERVOIR  | LINCOLN/MITCHEL RD              | ANZA             | 92539      | SOX      | 6      | Inland  | 6/16/1994  |
| 145495 | AQ005881 | PACIFIC ENERGY GROUP LLC                 | 5900 CHERRY AVE                 | LONG BEACH       | 90805      | SOX      | 6      | Coastal | 9/14/2005  |
| 20872  | AQ000006 | CBS INC                                  | 7800 BEVERLY BLVD               | LOS ANGELES      | 90036      | SOX      | 8      | Coastal | 12/17/1990 |
| 121727 | AQ005361 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                 | LONG BEACH       | 90805      | SOX      | 10     | Coastal | 5/12/2004  |
| 121727 | AQ005362 | PACIFIC PIPELINE SYSTEM LLC              | 5900 CHERRY AVE                 | LONG BEACH       | 90805      | SOX      | 10     | Coastal | 5/12/2004  |
| 141891 | AQ006018 | AES HIGHGROVE, LLC                       | 12700 TAYLOR ST                 | GRAND TERRACE    | 92313      | SOX      | 10     | Inland  | 1/12/2006  |
| 128954 | AQ003332 | NRG POWER MARKETING, INC.                | VARIOUS LOCATIONS IN SCAQMD     | DIAMOND BAR      | 91765      | SOX      | 13     | Coastal | 12/2/2000  |
| 128954 | AQ003333 | NRG POWER MARKETING, INC.                | VARIOUS LOCATIONS IN SCAQMD     | DIAMOND BAR      | 91765      | SOX      | 17     | Coastal | 12/2/2000  |
| 141891 | AQ005672 | AES HIGHGROVE, LLC                       | 12700 TAYLOR ST                 | GRAND TERRACE    | 92313      | SOX      | 18     | Inland  | 3/1/2005   |
| 128954 | AQ003336 | NRG POWER MARKETING, INC.                | VARIOUS LOCATIONS IN SCAQMD     | DIAMOND BAR      | 91765      | SOX      | 19     | Coastal | 12/2/2000  |
| 89033  | AQ000687 | US GOVT, AIR FORCE DEPT, MARCH AFB       | WILSHIRE & SAWTELLE             | LOS ANGELES      | 90073      | SOX      | 20     | Coastal | 12/3/1991  |
| 141891 | AQ005673 | AES HIGHGROVE, LLC                       | 12700 TAYLOR ST                 | GRAND TERRACE    | 92313      | SOX      | 20     | Inland  | 3/1/2005   |
| 145495 | AQ005878 | PACIFIC ENERGY GROUP LLC                 | 5900 CHERRY AVE                 | LONG BEACH       | 90805      | SOX      | 22     | Coastal | 9/14/2005  |
| 141891 | AQ006016 | AES HIGHGROVE, LLC                       | 12700 TAYLOR ST                 | GRAND TERRACE    | 92313      | SOX      | 26     | Coastal | 1/12/2006  |
| 104017 | AQ002273 | AERA ENERGY LLC                          | 20101 GOLDENWEST ST             | HUNTINGTON BEACH | 92648 2628 | SOX      | 36     | Coastal | 2/24/1998  |
| 14966  | AQ000688 | U S GOVT, V A MEDICAL CENTER, WEST L A   | 11301 WILSHIRE BLVD             | LOS ANGELES      | 90073      | SOX      | 39     | Coastal | 12/3/1991  |

Table 8.1F-2  
LIST OF ACTIVE SCAQMD ERCs - MARCH 2006

| FAC ID | ERC NBR  | COMPANY NAME                            | ADDRESS             | CITY             | ZIP        | EMITTANT | AMOUNT | Zone    | ISSUED    |
|--------|----------|-----------------------------------------|---------------------|------------------|------------|----------|--------|---------|-----------|
| 141891 | AQ005753 | AES HIGHGROVE, LLC                      | 12700 TAYLOR ST     | GRAND TERRACE    | 92313      | SOX      | 40     | Inland  | 6/21/2005 |
| 101337 | AQ006042 | NATIONAL OFFSETS                        | 6251 PARAMOUNT BLVD | LONG BEACH       | 90248      | SOX      | 46     | Coastal | 2/16/2006 |
| 121727 | AQ005364 | PACIFIC PIPELINE SYSTEM LLC             | 5900 CHERRY AVE     | LONG BEACH       | 90805      | SOX      | 47     | Coastal | 5/12/2004 |
| 800075 | AQ004499 | LA CITY, DWP SCATTERGOOD GENERATING STN | 12700 VISTA DEL MAR | PLAYA DEL REY    | 90293 8599 | SOX      | 50     | Coastal | 5/10/2002 |
| 29110  | AQ006041 | ORANGE COUNTY SANITATION DISTRICT       | 22212 BROOKHURST ST | HUNTINGTON BEACH | 92646 8457 | SOX      | 54     | Coastal | 2/16/2006 |
| 121727 | AQ005363 | PACIFIC PIPELINE SYSTEM LLC             | 5900 CHERRY AVE     | LONG BEACH       | 90805      | SOX      | 75     | Coastal | 5/12/2004 |
| 800305 | AQ001441 | UCLA                                    | 705 SO DR           | LOS ANGELES      | 90024 8315 | SOX      | 106    | Coastal | 4/19/1995 |

APPENDIX 8.2A

## **Qualifications/Resume of Field Surveyors**

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# Linda Anton

## Biological Resources

### Education

B.S., Biology, California State University Bakersfield, 2000

M.S., California State University Northridge, in progress

### Relevant Experience

Ms. Anton has worked in a wide capacity as a resource biologist, with expertise in issues pertaining to special-status species, landscape ecology and conservation planning, impact analysis and mitigation, and habitat restoration.

### Representative Projects

- ✓ **Edwards Air Force Base (AFB), Environmental Management Program, California. (2000-2004).**  
Since 2000, served as a wildlife biologist/field supervisor for this program that included providing biological technical support to maintain base compliance with the *Endangered Species Act*, the *Migratory Bird Treaty Act (MBTA)*, the *Clean Water Act (CWA)*, Executive Order 11988 for Floodplain Management, the *National Environmental Policy Act (NEPA)*, the Environmental Impact Analysis Process, and all Federal, State, and local legislation. Provided expertise to scientists, engineers and program managers on project planning as well as analysis and recommendations to interdisciplinary teams regarding environmental impacts of management actions to wildlife species and habitats, with emphasis on threatened and endangered species. Provided status briefings and project oversight to our Air Force customer and provided quality assurance and technical support on all NEPA documents, including biological, environmental, and damage assessments, as well as annual reports to the United States Fish and Wildlife Service (USFWS) (i.e., Biological Opinion and MBTA Annual Reports). Coordinated and conducted biological surveys, inventories and monitoring.
- ✓ **Net Environmental Benefit Analysis (NEBA), Edwards AFB, California (2003-2005).**  
Provided task management and biological support for drafting three NEBA Reports for the Edwards AFB Environmental Restoration Program. The NEBA is used to analyze the potential risks and value associated with remedial alternatives.
- ✓ **NEBA, Seal Beach, California (2005).** Provided task management and biological support for drafting a NEBA Report for the Naval Weapons Station Seal Beach Installation Restoration Program. The NEBA was used to analyze the potential risks and values associated with the remedial alternatives at Site 74, which includes a portion of the Nation Wildlife Refuge.
- ✓ **Wetland Delineation, Camp Pendleton, California (2004).** Conducted wetland delineation surveys for the Marine Corps Base at Camp Pendleton. This project involved delineating the boundaries of watercourses as well as soil sampling and vegetation mapping to aid in the determination of jurisdictional waters.

- ✓ **AES Highgrove Application for Certification (AFC) Permitting, Grand Terrace, California (2004).** Provided biological support for the licensing of a 300-megawatt (MW) peaking facility consisting of three natural-gas-fired turbines and associated equipment. This project involved conducting biological surveys for all of the alternative gas line routes and the power plant site to determine potential project impacts to sensitive species for the preparation of the biological section of the AFC.
- ✓ **Dominguez Gap Wetlands/Recreation Environmental Impact Report, Long Beach, California (2005).** Provided biological support by drafting the biological section of the Environmental Impact Report for the Dominguez Gap Wetlands/Recreation Project. The project involves flow improvements, basin restructuring, vegetation removal and planting, and the addition of passive recreational features to the Dominguez Gap Spreading Grounds located along the Los Angeles River.
- ✓ **Hill Canyon Mitigation Bank, Camarillo, California (2004-2005).** Provided task management, biological support, and agency coordination for the Hill Canyon Mitigation Bank. The Hill Canyon Mitigation Bank was proposed by the City of Thousand Oaks as an opportunity to implement biological resource planning for preservation, habitat creation, and enhancement in the Hill Canyon region. The Mitigation Bank will provide potential mitigation for environmental effects of future City projects and other projects within Ventura County by third party purchasers, including impacts to streambed and bank, impacts to “waters of the United States” including wetlands under Section 404 of the CWA, impacts under Section 401 of the CWA; and impacts to special-status species including southwestern pond turtle (*Clemmys marmorata pallida*).
- ✓ **Biological Assessment for the Open Burn Open Detonation Unit, Edwards AFB, California (2005).** Provided biological support to evaluate the effects of increasing the amount of unserviceable munitions and propellant treated at the Open Burn Open Detonation Unit on potentially occurring sensitive species. This assessment was conducted to make a determination regarding the effects of the proposed action on the status of these species and to determine whether formal or informal consultation or conference with the USFWS is required.
- ✓ **State Route 79, Hemet, California (2005).** Conducted rare plant and wetland delineation surveys for the proposed State Route 79 road realignment project. These surveys were conducted to identify project constraints associated with the proposed project.

APPENDIX 8.3A

## **Agency Consultation Letters**

---

SENT 1/21/05



**CH2MHILL**

**CH2M HILL**

3 Hutton Centre Drive

Suite 200

Santa Ana, CA 92707

Tel 714.429.2000

Fax 714.429.2050

January 20, 2005

322752.LS.AF.PS

Mr. Larry Myers  
Native American Heritage Commission  
915 Capitol Mall, Room 364  
Sacramento, CA 95814

Dear Larry,

Subject: AES Pacific Inc. – Proposed Highgrove Power Plant AFC

CH2M HILL is assisting AES Pacific Inc. (AES) with the preparation of an Application for Certification for a replacement generation facility at the former Riverside Canal Power Plant, located in the city of Grand Terrace, California. The proposed new facility will be called AES Highgrove.

The project is located at T2S, R4W (San Bernardino South, CA 1967 USGS 7.5 minute topographic map), T2S, R4W (Riverside East, CA 1967 USGS 7.5 minute topographic map), T3S, R4W (Riverside East, CA 1967 USGS 7.5 minute topographic map).

We would appreciate your checking the Sacred Lands Files to see if there are any culturally sensitive areas within the immediate project vicinity. We would also like to receive a list of MLD's appropriate for this area since we will attempt to contact local Indian groups to solicit their written input/concerns about the project.

Thanks again for your cooperation and assistance. We look forward to your earliest possible reply.

Sincerely,

CH2M HILL

Clint J. Helton, M.A., RPA  
Project Scientist

Enclosures : MAP

STATE OF CALIFORNIAArnold Schwarzenegger Governor**NATIVE AMERICAN HERITAGE COMMISSION**

915 CAPITOL MALL, ROOM 364  
SACRAMENTO, CA 95814  
(916) 653-4082  
Fax (916) 657-5390  
Web Site [www.nahc.ca.gov](http://www.nahc.ca.gov)



February 9, 2005

Clint J. Helton  
CH2Mhill  
3 Hutton Centre Drive  
Suite 200  
Santa Ana, CA 92707

Sent by Fax: 714-429-2050  
Number of Pages: 3

Re: Proposed AES Pacific Inc. – Proposed Highgrove Power Plant AFC, Riverside  
and San Bernaradino Counties

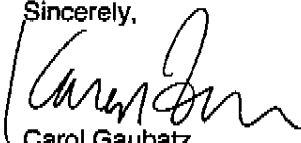
Dear Mr. Helton:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-6251.

Sincerely,

  
Carol Gaubatz  
Program Analyst

**Native American Contacts**  
**Riverside and San Bernardino County**  
**February 9, 2005**

Samuel H. Dunlap  
P.O. Box 1391  
Temecula, CA 92593

(909) 262-9351 (Cell)  
(909) 693-9196 FAX

Gabrielino  
Cahuilla  
Luiseno

Willie Pink  
626 E. Old Second St.  
San Jacinto, CA 92583  
(909) 936-1216

Luiseno

Cupa Cultural Center (Pala Band)  
William J. Contreras, Archaeology and Cultural Res.  
P.O. Box 455  
Pala, CA 92059  
(760) 742-3784

Luiseno

La Jolla Band of Mission Indians  
ATTN: Rob Roy, Environmental Director  
22000 Highway 76  
Pauma Valley, CA 92061  
(760) 742-3771/72  
(760) 742-1701 Fax

Luiseno

La Jolla Band of Mission Indians  
ATTN: Rob Roy, Environmental Director  
22000 Highway 76  
Pauma Valley, CA 92061  
(760) 742-3771/72  
(760) 742-1701 Fax

Luiseno

Morongo Band of Mission Indians  
Britt W. Wilson, Cultural Resource Coordinator  
245 N. Murray Street, Suite C  
Banning, CA 92220  
britt\_wilson@morongo.org  
(951) 849-8807  
(951) 755-5200  
(951) 922-8146 Fax

Cahuilla  
Serrano

Morongo Band of Mission Indians  
Maurice Lyons, Chairperson  
245 N. Murray Street, Suite C  
Banning, CA 92220  
(951) 849-8807  
(951) 755-5200  
(951) 922-8146 Fax

Cahuilla  
Serrano

Pala Band of Mission Indians  
Robert Smith, Chairperson  
P.O. Box 50  
Pala, CA 92059  
(760) 742-3784  
(760) 742-1411 Fax

Luiseno  
Cupeno

Pauma & Yuima  
Christobal C. Devers, Chairperson  
P.O. Box 369  
Pauma Valley, CA 92061  
(760) 742-1289  
(760) 742-3422 Fax

Luiseno

Pauma & Yuima  
Bennae Calac, Cultural Resource Coordinator  
P.O. Box 369  
Pauma Valley, CA 92061  
(760) 802-1811  
(760) 742-3422 Fax

Luiseno

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resource assessment for the proposed AES Pacific Inc. - Proposed Highgrove Power Plant AFC, Riverside and San Bernardino Counties.

**Native American Contacts**  
**Riverside and San Bernardino County**  
**February 9, 2005**

**Pauma & Yuima**  
**ATTN: EPA Coordinator**  
**P.O. Box 369**  
**Pauma Valley , CA 92061**  
**(760) 742-1289**  
**(760) 742-3422 Fax**

**Luiseno**

**Rincon Band of Mission Indians**  
**Rob Shaffer, Tribal Administrator**  
**P.O. Box 68**  
**Valley Center , CA 92082**  
**(760) 749-1051**  
**(760) 749-8901 Fax**

**Luiseno**

**Pechanga Band of Mission Indians**  
**Paul Macarro, Cultural Resource Center**  
**P.O. Box 2183**  
**Temecula , CA 92593**  
**(951) 308-9295**  
**(951) 506-9491 Fax**

**Luiseno**

**Rincon Band of Mission Indians**  
**Kristie Orosco, Environmental Coordinator**  
**P.O. Box 68**  
**Valley Center , CA 92082**  
**(760) 749-1051**  
**(760) 749-8901 Fax**

**Luiseno**

**Pechanga Band of Mission Indians**  
**Mark Macarro, Chairperson**  
**P.O. Box 2183**  
**Temecula , CA 92593**  
**(951) 308-9295**  
**(951) 506-9491 Fax**

**Luiseno**

**Rincon Band of Mission Indians**  
**Ruth Calac, President, Ricon Heritage Commission**  
**P.O. Box 68**  
**Valley Center , CA 92082**  
**(760) 749-1051**  
**(760) 749-8901 Fax**

**Luiseno**

**Rincon Band of Mission Indians**  
**Culture Committee**  
**P.O. Box 68**  
**Valley Center , CA 92082**  
**(760) 749-1051**  
**(760) 749-8901 Fax**

**Luiseno**

**San Fernando Band of Mission Indians**  
**John Valenzuela, Chairperson**  
**P.O. Box 221838**  
**Newhall , CA 91322**  
**tsten2u2@msn.com**  
**(661) 753-9833 Office**  
**(760) 885-0955 Cell**  
**(760) 949-2103 Home**

**Fernandeño**  
**Tataviam**  
**Serrano**  
**Vanyume**  
**Kitanemuk**

**Rincon Band of Mission Indians**  
**John Currier, Chairperson**  
**P.O. Box 68**  
**Valley Center , CA 92082**  
**(760) 749-1051**  
**(760) 749-8901 Fax**

**Luiseno**

**San Luis Rey Band of Mission Indians**  
**Henry Contreras, Most Likely Descendent**  
**1763 Chapulin Lane**  
**Fallbrook , CA 92028**  
**(760) 728-6722 - Home**  
**(760) 207-3618 - Cell**

**Luiseno**  
**Cupeno**

**This list is current only as of the date of this document.**

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**This list is only applicable for contacting local Native Americans with regard to cultural resource assessment for the proposed AES Pacific Inc. - Proposed Highgrove Power Plant AFC, Riverside and San Bernardino Counties.**

**Native American Contacts**  
**Riverside and San Bernardino County**  
**February 9, 2005**

San Luis Rey Band of Mission Indians  
Russell Romo, Chairman  
12064 Old Pomerado Road      Luiseno  
Poway, CA 92064      Cupeno  
(858) 748-1586

Soboba Band of Mission Indians  
Robert J. Salgado, Sr., Chairperson  
P.O. Box 487      Luiseno  
San Jacinto, CA 92581  
(909) 654-2765  
Fax: (909) 654-4198

San Luis Rey Band of Mission Indians  
Carmen Mojado, Co-Chair  
1889 Sunset Dr.      Luiseno  
Vista, CA 92081      Cupeno

Twenty-Nine Palms Band of Mission Indians  
Dean Mike, Chairperson  
46-200 Harrison Place      Luiseno  
Coachella, CA 92236      Chemehuevi  
(760) 775-5566  
(760) 775-4639 Fax

San Luis Rey Band of Mission Indians  
Mark Mojado, Cultural Resources  
P.O. Box 1      Luiseno  
Pala, CA 92059  
(760) 742-4468  
(760) 586-4858 (cell)

San Manuel Band of Mission Indians  
Deron Marquez, Chairperson  
PO Box 266      Serrano  
Patton, CA 92369  
dmarquez@sanmanuel-nsn.  
(909) 864-8933 EXT-3070  
(909) 864-3370 Fax

San Manuel Band of Mission Indians  
Bernadette Brierty, Cultural Resources Coordinator  
PO Box 266      Serrano  
Patton, CA 92369  
bbrierty@sanmanuel-nsn.gov  
(909) 864-8933 EXT-2203  
(909) 864-3370 Fax

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**CH2M HILL**

3 Hutton Centre Drive

Suite 200

Santa Ana, CA

92707

**Tel 714.429.2000**

**Fax 714.429.2050**

April 5, 2006

Samuel H. Dunlap  
P.O. Box 1391  
Temecula, CA 92593

Subject AES Pacific Inc. – Proposed Highgrove Power Plant AFC

CH2M HILL is assisting AES Pacific Inc. (AES) with the preparation of an Application for Certification for a replacement generation facility at the former Riverside Canal Power Plant, located in the city of Grand Terrace, California. The proposed new facility will be called AES Highgrove.

The project is located at T2S, R4W (San Bernardino South, CA 1967 USGS 7.5 minute topographic map), T2S, R4W (Riverside East, CA 1967 USGS 7.5 minute topographic map), T3S, R4W (Riverside East, CA 1967 USGS 7.5 minute topographic map).

A search of the Sacred Land files by the Native American Heritage Commission (NACH) in February 2005 failed to indicate the presence of Native American sacred sites in the immediate Project vicinity. However, the absence of specific site information in the Sacred Land files does not indicate the absence of cultural resources in the Project area. Therefore, the NAHC provided a list of Native America contacts within the project region.

If you know of any traditional cultural properties or values (e.g., burial sites, religious sites, or gathering sites) within the Project area shown on the enclosed map, or if you have any concerns regarding issues related to the overall Project, please contact me by telephone at (714) 435-6140, by FAX at (714) 424-2139, or by mail; you may also contact me at [chelton@ch2m.com](mailto:chelton@ch2m.com).

Your project comments and concerns are important to us. I look forward to hearing from you in the near future.

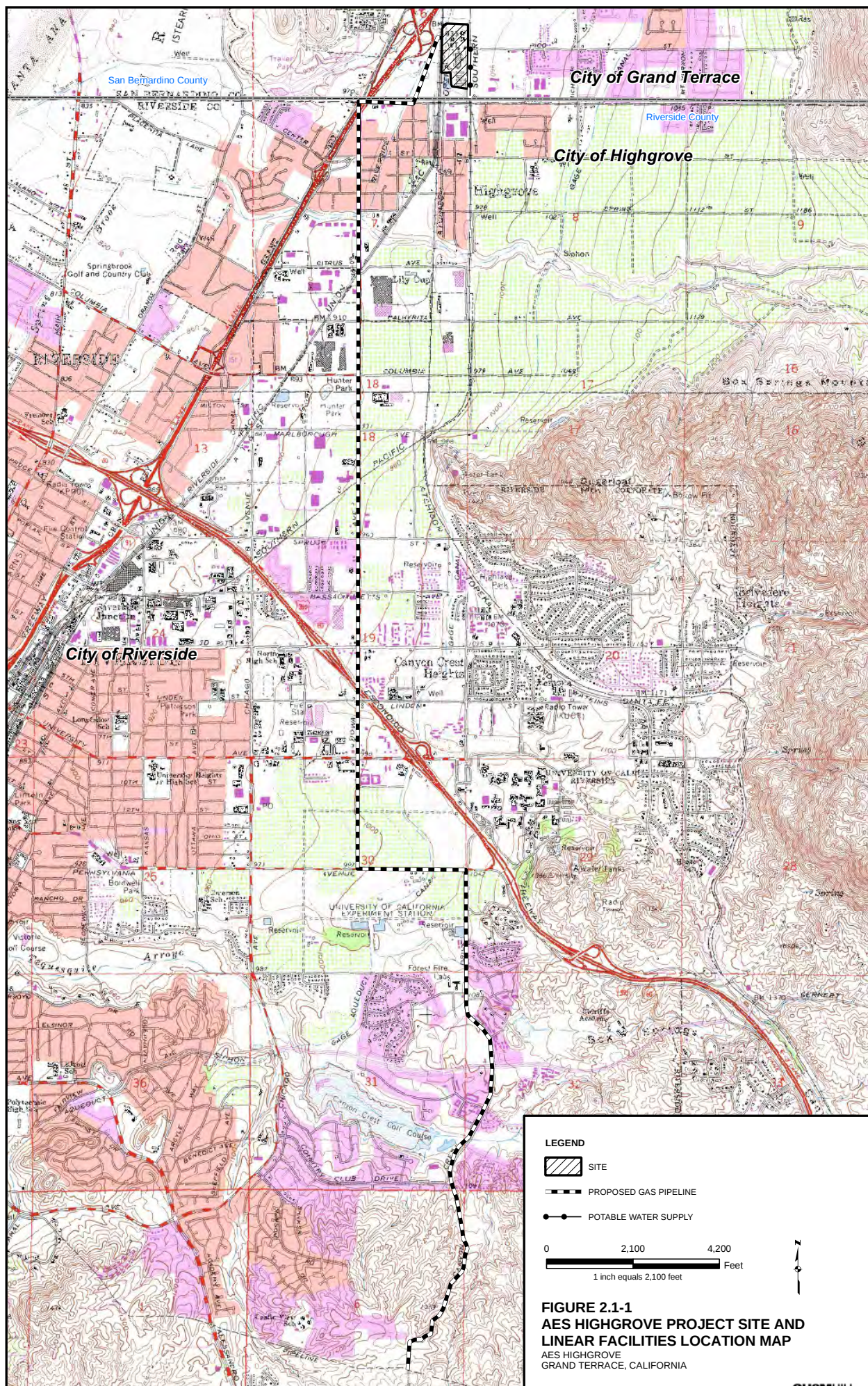
Respectfully yours,

A handwritten signature in black ink, appearing to read "Clint Helton".

Clint Helton  
Senior Scientist

cc: File

Enclosure—Map of Project Area





CH2M HILL

3 Hutton Centre Drive

Suite 200

Santa Ana, CA

92707

Tel 714.429.2000

Fax 714.429.2050

April 5, 2006

Willie Pink  
626 E. Old Second Street  
San Jacinto, CA 92583

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Clint Helton  
Senior Scientist

cc: File

Enclosure—Map of Project Area



CH2M HILL

3 Hutton Centre Drive

Suite 200

Santa Ana, CA

92707

Tel 714.429.2000

Fax 714.429.2050

April 5, 2006

Cupa Cultural Center (Pala Band)  
William J. Contreras,  
Archaeology and Cultural Res.  
P.O. Box 455  
Pala, CA 92059

Subject AES Pacific Inc. – Proposed Highgrove Power Plant AFC

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Respectfully yours,

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Clint Helton  
Senior Scientist

cc: File

Enclosure—Map of Project Area



**CH2M HILL**

3 Hutton Centre Drive

Suite 200

Santa Ana, CA

92707

**Tel 714.429.2000**

**Fax 714.429.2050**

April 5, 2006

La Jolla Band of Mission Indians  
Attn: Rob Roy, Environmental Leader  
22000 Highway 76  
Pauma Valley, CA 92061

Subject AES Pacific Inc. – Proposed Highgrove Power Plant AFC

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Respectfully yours,

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Clint Helton  
Senior Scientist

cc: File

Enclosure—Map of Project Area



CH2M HILL

3 Hutton Centre Drive

Suite 200

Santa Ana, CA

92707

Tel 714.429.2000

Fax 714.429.2050

April 5, 2006

Attn: Britt W. Wilson, Cultural Resource Coordinator  
Maurice Lyons, Chairperson  
Morongo Band of Mission Indians  
245 N. Murray Street, Suite C  
Banning, CA 92220  
2 Pages via Fax: 951/922-8146

Subject AES Pacific Inc. – Proposed Highgrove Power Plant AFC

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April 5, 2006

Pala Band of Mission Indians  
Robert Smith, Chairperson  
P.O. Box 50  
Pala, CA 92059  
2 Pages via Fax: 760/742-1411

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April 5, 2006

Attn: Christobal C. Devers, Chairperson  
Bennae Calac, Cultural Resource Coordinator  
EPA Coordinator  
Pauma & Yuima  
P.O. Box 369  
Pauma Valley, CA 92061  
2 Pages via Fax: 760/742-3422

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April 5, 2006

Attn: Culture Committee  
John Currier, Chairperson  
Rob Shaffer, Tribal Administrator  
Kristie Orosco, Environmental Coordinator  
Ruth Calac, President, Rincon Heritage Commission  
Rincon Band of Mission Indians  
P.O. Box 68  
Valley Center, CA 92082  
2 Pages via Fax: 760/749-8901

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April 5, 2006

San Fernando Band of Mission Indians  
John Valenzuela, Chairperson  
P.O. Box 221838  
Newhall, CA 91322

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April 5, 2006

San Luis Rey Band of Mission Indians  
Henry Contreras, Most Likely Descendent  
1763 Chapulin Lane  
Fallbrook, CA 92028

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92707  
**Tel 714.429.2000**  
**Fax 714.429.2050**

April 5, 2006

Pechanga Band of Mission Indians  
Paul Macarro, Cultural Resource Center  
Mark Macarro, Chairperson  
P.O. Box 2183  
Temecula, CA 92593  
2 Pages via Fax: 951/506-9491

**Subject** AES Pacific Inc. – Proposed Highgrove Power Plant AFC

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April 12, 2006

San Luis Rey Band of Mission Indians  
Attn: Russell Romo, Chairman  
12064 Old Pomerado Road  
Poway, CA 92064

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April 12, 2006

San Luis Rey Band of Mission Indians  
Attn: Carmen Mojado, Co-Chair  
1889 Sunset Dr.  
Vista, CA 92081

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San Luis Rey Band of Mission Indians  
Attn: Mark Mojado, Cultural Resources  
PO BOX 1  
Pala, CA 92059

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April 12, 2006

San Manuel Band of Mission Indians  
Attn: Deron Marquez, Chairperson  
PO Box 266  
Patton, CA 92369  
2 Pages via Fax: 909/864-3370

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April 12, 2006

Soboba Band of Mission Indians  
Attn: Robert J. Salgado, Sr., Chairperson  
PO Box 487  
San Jacinto, CA 92581  
2 pages via Fax: 909/654-4198

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April 12, 2006

Twenty-Nine Palms Band of Mission Indians  
Attn: Dean Mike, Chairperson  
46-200 Harrison Place  
Coachella, CA 92236  
2 Pages via Fax: 760/775-4639

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| <p style="text-align: center;"><b>AES Highgrove AFC</b></p> <p style="text-align: center;"><b>Consultation Letters to Native American Contacts Provided by NAHC</b></p>                                                                                                             |               |          |          |          |                                                  |                                                                                                                                 |                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|----------|----------|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| RECIPIENT                                                                                                                                                                                                                                                                           | DATE SENT     | MAILED   | FAXED    | E-MAILED | COMMENTS RECEIVED (from letter)                  | FOLLOW-UP PHONE CALL                                                                                                            | COMMENTS SUMMARY (from phone)            |
| <b>Gabrielino/Cahuilla/Luiseno</b><br>Samuel H. Dunlap<br>P.O. Box 1391<br>Temecula, CA 92593<br>(909) 262-9351 (cell)<br>(909) 693-9196 (fax)                                                                                                                                      | <b>4/6/06</b> | <b>X</b> |          |          |                                                  | <b>4/14/06</b><br><b>9:55 am</b><br>Will return call.<br><br><b>4/17/06</b><br><b>12:20 pm</b><br>Spoke to <b>S. Dunlap</b> .   | No concern.                              |
| <b>Luiseno</b><br>Willie Pink<br>626 E. Old Second Street<br>San Jacinto, CA 92583<br>(909) 936-1216                                                                                                                                                                                | <b>4/6/06</b> | <b>X</b> |          |          |                                                  | <b>4/14/06</b><br><b>9:58 am</b><br>Spoke to <b>Willie Pink</b> .                                                               | No concern.<br>Referred to Serrano Band. |
| Cupa Cultural Center ( <b>Pala Band</b> )<br>William J. Contreras,<br>Archaeology and Cultural Res.<br>P.O. Box 455<br>Pala, CA 92059<br>(760) 742-3784                                                                                                                             | <b>4/6/06</b> | <b>X</b> |          |          |                                                  | <b>4/14/06</b><br><b>10 am</b><br>Left message on VM.<br><br><b>4/17/06</b><br><b>8:06 am</b><br>Spoke to <b>W. Contreras</b> . | No concern.                              |
| <b>La Jolla Band of Mission Indians</b><br>Attn: Rob Roy, Environmental Leader<br>22000 Highway 76<br>Pauma Valley, CA 92061<br>(760) 742-3771/72<br>(760) 742-1701 (fax)                                                                                                           | <b>4/6/06</b> | <b>X</b> |          |          |                                                  | <b>4/14/06</b><br><b>10:04 am</b><br>Left message on VM.                                                                        |                                          |
| Attn: Britt W. Wilson, Cultural Resource Coordinator<br>Maurice Lyons, Chairperson<br><b>Morongo Band of Mission Indians</b><br>245 N. Murray Street, Suite C<br>Banning, CA 92220<br>2 Pages via Fax: 951/922-8146<br>(951) 849-8807<br>(951) 755-5200<br>Britt_wilson@morongo.org | <b>4/5/06</b> |          | <b>X</b> |          | E-mail received<br>4/14/06: No specific concern. | <b>4/14/06</b><br><b>10:06 am</b><br>Left message on VM.<br><br><b>10:20 am</b><br>Rec'd call.                                  | Will email official tribal response.     |

| <p style="text-align: center;"><b>AES Highgrove AFC</b><br/> <b>Consultation Letters to Native American Contacts Provided by NAHC</b></p>                                                                                                                                                                                         |           |        |       |          |                                 |                                                                   |                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------|-------|----------|---------------------------------|-------------------------------------------------------------------|-------------------------------|
| RECIPIENT                                                                                                                                                                                                                                                                                                                         | DATE SENT | MAILED | FAXED | E-MAILED | COMMENTS RECEIVED (from letter) | FOLLOW-UP PHONE CALL                                              | COMMENTS SUMMARY (from phone) |
| <b>Pala Band of Mission Indians</b><br>Robert Smith, Chairperson<br>P.O. Box 50<br>Pala, CA 92059<br>2 Pages via Fax: 760/742-1411<br>(760) 742-3784<br>(760) 742-1411 (fax)                                                                                                                                                      | 4/5/06    |        | X     |          |                                 | 4/14/06<br>10:08 am<br>Left written message with AA, Wendy Dubell |                               |
| Attn: Christobal C. Devers,<br>Chairperson<br>Bennae Calac, Cultural Resource Coordinator<br>EPA Coordinator<br><b>Pauma &amp; Yuima</b><br>P.O. Box 369<br>Pauma Valley, CA 92061<br>2 Pages via Fax: 760/742-3422<br>(760) 742-1289                                                                                             | 4/5/06    |        | X     |          |                                 | 4/14/06<br>10:12 am<br>Left message on VM.                        |                               |
| <b>Pechanga Band of Mission Indians</b><br>Paul Macarro, Cultural Resource Center<br>Mark Macarro, Chairperson<br>P.O. Box 2183<br>Temecula, CA 92593<br>2 Pages via Fax: 951/506-9491<br>(951) 308-9295<br>(951) 506-9491 (fax)                                                                                                  | 4/5/06    |        | X     |          |                                 | 4/14/06<br>10:15 am<br>Left message on VM.                        |                               |
| Attn: Culture Committee<br>John Currier, Chairperson<br>Rob Shaffer, Tribal Administrator<br>Kristie Orosco, Environmental Coordinator<br>Ruth Calac, President, Rincon Heritage Commission<br><b>Rincon Band of Mission Indians</b><br>P.O. Box 68<br>Valley Center, CA 92082<br>2 Pages via Fax: 760/749-8901<br>(760) 749-1051 | 4/5/06    |        | X     |          |                                 | 4/14/06<br>10:25 am<br>Left message on Rob Shaeffer's VM.         |                               |

| AES Highgrove AFC                                                                                                                                                                       |                |          |       |          |                                 |                                                                 |                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------|-------|----------|---------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------|
| Consultation Letters to Native American Contacts Provided by NAHC                                                                                                                       |                |          |       |          |                                 |                                                                 |                                                               |
| RECIPIENT                                                                                                                                                                               | DATE SENT      | MAILED   | FAXED | E-MAILED | COMMENTS RECEIVED (from letter) | FOLLOW-UP PHONE CALL                                            | COMMENTS SUMMARY (from phone)                                 |
| <b>San Fernando Band of Mission Indians</b><br>John Valenzuela, Chairperson<br>P.O. Box 221838<br>Newhall, CA 91322<br>(661) 753-9833<br>(760) 885-0955 (cell)<br>(760) 949-2103 (home) | <b>4/6/06</b>  | <b>X</b> |       |          |                                 | <b>4/14/06</b><br><b>10:28 am</b><br>Left message on VM.        |                                                               |
| <b>San Luis Rey Band of Mission Indians</b><br>Henry Contreras, Most Likely Descendent<br>1763 Chapulin Lane<br>Fallbrook, CA 92028<br>(760) 728-6722 (home)<br>(760) 207-3618 (cell)   | <b>4/6/06</b>  | <b>X</b> |       |          |                                 | <b>4/14/06</b><br><b>10:29 am</b><br>Left message on VM.        |                                                               |
| <b>San Luis Rey Band of Mission Indians</b><br>Russell Romo, Chairman<br>12064 Old Pomerado Raod<br>Poway, CA 92064<br>(858) 748-1586                                                   | <b>4/12/06</b> | <b>X</b> |       |          |                                 | <b>4/14/06</b><br><b>10:30 am</b><br><b>Spoke to R. Romo.</b>   | Referred to Mark Mojado tribal Cultural Resource Coordinator. |
| <b>San Luis Rey Band of Mission Indians</b><br>Carmen Mojado, Co-Chair<br>1889 Sunset Dr.<br>Vista, CA 92081                                                                            | <b>4/12/06</b> | <b>X</b> |       |          |                                 | <b>4/14/06</b><br>No phone number available                     |                                                               |
| <b>San Luis Rey Band of Mission Indians</b><br>Mark Mojado, Cultural Resources<br>PO BOX 1<br>Pala, CA 92059<br>(760) 742-4468<br>(760) 586-4858 (cell)                                 | <b>4/12/06</b> | <b>X</b> |       |          |                                 | <b>4/14/06</b><br><b>10:35 am</b><br><b>Spoke to M. Mojado.</b> | Call Pechango Tribe, since its part of their territory.       |

# AES Highgrove AFC

## Consultation Letters to Native American Contacts Provided by NAHC

| RECIPIENT                                                                                                                                                                                                                                                    | DATE SENT | MAILED | FAXED | E-MAILED | COMMENTS RECEIVED (from letter) | FOLLOW-UP PHONE CALL                               | COMMENTS SUMMARY (from phone)                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------|-------|----------|---------------------------------|----------------------------------------------------|--------------------------------------------------------|
| <b>San Manuel Band of Mission Indians</b><br>Deron Marquez, Chairperson<br>PO Box 266<br>Patton, CA 92369<br><a href="mailto:dmarquez@sanmanuel-nsn.gov">dmarquez@sanmanuel-nsn.gov</a><br>(909) 864-8933 ext 3070<br>(909) 864-3370 (fax)                   | 4/12/06   |        | X     |          |                                 | 4/14/06<br>10:38 am                                | Deron Marquez no longer in the office.<br>No response. |
| <b>San Manuel Band of Mission Indians</b><br>Anne Brierty, Cultural Resources Coordinator<br>PO Box 266<br>Patton, CA 92369<br><a href="mailto:bbrierty@sanmanuel-nsn.gov">bbrierty@sanmanuel-nsn.gov</a><br>(909) 864-8933 ext 2203<br>(909) 864-3370 (fax) | 4/12/06   |        | X     |          |                                 | 4/14/06<br>10:40 am<br>Left message on VM.         |                                                        |
| <b>Soboba Band of Mission Indians</b><br>Robert J. Salgado, Sr., Chairperson<br>PO Box 487<br>San Jacinto, CA 92581<br>(909) 654-2765<br>(909) 654-4198                                                                                                      | 4/12/06   | X      |       |          |                                 | 4/14/06<br>10:44 am<br>Phone no longer in service. |                                                        |
| <b>Twenty-Nine Palms Band of Mission Indians</b><br>Dean Mike, Chairperson<br>46-200 Harrison Place<br>Coachella, CA 92236<br>(760) 775-5566<br>(760) 775-4639 (fax)                                                                                         | 4/12/06   |        | X     |          |                                 | 4/14/06<br>10:45 am<br>Left message on VM.         |                                                        |

APPENDIX 8.3B

## **Resume of Cultural Staff**

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Clint J. Helton, M.A., RPA

[chelton@ch2m.com](mailto:chelton@ch2m.com)

CH2M HILL

3 Hutton Centre Drive

Suite 200

Santa Ana, CA 92707

Tel 714.429.2000

Fax 714.429.2050

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## Education

- M.A., major in Anthropology, Brigham Young University, 1996
- B.A., major in Language and Literature, University of Utah, 1994

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## Training and Certifications

- CEQA Training
- NEPA Training
- Section 106/NHPA Training
- Registered Professional Archaeologist (RPA)
- Federal Antiquities Permit in California, Oregon, Washington, Utah, and Nevada

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## Areas of Expertise

Mr. Helton has a strong background in environmental impact studies, with specific experience in cultural resources requirements in California, Nevada, and Utah. Mr. Helton has directed technical studies, negotiated with lead agencies, responsible agencies and clients, and has written, edited and produced a substantial number of environmental review and technical documents.

His knowledge of regulatory compliance enables him to manage National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA) as well as California Environmental Quality Act (CEQA) compliance activities and document preparation. Mr. Helton has more than 9 years of environmental management experience in the western U.S., including his past three years of experience in California. He has authored numerous environmental technical reports, cultural resources studies, Programmatic Agreements, Memorandum's of Understanding, and contributed to many CEQA and NEPA documents for a variety of private and public sector clients.

Over the course of his career, Mr. Helton has honed valuable leadership and managerial skills, having successfully managed numerous on-call contracts, complex projects, and large numbers of staff. Mr. Helton has led many multi-disciplinary teams in support of many complex undertakings such as development of gas and petroleum pipelines, fiber optic cables, highways, utility lines, and land development projects. Mr. Helton possesses particularly strong capabilities in third-party environmental compliance/mitigation monitoring work, having managed several major projects for public utility proponents in Nevada and California, as well as private oil, gas, and technology companies. Mr. Helton is a particularly skilled strategist, and is skillful at running large contracts, delivering quality products on time and within budgets. In the course of his investigations, he has worked with many State and Federal agencies, as well as various Native American Tribal officials.

Mr. Helton is an active member of the Association of Environmental Professionals, Register of Professional Archaeologists, Society for American Archaeology, and American Anthropological Association.

## **Professional Experience**

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### **Project Scientist – CH2M HILL; Santa Ana, California (2005)**

Scientist in the Environmental Services group in the Santa Ana office. Responsible for cultural resources services throughout Southwest Region. Also lead teams and contribute to preparation of Environmental Impact Statements and Reports, and other permitting assistance and document preparation. Report to Regional Business Group Manager.

### **Managing Principal – SWCA Environmental Consultants; Orange County, California (2001-2004)**

Promoted from Program Director to Managing Principal of California operations. Responsible for operation of 60-person regional profit center, consisting of three offices in Sacramento, Orange County, and San Diego with. Reported to Regional Vice President Thomas Motsinger.

### **Cultural Resources Program Director—SWCA Environmental Consultants, Salt Lake City, Utah (2000-2001)**

Promoted from Project Manager to Program Director while working with SWCA in the Salt Lake City office. Co-Managed Salt Lake City office, including all day-to-day activities of 35-person cultural resources division. Duties included project management, staff work load leveling, performing QA/QC review, hiring/mentoring staff, and business development. Managed all aspects of cultural resource management activities throughout Utah, Nevada, Idaho, and western Colorado, including marketing, proposal preparation, agency liaison, project management, oversight of personnel and physical resources, local and federal permits, as well as NHPA and NEPA document preparation. Reported to Regional Vice President.

### **Project Manager—SWCA Environmental Consultants; Salt Lake City, Utah (1998–2000)**

Worked as project manager and analyst in the Salt Lake City office, responsible for preparation of environmental documents complying with NEPA and NHPA (Section 106) requirements. Prepared technical and cost proposals and research designs; conducted various aspects of surveys, testing projects, and excavation projects; and prepared reports involving historic and prehistoric resources in Utah and Nevada. Reported to Program Director.

### **Staff Archaeologist, Baseline Data; Orem, Utah (1996–1998)**

Responsibilities include preparation of technical reports, conducting and supervision of various aspects of surveys, testing projects, and excavation projects; and preparing reports involving historic and prehistoric resources in Utah and Nevada.

### **Instructor, Brigham Young University, Provo, Utah (1995–1996)**

Anthropology 312 “Intercultural Communication; Mexico and Central America Emphasis.” Designed curriculum for and taught undergraduate course on culture, history, language, and traditions of Mexicans, Central Americans, and Hispanic-Americans. Course focused on the

need for greater cultural awareness and improved communication between Hispanics and Anglo cultures and improving communication in general between diverse cultural groups.

**Instructor, University of Utah; Salt Lake City, Utah (1994–1998)**

Art 205, “Wheel-thrown Pottery” Taught course on wheel-thrown ceramics to classes of approximately 30 students.

**Teacher, Salt Lake City School District; Salt Lake City, Utah (1991–1994)**

Taught Spanish language classes to grades K-6 students. Designed curriculum. Taught English language classes to primarily Hispanic students of grades K-12. Taught students in other subject areas such as science and history when needed.

**Select Project Experience**

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**Deputy Project Manager, AES Pacific Inc., Highgrove Power Plant Project; California (2005):** Co-managing preparation of Application For Certification from California Energy Commission for proposed power generation facility. Responsible for preparation of cultural resources component of project, as well as an interdisciplinary team of environmental specialists including archaeologists, biologists, and paleontologists. *Client: AES Pacific Inc. Client Contact: Confidential.*

**Project Manager, Sacramento Municipal Utility District (SMUD) Cosumnes Power Plant and Gas Pipeline Project, Environmental Compliance; Sacramento, California (2003-2004):** Managed interdisciplinary team of over 20 environmental specialists including archaeologists, biologists, and paleontologists during construction of 26-mile gas pipeline and associated power generation plant. Contract value was over \$2.0 million. *Client: Sacramento Municipal Utility District. Client Contact: Sacramento Municipal Utilities District; Kevin Hudson, 916.732.7101.*

**Project Manager, 700-mile Kern River Pipeline Expansion Project; Utah, Nevada, and California (2002-2003):** Managed major cultural resources services contract with Williams Energy, in support of the 700-mile Kern River Pipeline Expansion Project, traversing Utah, Nevada, Wyoming, and California. Individually sought by Williams Energy to provide regulatory guidance, regional technical expertise in cultural resources and project management support, as well as to provide leadership as the project's agency and subcontractor liaison, given the projects size, complexity, multi-state and multi-jurisdictional challenges and aggressive schedule. Assisted from project initiation with facilitation of project Programmatic Agreement and led coordination meetings with stakeholder agencies and permitting authorities in California, Utah, Nevada, and Wyoming. Coordinated the activities of three sub-consultants as well as the support of SWCA's regional offices and technical contributors. Played major role in the development of treatment plans to mitigate impacts to a large number of National Register eligible cultural sites. Contract value was over \$3.0 million. *Client: Ecology and Environment (Prime) and Williams Energy/Kern River Gas Transmission Company. Client Contact: Williams Energy; Jim Bloemker, 713.215.2656.*

**Project Principal/QC Manager, Talega Residential Housing Development, Archaeological and Paleontological Compliance, Data Recovery, and Compliance Monitoring, San Clemente,**

**California (2001-2004):** Acted as Project Principal for multi-disciplinary team providing environmental compliance services for this 3,700-acre home development in San Clemente. Assisted with frequent agency consultation with Army Corps of Engineers. Worked with Project Manager and supporting scientists to ensure adequate staffing and production of high-quality reports. Contract value was over \$1.5 million. *Client: Talega Associates. Client Contact: Talega Associates; Glen Land, 949.498.1366.*

**Project Principal/QC Manager, Dayton Canyon Estates Development; San Clemente, California (2001-2004):** Acted as Project Principal for multi-disciplinary team providing environmental compliance services for this 3,700-acre home development in San Clemente. Assisted with frequent agency consultation with Army Corps of Engineers. Worked with Project Manager and supporting scientists to ensure adequate staffing and production of high-quality reports. Contract value was over \$2.0 million. *Client: Sun Cal Companies. Client Contact: Sun Cal Companies; Ed Pickett, 818.348.3033.*

**Project Principal /QC Manager, Western Area Power Administration, Transmission Line Project; Imperial County, California (2003-2004):** Provided overall management of cultural resources services for the Parker-Blythe #1 161-kV transmission line project. The inventory extended from Blythe, California to Parker, Arizona. A total of 147 sites (136 in California and 11 in Arizona) were recorded. *Client: Western Area Power Administration.*

**Project Principal /QC Manager, Williams Pipeline, Rockies Expansion Pipeline Construction; Idaho and Wyoming (2003):** Provided overall management of cultural resources and paleontological resources compliance monitoring services for the Rockies Expansion pipeline construction project. *Client: Williams Pipeline.*

**Project Manager, Level III Communications Fiber Optic Line; Salt Lake to Las Vegas, Nevada (2001):** Managed multi-phased contract for this major interstate utility project. Managed cultural resources surveys of project ROW, cultural resources monitoring during construction, major data recovery excavations of significant archaeological sites, and production of multi-volume final technical report production for this large project. Contract value was over \$4.0 million. *Client: Level III.*

**Project Manager, Adesta Communications Fiber Optic Project; Grand Junction, Colorado to Salt Lake City, Utah (2000):** Managed all aspects of cultural resources compliance for the 260-mile project. Assisted with preparation of EA for NEPA compliance. Project development; agency coordination; management of project budget and staff; supervision of field crews; identification and recordation of historic and prehistoric resources; laboratory analysis; report preparation. Contract value was over \$1.0 million. *Client: Adesta Communications.*

**Project Manager, Sierra Pacific Power Company, 3<sup>rd</sup>-Party Environmental Compliance, 630-Mile Silver State East Fiber Optic Project; Salt Lake City, Utah to Reno, Nevada (2000):** Managed multi-phase contract to provide staff support to Bureau of Land Management during preparation of POD and NEPA document, as well as third-party environmental compliance activities during construction of the 590-mile Silver State East Fiber Optic Project

by Sierra Pacific Power Company. Led agency coordination, management of project budget and staff, assisted with resource data extraction from agency archives. Assisted with development of MOU, Project Charter, Programmatic Agreement, and public scoping process. During 14 month construction process, managed team of 25 cultural and biological resources environmental compliance monitors and acted as point of contact for BLM and Sierra Pacific Power Company. Contract value was over \$2.0 million. *Client: Sierra Pacific Power Company and Bureau of Land Management. Client Contact: Steve Siegel; 775-834-4429.*

**Project Principal and Manager, Army National Guard Cultural Resources Support Contracts; Utah (2002-2003):** Managed sole-sourced cultural resources services from Army National Guard for all of its 29 facilities within the State of Utah. Primary goal was to assist National Guard with bringing facilities into compliance with Section 106 of NHPA. Managed archaeological survey, testing, and data recovery projects. Assisted with Native American consultation. Authored an Integrated Cultural Resources Management Plan (ICRMP) to assist the Guard in complying with Department of Defense Instructions 4715.3 and Army Regulation 200-4. *Client: Army National Guard. Client Contact: Army National Guard; Paul Graham, Environmental Coordinator 801.523.4452*

**Program Manager, United States Army Dugway Proving Ground, Cultural and Biological Resources Services (2001-2002):** Program Manager for a 3-year on-call contract to supply cultural and biological resources services to the United States Army's Dugway Proving Ground. Served as primary point of contact for the facility's environmental lead official. Assisted facility staff with cultural resources compliance activities, including cultural resources inventories in harsh and sometimes dangerous conditions within areas known to contain UXO's and other potential hazards. Completed required background checks, safety training, range training, and other required training and preparation to work on the sensitive facility. Led crews on several large inventories within this expansive training facility in Utah's West Desert. Maintained constant communication with Range Control and base staff to avoid conflict with range training activities, while performing the required inventories. *Client: Agiess Environmental (Prime) and Dugway Proving Ground.*

**Project Manager, United States Army Deseret Chemical Depot, Cultural Resources Services (2001):** As Principal Investigator for a large multi-phased cultural resources investigation of the United States Army's Deseret Chemical Depot, led initial survey design and sampling plan to determine the presence, distribution, type, and significance of cultural resources located at this sensitive chemical weapons facility. *Client: CH2MHill (Prime) and Deseret Chemical Depot.*

**Project Principal/QC Manager, Questar Pipeline Company, Mainline 104 Pipeline Project (2001):** Managed cultural resources component of SWCA's contract to Questar Pipeline Company in support of the Mainline 104 natural gas pipeline project, 75 miles of 24-inch-diameter natural gas pipeline from Price to Elberta, Utah, across Carbon, Emery, Sanpete, and Utah Counties, including the Manti-LaSal and Uinta National Forests, BLM, state, and private lands. Conducted cultural resources inventory. Responsible for monitoring compliance with various resources treatment plans and responding to any unanticipated discoveries or

inadvertent non-compliance incidents that affect cultural resources. Coordinated with officials from BLM, State Trust Lands, USDA Forest Service, and SHPO.

**Project Manager, Qwest Fiber Optic Project; Environmental Assessment; Cove Fort, Utah (2000):** Managed preparation of Environmental Assessment for NEPA compliance. Also prepared required technical report for cultural resources. Project development; agency coordination; management of project budget and staff; supervision of field crews; report preparation. *Client: Qwest.*

**Project Manager, Williams Communications, 3<sup>rd</sup>-Party Environmental Compliance, I-80 Fiber Optic Project; Nevada and Utah (2000):** Managed third party construction compliance monitors and representatives of the BLM; ensured that compliance monitors, contractors, and construction crews met the requirements described in the projects construction stipulations, permits, and right-of-way grant. Primary liaison to client, BLM; agency coordination; management of project budget and staff; supervision of field crews; report preparation. *Client: Williams Communications.*

**Project Manager, Williams Pipe Line Project; Thompson to Salt Lake City, Utah (1998-2002):** Managed all aspects of cultural resources compliance for the 260-mile pipeline, including project development, agency coordination, management of project budget and staff, supervision of field crews, identification and recordation of historic and prehistoric resources, laboratory analysis, artifact curation, and report preparation. *Client: Williams Pipeline Company.*

**Project Manager, Kennecott Rawhide Mine, On Call Cultural Resources Services; Fallon, Nevada (1998):** Project development, management of project budget, agency liaison, supervision of field crews and report preparation for over 1200 acres of multiple cultural resources inventories. *Client: Kennecott Rawhide Mining Company.*

**Project Manager, Questar Gas Pipeline Company Dog Valley Pipeline Project; Panguitch, Utah (1998):** Survey and recordation of 37 historic and prehistoric sites; supervision of field crews; laboratory analysis; artifact curation; report preparation. *Client: Questar Gas Pipeline Company.*

### **Additional Cultural Resources Experience**

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**Field Director, Excavation of 42SI 230; Salt Lake City, Utah (1998):** Directed large excavation at the Salt Lake International Airport. Participated in laboratory analysis of ceramic, lithic, and bone artifacts. *Employer: Baseline Data. Client: Salt Lake City International Airport Authority.*

**Field Director, Legacy West Davis Highway Excavation Project; Salt Lake City, Utah (1997):** Directed field excavation of 42Dv 2 Archaic to Late Prehistoric site. Twelve-week test pitting phase included over 60 2 x 2 meter test pits. Consulted and participated with local Native American Tribal representatives. Laboratory analysis of ceramic, lithic, and bone artifacts. Contributed to final report. *Employer: Baseline Data. Client: HDR Engineering (Prime) and Utah Department of Transportation.*

**Field Director, Legacy West Davis Highway Survey and Testing project; Salt Lake City, Utah (1997):** Directed Class III inventory of historic and prehistoric resources and implemented innovative sub-surface auger testing. Contributed to final report. *Employer: Baseline Data. Client: HDR Engineering (Prime) and Utah Department of Transportation.*

**Crew Chief, River Gas Survey and Subsurface Testing Project; Price, Utah (1996–1997):** Supervised Class III inventory and historic and prehistoric site recording. Performed laboratory analysis of ceramic, lithic, and bone artifacts. Contributed to final report. *Employer: Baseline Data. Client: River Gas Company.*

**Crew Chief, Salt Lake City International Airport Test Excavation; Salt Lake City, Utah (1996–1997):** Ten-week excavation of site 42Sl 230, an Archaic, Fremont, and Late Prehistoric site. Supervised excavation of over 40 test pits. Performed laboratory analysis of ceramic, lithic, and bone artifacts. Contributed to final report. *Employer: Baseline Data. Client: Salt Lake City International Airport Authority.*

**Crew Chief, Central Telephone Fiber Optic Project; Salt Lake City, Utah (1996):** Directed Class III survey, and authored final report. *Employer: Baseline Data. Client: Central Telephone.*

**Surveyor, Regional Class III Surveys; Regional, Utah (1996–1998):** Pedestrian surveys for various projects in the Wasatch Mountains and valleys and the Colorado Plateau. *Employer: Baseline Data. Client: Various.*

### **Other Related Experience**

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**Student, Nakbé Archaeological Project (RAINPEG); Petén, Guatemala (1996):** Discovered and mapped previously undocumented sites and sampled material culture around the Maya site of Nakbé in the El Mirador Basin located in Northern Petén of Guatemala under Dr. Richard Hansen of UCLA, Director. Co-authored final publication.

**Student, Fish Lake Archaeological Project/BYU Field School; Fish Lake, Utah (1995):** Participated in an eight-week excavation of Archaic, Fremont, and Prehistoric sites in central Utah. Participated with local Native American Paiute Tribal consultants.

**Volunteer Campus Representative, International Center, University of Utah; Salt Lake City, Utah (1993-1994):** Promoted intercultural experiences through participation in study abroad programs and cultural awareness activities for student body. Acted as representative during campus-wide information sessions and International Center sponsored activities.

**President/Founder, Graduate Student Organization (GSO), Department of Anthropology, Brigham Young University; Provo, Utah (1995–1996):** Formed a student group concerned with promoting interest in anthropology, academic success, and professional opportunity. Participated in bringing distinguished speakers and other local and national scholars and professionals to the University. Provided a communication link between faculty and graduate students in the Department of Anthropology.

### Third-Party Environmental Compliance/Mitigation Monitoring Experience Supporting Major Construction Projects

- Project Manager, Cosumnes Power Plant and Gas Pipeline Project, Sacramento Municipal Utility District
- Project Manager, Level III Fiber Optic Project, Level III
- Project Principal/QC Manager, Talega Housing Development, Talega Associates
- Project Manager, Silver State East Fiber Optic Project, Sierra Pacific Power Company
- Project Manager, I-80 Fiber Optic Project, Williams Communications
- Project Manager, Questar Mainline 104 pipeline loop, Questar Pipeline Company

### Permits Held

|                            | <i>Title on Permit</i>                                                                                                         | <i>Geographic Area</i> | <i>Year Permitted</i> | <i>Issuing Agency</i>                                |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------|------------------------------------------------------|
| Clint J. Helton, M.A., RPA | Registered Professional Archaeologist                                                                                          | Nationwide             | 1999                  | Register of Professional Archaeologists              |
| Clint J. Helton, M.A., RPA | ARPA Permit—Project Director (Statewide), California Bureau of Land Management Cultural Resource Use Permit                    | California             | 2004                  | California State Office of Bureau of Land Management |
| Clint J. Helton, M.A., RPA | Field Director (Statewide), Nevada State Antiquities Permit                                                                    | Nevada                 | 1998                  | State of Nevada, Nevada State Museum                 |
| Clint J. Helton, M.A., RPA | ARPA Permit--Project Director, Historic/Prehistoric (Statewide), Nevada Bureau of Land Management Cultural Resource Use Permit | Nevada                 | 1998                  | Nevada State Office of Bureau of Land Management     |
| Clint J. Helton, M.A., RPA | Principal Investigator, Utah State Antiquities Permit                                                                          | Utah                   | 1998                  | State of Utah, Division of State History             |
| Clint J. Helton, M.A., RPA | ARPA Permit--Project Director (Statewide), Utah Bureau of Land Management Cultural Resource Use Permit                         | Utah                   | 1998                  | Utah State Office of Bureau of Land Management       |
| Clint J. Helton, M.A., RPA | ARPA Permit—Project Director (Statewide), Oregon/Washington Bureau of Land Management Cultural Resource Use Permit             | Oregon                 | 2004                  | Oregon State Office of Bureau of Land Management     |
| Clint J. Helton, M.A., RPA | ARPA Permit—Project Director (Statewide), Oregon/Washington Bureau of Land Management Cultural Resource Use Permit             | Washington             | 2004                  | Oregon State Office of Bureau of Land Management     |

### Professional Affiliations and Committees

---

- Association of Environmental Professionals
- Register of Professional Archaeologists
- Society for American Archaeology
- American Anthropological Association
- Member, Utah Professional Archaeological Council
- Member, Wyoming Association of Professional Archaeologist

### Professional References

---

Sacramento Municipal Utility District (SMUD)  
6201 S Street, Sacramento, CA 95817  
Kevin Hudson, Compliance Manager  
916-732-7101

Williams Energy  
2800 Post Oak Blvd. Houston, Texas 77056  
James Bloemker, Archaeologist/Permitting  
Specialist  
713-215-2656

APPENDIX 8.3C

## **CHRIS Confidential Documents**

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# **CHRIS Confidential Documents (Confidential)**

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Appendix 8.3C, CHRIS Confidential Documents, was submitted separately under a request for confidentiality.

APPENDIX 8.4A

## **City of Grand Terrace Land Use Documents**

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The Blue Mountain City

Grand Terrace  
CALIFORNIA

Community and Economic Development Department

February 22, 2005

Ms. Julie Way, Project Director  
The AES Corporation  
690 Studebaker Road  
Long Beach, CA 90803

Re: Request for Zoning Consistency

Dear Ms. Way:

On February 17, 2005, the Grand Terrace Planning Commission heard your request for zoning consistency regarding whether power generation facilities were a permitted use in the City's M-2 (Industrial zone). On a unanimous vote (5-0-0), the Commission determined that power generation facilities were permitted uses within the M-2 zone. A copy of the meeting's minutes will be made available to you upon request.

If you have any questions regarding this action, please call me at (909) 430-2225.

Sincerely,

**CITY OF GRAND TERRACE**



Gary L. Koontz  
Director of Community Development

ORDINANCE NO. 215.

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF GRAND TERRACE APPROVING AMENDMENT #1 TO SP-04-01 (THE OUTDOOR ADVENTURES CENTER SPECIFIC PLAN)**

WHEREAS, the City Council of Grand Terrace adopted SP04-01 (the Outdoor Adventures Center Specific Plan) on September 9, 2004; and

WHEREAS, the City General Plan requires the preparation of a Specific Plan for commercial projects of 10 acres or more;

WHEREAS, the proposed amendment is consistent with the City General Plan; and

WHEREAS, the proposed amendment will provide an alternative to assess the potential development of a proposed power generation facility; and

WHEREAS, the Outdoor Adventures Center Specific Plan (SP-04-01), as presented in Exhibit A, is consistent with the General Plan of the City of Grand Terrace; and

WHEREAS, the Planning Commission found the project to be exempt from the California Environmental Quality Act under Section 15271; and

WHEREAS, the Planning Commission held a properly noticed public hearing on April 21, 2005; and

WHEREAS, the Planning Commission following its public hearing on April 21, 2005 recommended that the City Council approve that Amendment #1 to SP-04-01, set out in full in the attached Exhibit A, be approved and adopted by the City Council; and

WHEREAS, the City Council held a properly noticed public hearings on May 12, 2005 and May 26, 2005 for SP-04-01 Amendment #1.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF GRAND TERRACE, CALIFORNIA, DOES HEREBY ORDAIN AS FOLLOWS:

- |            |                                                                                                                                                                                                                   |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Section 1: | The proposed Amendment #1 to SP-04-01 set out in full in Exhibit A is hereby approved and adopted by the City Council.                                                                                            |
| Section 2: | An exemption to CEQA under Section 15271 is hereby approved as Exhibit B.                                                                                                                                         |
| Section 3: | <u>Effective Date:</u> This Ordinance shall be in full force and effect at 12:01 a.m. on the 31 <sup>st</sup> day of its adoption.                                                                                |
| Section 4: | <u>Posting:</u> The City Clerk shall cause this Ordinance to be posted in three (3) public places with fifteen (15) days of its adoption, as designated for such purpose by the City Council.                     |
| Section 5. | First read at a regular meeting of the City Council of said City held on the 26th day of May, 2005 and finally adopted and ordered posted at a regular meeting of said City Council on the 9th day of June, 2005. |

Attest:

Brenda Stanfill  
City Clerk of the City of Grand  
Terrace and of the City Council  
thereof.

Maryetta Deeks  
Mayor of the City of Grand Terrace  
and of the City Council thereof.

I, Brenda Stanfill, City Clerk of the City of Grand Terrace, do hereby certify that the foregoing Ordinance was introduced and adopted at a regular meeting of the City Council of the City of Grand Terrace held on the 9<sup>th</sup> day of June, 2005, by the following vote:

AYES: Councilmembers Garcia and Miller; Mayor Pro Tem Cortes and Mayor Ferre

NOES: Councilmember Hilkey

ABSENT: None

ABSTAIN: None

Brenda Stanfill  
City Clerk

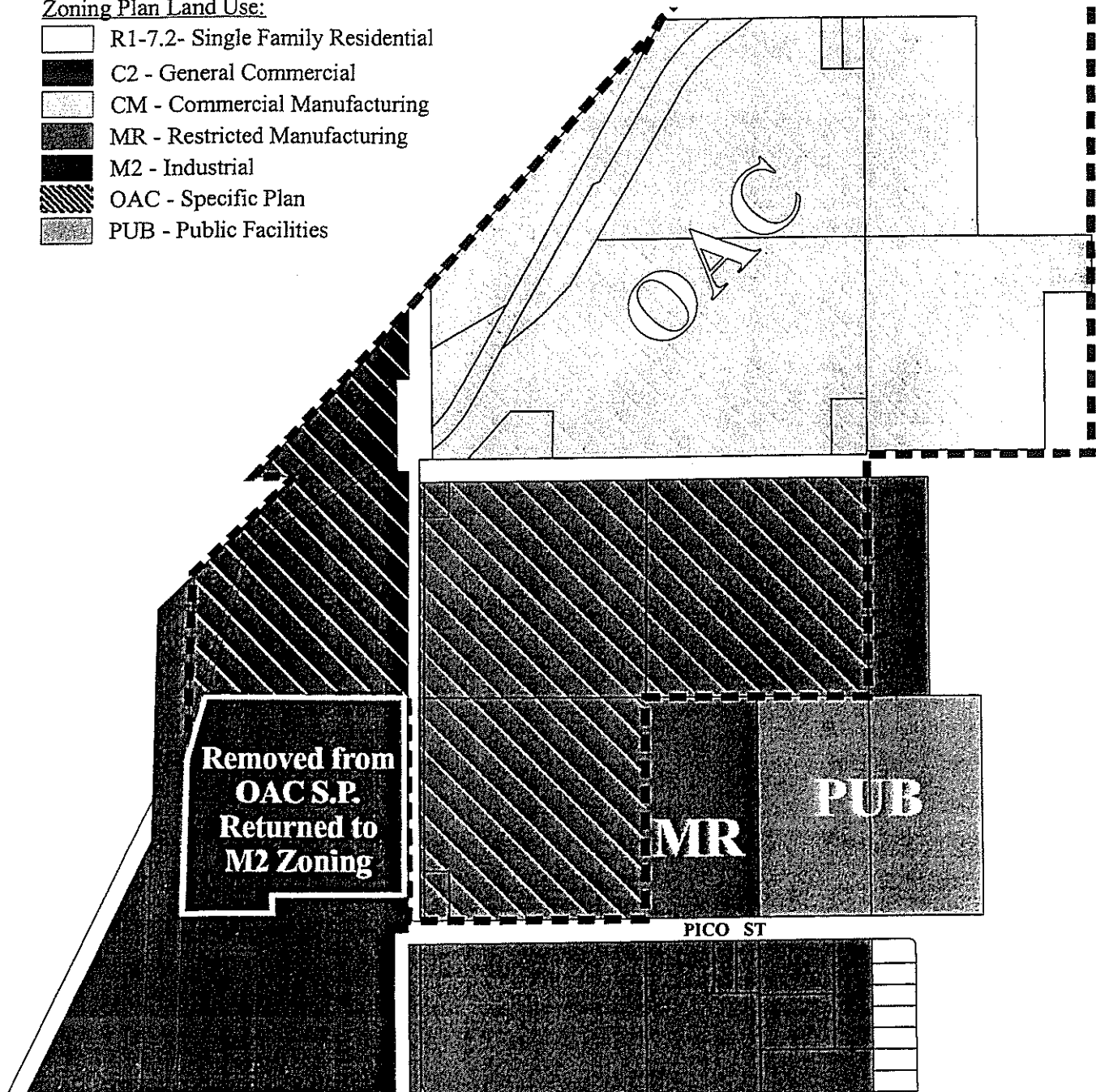
Approved as to form:

Wm Hilkey  
City Attorney

# OAC Specific Plan Amendment Sp-04-01-A1

## Zoning Plan Land Use:

-  R1-7.2- Single Family Residential
-  C2 - General Commercial
-  CM - Commercial Manufacturing
-  MR - Restricted Manufacturing
-  M2 - Industrial
-  OAC - Specific Plan
-  PUB - Public Facilities



**ENVIRONMENTAL REVIEW:**

It has been determined that this action is exempt from CEQA for the following reasons:

1. The action will return the site to its previous zoning designation of M-2. At the time that the M-2 zone was applied to the site a CEQA review was performed.
2. CEQA Guidelines Section 15271 provides that early activities by public agencies related to thermal power plants are exempt from CEQA provided that the site and facility will be subject to CEQA review and documentation prepared pursuant to a certified regulatory program such as the California Energy Commission permitting process. All CEQA compliance pertaining to siting and operating a power plant on the subject site will occur as part of the full permitting process at the CEC per State requirements.

**FINDINGS:**

Under Section 18.90.040 of the Zoning Ordinance, certain findings must be made when amending the Zoning ordinance. Since the adoption of an amendment to a Specific Plan is classified as a Change to the Zoning Ordinance, the Planning Commission and City Council must find that:

A. The proposed amendment will not be:

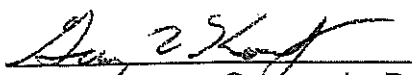
1. Detrimental to the health, safety, morals, comfort or general welfare of the persons residing or working within the neighborhood of the proposed amendment or within the city; or
2. Injurious to property or improvements in the neighborhood or within the City.

B. The proposed amendment will be consistent with the latest adopted General Plan.

**RECOMMENDATION:**

The staff recommends that the Planning Commission recommend to the City Council approval of Amendment #1 to SP 04-01 (the Outdoor Adventures Center Specific Plan) as called for by the attached Ordinance - Attachment 2

Respectfully submitted,



Gary L. Koontz, Community Development Director

APPENDIX 8.6A

## **EDR Offsite Receptor Report**

---



## **EDR Offsite Receptor Report**

**AESH  
12700 Taylor Street  
Grand Terrace, CA 92313**

**Inquiry Number: 1597275.3s**

**January 20, 2006**

### **The Standard in Environmental Risk Management Information**

440 Wheelers Farms Road  
Milford, Connecticut 06461

#### **Nationwide Customer Service**

Telephone: 1-800-352-0050  
Fax: 1-800-231-6802  
Internet: [www.edrnet.com](http://www.edrnet.com)

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| Census Findings                                  | 4    |
| Receptor Map                                     | 6    |
| Map Findings                                     | 7    |
| Records Searched/Data Currency Tracking Addendum | 55   |

**Thank you for your business**  
Please contact EDR at 1-800-352-0050  
with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available records was conducted by Environmental Data Resources, Inc. (EDR). The EDR Offsite Receptor Report provides information which may be used to comply with the Clean Air Act Risk Management Program 112-R. *"The rule requires that you estimate in the RMP residential populations within the circle defined by the endpoint for your worst-case and alternative release scenarios (i.e., the center of the circle is the point of release and the radius is the distance to the endpoint). In addition, you must report in the RMP whether certain types of public receptors and environmental receptors are within the circles."*

The address of the subject property, for which the search was intended, is:

AESH  
12700 TAYLOR STREET  
GRAND TERRACE, CA 92313

Distance Searched: 6.000 miles from subject property

### RECEPTOR SUMMARY

An X indicates the presence of the receptor within the search radius.

#### Residential Population

Estimated population within search radius: 280541 persons.

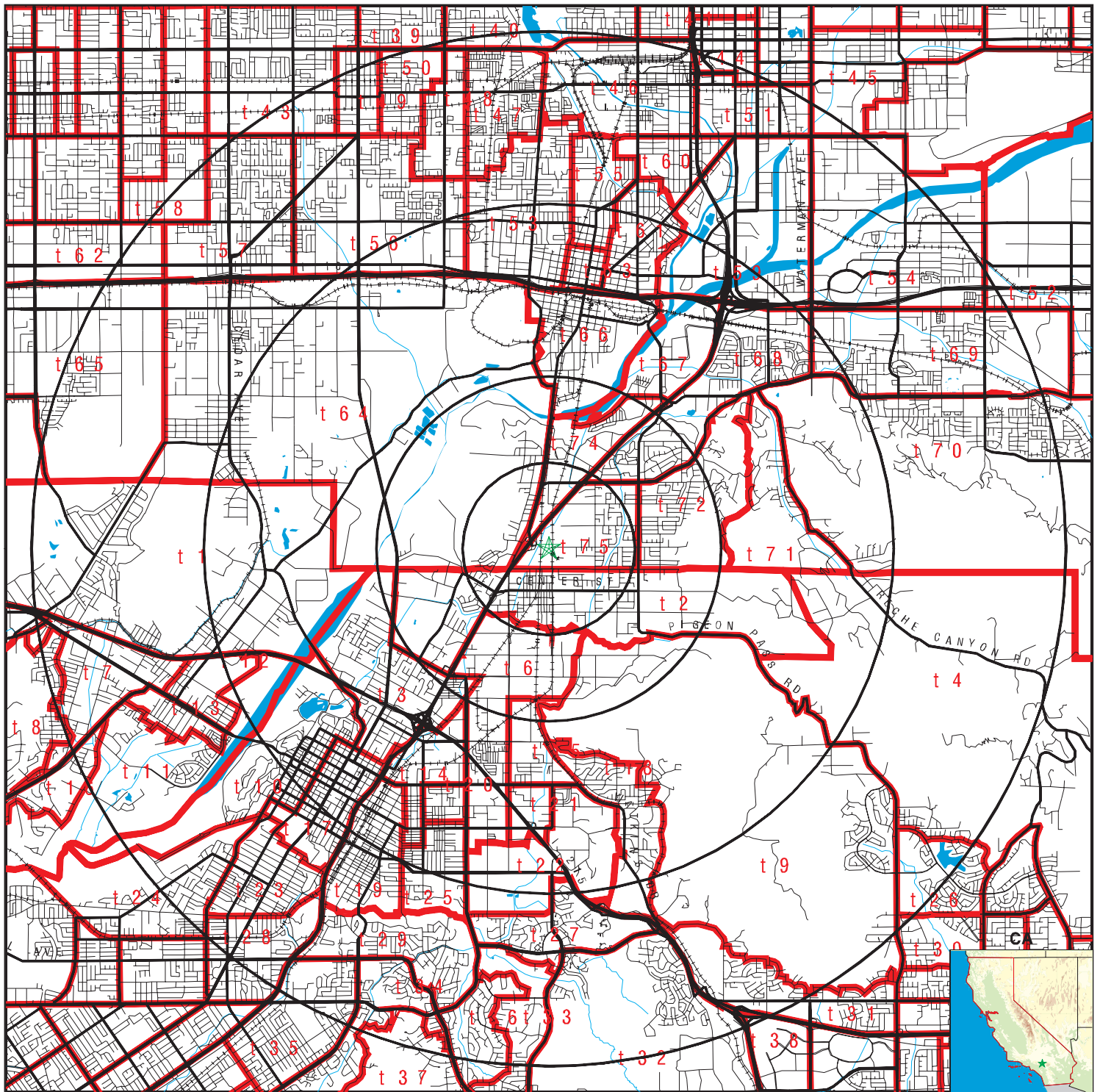
#### Other Public Receptors

| Type              | Within Search Radius                | Sites Total |
|-------------------|-------------------------------------|-------------|
| Day Care Centers: | <input checked="" type="checkbox"/> | 56          |
| Medical Centers:  | <input checked="" type="checkbox"/> | 4           |
| Nursing Homes:    | <input checked="" type="checkbox"/> | 13          |
| Schools:          | <input checked="" type="checkbox"/> | 149         |
| Hospitals:        | <input checked="" type="checkbox"/> | 5           |
| Colleges:         | <input checked="" type="checkbox"/> | 15          |
| Arena:            | <input type="checkbox"/>            |             |
| Prison:           | <input type="checkbox"/>            |             |

#### Environmental Receptors

| Type          | Within Search Radius                | Sites Total |
|---------------|-------------------------------------|-------------|
| Federal Land: | <input checked="" type="checkbox"/> | 1           |

# CENSUS MAP - 1597275.3s



- ★ Target Property
- Roads
- Waterways
- Census Tracts

0 1 1/2 3 6 Miles

TARGET PROPERTY: AESH  
 ADDRESS: 12700 Taylor Street  
 CITY/STATE/ZIP: Grand Terrace CA 92313  
 LAT/LONG: 34.0227 / 117.3318

CUSTOMER: CH2M Hill, Inc.  
 CONTACT: Sarah Madams  
 INQUIRY #: 1597275.3s  
 DATE: January 20, 2006 2:41 pm

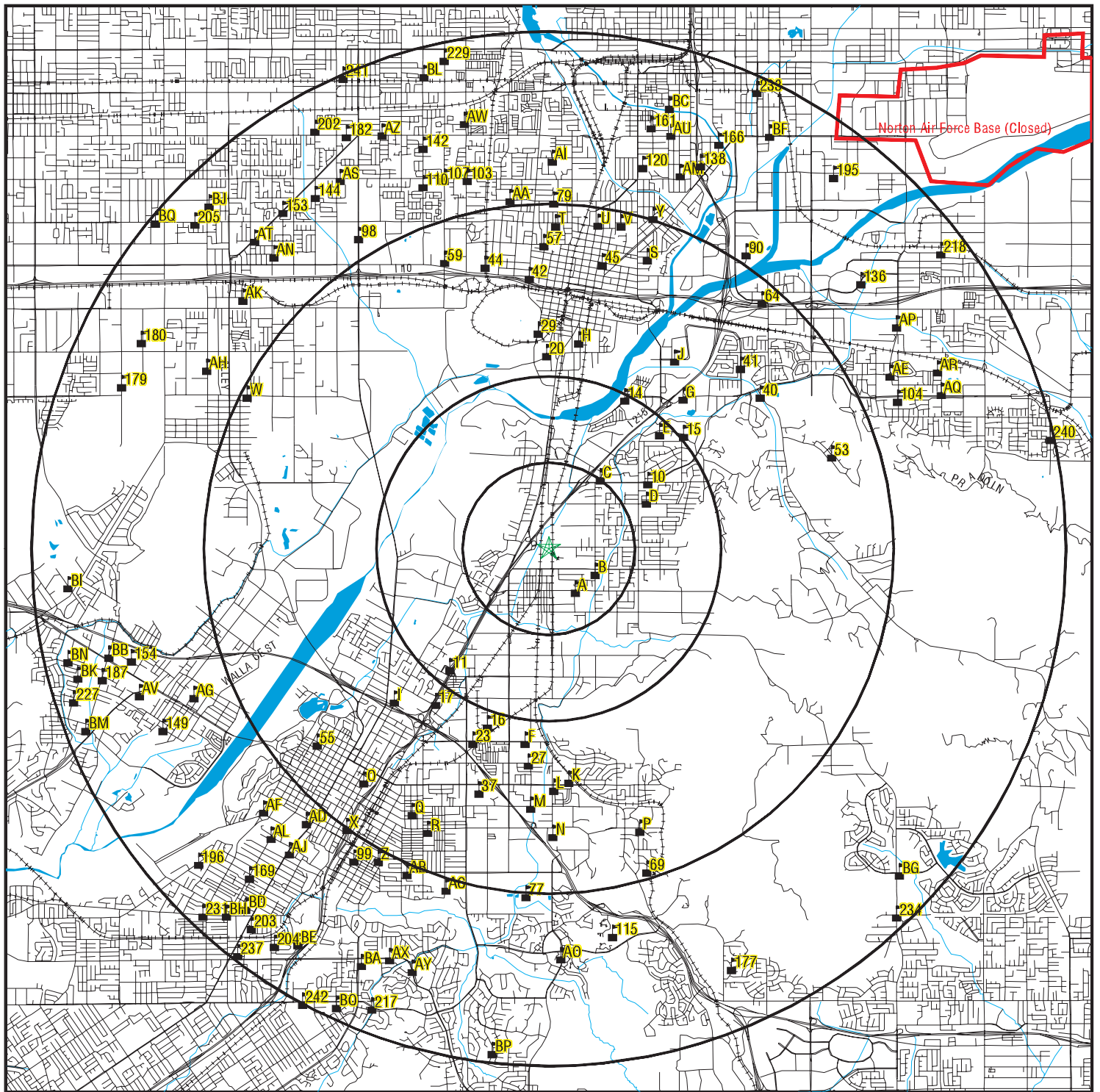
## CENSUS FINDINGS

| Map ID | Tract Number | Total Population | Population in Radius | Total Area(sq.mi.) | Area in Radius(sq.mi.) |
|--------|--------------|------------------|----------------------|--------------------|------------------------|
| T1     | 0401.00      | 8005             | 6001.6               | 8.91               | 6.68                   |
| T2     | 0423.00      | 5903             | 5903.0               | 3.98               | 3.98                   |
| T3     | 0301.00      | 7907             | 7907.0               | 1.90               | 1.90                   |
| T4     | 0424.12      | 3931             | 1446.2               | 19.63              | 7.22                   |
| T5     | 0403.03      | 2526             | 23.2                 | 1.17               | 0.01                   |
| T6     | 0422.09      | 3124             | 3124.0               | 1.96               | 1.96                   |
| T7     | 0403.01      | 6634             | 5903.3               | 1.28               | 1.14                   |
| T8     | 0403.02      | 6484             | 398.5                | 2.18               | 0.13                   |
| T9     | 0422.14      | 5822             | 5662.7               | 10.36              | 10.07                  |
| T10    | 0302.00      | 4682             | 4443.3               | 2.21               | 2.10                   |
| T11    | 0402.01      | 4356             | 2944.6               | 2.96               | 2.00                   |
| T12    | 0402.04      | 3508             | 3508.0               | 0.54               | 0.54                   |
| T13    | 0402.03      | 3785             | 3785.0               | 0.35               | 0.35                   |
| T14    | 0305.02      | 2103             | 2103.0               | 0.73               | 0.73                   |
| T15    | 0422.10      | 4019             | 4019.0               | 0.52               | 0.52                   |
| T16    | 0402.02      | 2501             | 447.2                | 0.62               | 0.11                   |
| T17    | 0303.00      | 4845             | 4845.0               | 0.97               | 0.97                   |
| T18    | 0422.13      | 5033             | 5033.0               | 1.14               | 1.14                   |
| T19    | 0304.00      | 5966             | 5966.0               | 1.07               | 1.07                   |
| T20    | 0305.03      | 4325             | 4325.0               | 0.22               | 0.22                   |
| T21    | 0422.11      | 3571             | 3571.0               | 0.32               | 0.32                   |
| T22    | 0422.02      | 1626             | 1626.0               | 1.68               | 1.68                   |
| T23    | 0307.00      | 5463             | 5463.0               | 0.94               | 0.94                   |
| T24    | 0308.00      | 6402             | 2565.6               | 1.87               | 0.75                   |
| T25    | 0305.01      | 4529             | 4529.0               | 0.72               | 0.72                   |
| T26    | 0424.10      | 4563             | 2641.5               | 0.92               | 0.53                   |
| T27    | 0422.06      | 5190             | 5190.0               | 1.04               | 1.04                   |
| T28    | 0311.00      | 4638             | 3080.2               | 1.11               | 0.74                   |
| T29    | 0306.03      | 2841             | 2841.0               | 1.35               | 1.35                   |
| T30    | 0424.09      | 3230             | 82.3                 | 0.60               | 0.02                   |
| T31    | 0422.12      | 6218             | 3722.7               | 1.50               | 0.90                   |
| T32    | 0422.05      | 8164             | 3123.1               | 6.29               | 2.41                   |
| T33    | 0422.07      | 2561             | 1807.7               | 0.95               | 0.67                   |
| T34    | 0306.02      | 3478             | 1617.8               | 1.29               | 0.60                   |
| T35    | 0312.00      | 6504             | 2241.7               | 1.48               | 0.51                   |
| T36    | 0422.08      | 2471             | 1981.3               | 0.74               | 0.60                   |
| T37    | 0306.01      | 4324             | 194.0                | 5.34               | 0.24                   |
| T38    | 0425.05      | 3224             | 54.3                 | 1.40               | 0.02                   |
| T39    | 0038.00      | 13498            | 36.2                 | 2.74               | 0.01                   |
| T40    | 0043.00      | 8313             | 1147.4               | 1.75               | 0.24                   |
| T41    | 0048.00      | 2945             | 0.3                  | 0.32               | 0.00                   |
| T42    | 0058.00      | 3538             | 35.9                 | 0.65               | 0.01                   |
| T43    | 0035.01      | 13569            | 2264.3               | 2.38               | 0.40                   |
| T44    | 0057.00      | 1188             | 241.7                | 0.51               | 0.10                   |
| T45    | 0065.00      | 6688             | 445.5                | 1.51               | 0.10                   |
| T46    | 0049.00      | 6807             | 6624.5               | 1.87               | 1.82                   |
| T47    | 0044.02      | 9604             | 9604.0               | 1.11               | 1.11                   |
| T48    | 0044.01      | 3700             | 3700.0               | 0.69               | 0.69                   |
| T49    | 0037.00      | 3362             | 2563.2               | 0.50               | 0.38                   |
| T50    | 0039.00      | 4680             | 4418.6               | 0.61               | 0.57                   |
| T51    | 0059.00      | 1189             | 1119.9               | 0.86               | 0.81                   |
| T52    | 0078.00      | 4051             | 33.3                 | 6.89               | 0.06                   |
| T53    | 0066.00      | 12546            | 12546.0              | 1.93               | 1.93                   |
| T54    | 0072.00      | 6800             | 5582.5               | 3.67               | 3.01                   |
| T55    | 0067.00      | 4065             | 4065.0               | 0.74               | 0.74                   |
| T56    | 0036.01      | 17548            | 17548.0              | 2.94               | 2.94                   |
| T57    | 0036.02      | 12652            | 12305.3              | 2.01               | 1.95                   |
| T58    | 0034.03      | 3656             | 1191.4               | 0.75               | 0.25                   |

## CENSUS FINDINGS

| Map ID | Tract Number | Total Population | Population in Radius | Total Area(sq.mi.) | Area in Radius(sq. mi.) |
|--------|--------------|------------------|----------------------|--------------------|-------------------------|
| T59    | 0060.00      | 1523             | 1523.0               | 2.85               | 2.85                    |
| T60    | 0050.00      | 1831             | 1831.0               | 0.61               | 0.61                    |
| T61    | 0070.00      | 7150             | 7150.0               | 0.89               | 0.89                    |
| T62    | 0033.00      | 9943             | 1604.6               | 1.79               | 0.29                    |
| T63    | 0068.00      | 889              | 889.0                | 0.23               | 0.23                    |
| T64    | 0040.00      | 12760            | 12760.0              | 12.71              | 12.71                   |
| T65    | 0026.01      | 5030             | 1579.0               | 8.29               | 2.60                    |
| T66    | 0069.00      | 2929             | 2929.0               | 1.55               | 1.55                    |
| T67    | 0071.08      | 2064             | 2064.0               | 1.00               | 1.00                    |
| T68    | 0071.02      | 10567            | 10567.0              | 2.01               | 2.01                    |
| T69    | 0073.01      | 12160            | 9978.3               | 2.92               | 2.40                    |
| T70    | 0073.02      | 7987             | 4447.8               | 11.43              | 6.36                    |
| T71    | 0071.05      | 2841             | 2841.0               | 1.36               | 1.36                    |
| T72    | 0071.04      | 4085             | 4085.0               | 1.67               | 1.67                    |
| T73    | 0026.03      | 17896            | 110.2                | 3.36               | 0.02                    |
| T74    | 0071.07      | 2609             | 2609.0               | 0.88               | 0.88                    |
| T75    | 0071.06      | 3979             | 3979.0               | 1.10               | 1.10                    |

# RECEPTOR MAP - 1597275.3s



★ Target Property

⚡ Roads

⚡ Waterways

⚡ Environmental or Public Receptor

⚡ Federal Lands Linear Features

⚡ Federal Lands Area

0 1 1/2 3 6 Miles

TARGET PROPERTY: AESH  
ADDRESS: 12700 Taylor Street  
CITY/STATE/ZIP: Grand Terrace CA 92313  
LAT/LONG: 34.0227 / 117.3318

CUSTOMER: CH2M Hill, Inc.  
CONTACT: Sarah Madams  
INQUIRY #: 1597275.3s  
DATE: January 20, 2006 2:41 pm

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site           |                                                               | EDR ID<br>Database                |
|----------------------------------------------------------------|----------------|---------------------------------------------------------------|-----------------------------------|
| A1<br>SSE<br>1/2-1 mi<br>2980<br>Higher                        | Name:          | RUSD/HIGHGROVE HEADSTART STATE PRESCHOOL                      | DAY1040160<br>Daycare             |
|                                                                | Address:       | Not Reported                                                  |                                   |
|                                                                | City:          | Not Reported                                                  |                                   |
|                                                                | State:         | CA                                                            |                                   |
|                                                                | Zip:           | Not Reported                                                  |                                   |
| A2<br>SSE<br>1/2-1 mi<br>3035<br>Higher                        | Name:          | HIGHGROVE ELEMENTARY                                          | PBS063315005142<br>Public Schools |
|                                                                | NCES ID:       | 063315005142                                                  |                                   |
|                                                                | Address:       | 690 CENTER ST.<br>HIGHGROVE, CA 92507                         |                                   |
|                                                                | Telephone:     | 9097887296                                                    |                                   |
|                                                                | Local Code:    | Urban Fringe of Large City                                    |                                   |
|                                                                | School Type:   | Regular Elementary and Secondary Schools                      |                                   |
|                                                                | School Level:  | Primary                                                       |                                   |
|                                                                | Lowest Grade:  | Kindergarten                                                  |                                   |
|                                                                | Highest Grade: | 06                                                            |                                   |
| B3<br>ESE<br>1/2-1 mi<br>3181<br>Higher                        | Schoolid:      | 02010844                                                      | PVTSCH02010844<br>Private Schools |
|                                                                | Address:       | 45 MICHIGAN AVE                                               |                                   |
|                                                                | County num:    | 6065                                                          |                                   |
|                                                                | State:         | CA                                                            |                                   |
|                                                                | Zip5:          | 92507                                                         |                                   |
|                                                                | Phone:         | 909-784-1100                                                  |                                   |
|                                                                | Hi grde:       | Grade 12                                                      |                                   |
|                                                                | Locale:        | Mid-size Central City                                         |                                   |
|                                                                | School type:   | Regular elementary or secondary                               |                                   |
|                                                                | School level:  | Combined                                                      |                                   |
|                                                                | Affiliation:   | Baptist                                                       |                                   |
|                                                                | Association:   | Accelerated Christian Education (ACE) or (School of Tomorrow) |                                   |
| B4<br>ESE<br>1/2-1 mi<br>3188<br>Higher                        | Name:          | IMMANUEL BAPTIST PRESCHOOL                                    | DAY1040139<br>Daycare             |
|                                                                | Address:       | Not Reported                                                  |                                   |
|                                                                | City:          | Not Reported                                                  |                                   |
|                                                                | State:         | CA                                                            |                                   |
|                                                                | Zip:           | Not Reported                                                  |                                   |
| C5<br>NE<br>1/2-1 mi<br>5177<br>Higher                         | Name:          | Grand Terrace School                                          | GNS0187086<br>GNIS Schools        |
|                                                                | ID:            | 242894                                                        |                                   |
|                                                                | Site Type:     | school                                                        |                                   |
|                                                                | Latitude:      | 34.03400                                                      |                                   |
|                                                                | Longitude:     | -117.30000                                                    |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site           |                                                                 | EDR ID<br>Database                |
|----------------------------------------------------------------|----------------|-----------------------------------------------------------------|-----------------------------------|
| C6<br>NE<br>1-2 mi<br>5579<br>Higher                           | Name:          | GRAND TERRACE ELEMENTARY                                        | PBS060939000949<br>Public Schools |
|                                                                | NCES ID:       | 060939000949                                                    |                                   |
|                                                                | Address:       | 12066 VIVIENDA AVE.<br>GRAND TERRACE, CA 92313                  |                                   |
|                                                                | Telephone:     | 9098764146                                                      |                                   |
|                                                                | Local Code:    | Urban Fringe of Large City                                      |                                   |
|                                                                | School Type:   | Regular Elementary and Secondary Schools                        |                                   |
|                                                                | School Level:  | Primary                                                         |                                   |
|                                                                | Lowest Grade:  | Kindergarten                                                    |                                   |
|                                                                | Highest Grade: | 06                                                              |                                   |
| D7<br>ENE<br>1-2 mi<br>6487<br>Higher                          | Name:          | Terrace Hills School                                            | GNS0233875<br>GNIS Schools        |
|                                                                | ID:            | 250353                                                          |                                   |
|                                                                | Site Type:     | school                                                          |                                   |
|                                                                | Latitude:      | 34.02900                                                        |                                   |
|                                                                | Longitude:     | -117.30000                                                      |                                   |
| D8<br>ENE<br>1-2 mi<br>6653<br>Higher                          | Name:          | TERRACE HILLS MIDDLE                                            | PBS060939000957<br>Public Schools |
|                                                                | NCES ID:       | 060939000957                                                    |                                   |
|                                                                | Address:       | 22579 DEBERRY ST.<br>GRAND TERRACE, CA 92313                    |                                   |
|                                                                | Telephone:     | 9098764256                                                      |                                   |
|                                                                | Local Code:    | Urban Fringe of Large City                                      |                                   |
|                                                                | School Type:   | Regular Elementary and Secondary Schools                        |                                   |
|                                                                | School Level:  | Middle                                                          |                                   |
|                                                                | Lowest Grade:  | 07                                                              |                                   |
|                                                                | Highest Grade: | 08                                                              |                                   |
| D9<br>ENE<br>1-2 mi<br>6849<br>Higher                          | Schoolid:      | AA000060                                                        | PVTSCHAA000060<br>Private Schools |
|                                                                | Address:       | 22577 CITY CENTER CT                                            |                                   |
|                                                                | County num:    | 6071                                                            |                                   |
|                                                                | State:         | CA                                                              |                                   |
|                                                                | Zip5:          | 92313                                                           |                                   |
|                                                                | Phone:         | 909-825-2030                                                    |                                   |
|                                                                | Hi grde:       | Grade 7                                                         |                                   |
|                                                                | Locale:        | Urban fringe of Large City                                      |                                   |
|                                                                | School type:   | Regular elementary or secondary                                 |                                   |
|                                                                | School level:  | Elementary                                                      |                                   |
|                                                                | Affiliation:   | Seventh-Day Adventist                                           |                                   |
|                                                                | Association:   | General Conference of the Seventh-Day Adventist Church (GCSDAC) |                                   |
| 10<br>NE<br>1-2 mi<br>7320<br>Higher                           | Name:          | AZURE HILLS CHILDREN CENTER                                     | DAY1040019<br>Daycare             |
|                                                                | Address:       | Not Reported                                                    |                                   |
|                                                                | City:          | Not Reported                                                    |                                   |
|                                                                | State:         | CA                                                              |                                   |
|                                                                | Zip:           | Not Reported                                                    |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | EDR ID<br>Database         |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| 11<br>SW<br>1-2 mi<br>9477<br>Lower                            | Schoolid: 111744<br>Name: CENTER FOR EMPLOYMENT TRAINING-RIVERSIDE<br>Address: 1099 W LACADENA DR<br>City: RIVERSIDE<br>State: CA Zip: 92501<br>Telephone: 4082877924<br>Sector: Less than 2-year private, not-for-profit<br>Level: Less than 2 years (below associate)<br>Control: Private, nonprofit<br>Affiliation: Private, not for-profit, no religious affiliation<br>Has Hospital?: 2<br>Open to Pub?: Insitution is open to the public<br>Active?: Active - institution active and not a new institution | COL111744<br>Colleges      |
| E12<br>NE<br>1-2 mi<br>9774<br>Higher                          | Name: TERRACE VIEW ELEMENTARY - CHILD CARE<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                                                                                                                                                                                                                      | DAY1039965<br>Daycare      |
| E13<br>NE<br>1-2 mi<br>9911<br>Higher                          | Name: Terrace View School<br>ID: 250357<br>Site Type: school<br>Latitude: 34.04200<br>Longitude: -117.30000                                                                                                                                                                                                                                                                                                                                                                                                      | GNS0233886<br>GNIS Schools |
| 14<br>NNE<br>1-2 mi<br>10346<br>Lower                          | Schoolid: 415774<br>Name: FOUR D SUCCESS ACADEMY<br>Address: 1020 East Washington Street<br>City: COLTON<br>State: CA Zip: 92324<br>Telephone: 9097839331<br>Sector: Less than 2-year private, for-profit<br>Level: Less than 2 years (below associate)<br>Control: Private, for-profit<br>Affiliation: Private, for-profit<br>Has Hospital?: 2<br>Open to Pub?: Insitution is open to the public<br>Active?: Active - institution active and not a new institution                                              | COL415774<br>Colleges      |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | EDR ID<br>Database                |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 15<br>NE<br>2-4 mi<br>10828<br>Higher                          | Name: TERRACE VIEW ELEMENTARY<br>NCES ID: 060939000958<br>Address: 22731 GRAND TERRACE ROAD<br>GRAND TERRACE, CA 92313<br>Telephone: 9098764266<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade:06                                                                                                                                               | PBS060939000958<br>Public Schools |
| 16<br>SSW<br>2-4 mi<br>11408<br>Lower                          | Schoolid: 410520<br>Name: CALIFORNIA SCHOOL OF COURT REPORTING-RIVERSIDE<br>Address: 1989 ATLANTA AVE<br>City: RIVERSIDE<br>State: CA<br>Zip: 92507<br>Telephone: 909781272717<br>Sector: 2-year private, for-profit<br>Level: At least 2 but less than 4 years<br>Control: Private, for-profit<br>Affiliation: Private, for-profit<br>Has Hospital?: 2<br>Open to Pub?: Insitution is open to the public<br>Active?: Active - institution active and not a new institution | COL410520<br>Colleges             |
| 17<br>SW<br>2-4 mi<br>11669<br>Lower                           | Name: MY LITTLE SCHOOL HOUSE NURSERY<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                                                                                                                                                                                       | DAY1040269<br>Daycare             |
| F18<br>South<br>2-4 mi<br>11874<br>Higher                      | Schoolid: 437954<br>Name: UNITED TRUCK DRIVING SCHOOL<br>Address: 1151 SPRUCE ST #4<br>City: RIVERSIDE<br>State: CA<br>Zip: 92507<br>Telephone: -1<br>Sector: sector not known<br>Level: Not available<br>Control: Not available<br>Affiliation: Not available<br>Has Hospital?: 2<br>Open to Pub?: Not available<br>Active?: Potential add - might be added                                                                                                                | COL437954<br>Colleges             |

## MAP FINDINGS

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

Site

EDR ID  
Database

|                                                      |                                                                                                                                                                                                                                                                                                                                                                |                   |                               |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------|
| <p>F19<br/>South<br/>2-4 mi<br/>11874<br/>Higher</p> | <p>Schoolid: 437972<br/>Name: UNITED TRUCK DRIVING SCHOOL<br/>Address: 1151 SPRUCE ST<br/>City: RIVERSIDE<br/>State: CA<br/>Telephone: -1<br/>Sector: sector not known<br/>Level: Not available<br/>Control: Not available<br/>Affiliation: Not available<br/>Has Hospital?: 2<br/>Open to Pub?: Not available<br/>Active?: Potential add - might be added</p> | <p>Zip: 92507</p> | <p>COL437972<br/>Colleges</p> |
|------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------|

|                                                    |                                                                                                                        |                                    |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| <p>20<br/>North<br/>2-4 mi<br/>11961<br/>Lower</p> | <p>Name: San Salvador School<br/>ID: 248962<br/>Site Type: school<br/>Latitude: 34.05600<br/>Longitude: -117.30000</p> | <p>GNS0224728<br/>GNIS Schools</p> |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------|

|                                                   |                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                       |                                     |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <p>G21<br/>NE<br/>2-4 mi<br/>12369<br/>Higher</p> | <p>Provnum: 555089<br/>Street: 1700 E WASHINGTON AVE<br/>State: CA<br/>Phone: 9098241530<br/>Num Beds: 99<br/>Occupied %: 87<br/>Owner Type: For profit - Corporation<br/>Multi Nursing home ownership?: YES<br/>Has Resident and Family Councils?: RESIDENT</p> | <p>Name: WESTERN HEALTHCARE CENTER<br/>City: COLTON<br/>Zipcode: 92324<br/>Last Insp: 20010711<br/>Num Residents: 86<br/>Description: Participating in Medicare and Medicaid<br/>Within Hosp?: NO</p> | <p>SRNH555089<br/>Nursing Homes</p> |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|

|                                                   |                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                         |                                           |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| <p>G22<br/>NE<br/>2-4 mi<br/>12468<br/>Higher</p> | <p>Schoolid: K9300367<br/>Address: 1730 E WASHINGTON ST<br/>County num: 6071<br/>State: CA<br/>Zip5: 92324<br/>Phone: 909-824-1004<br/>Hi grde: Kindergarten<br/>Locale: Urban fringe of Large City<br/>School type: Early Childhood Program/Day Care Center<br/>School level: Elementary<br/>Affiliation: Nonsectarian<br/>Association: No Membership Association</p> | <p>Name: KINDER CARE LEARNING CENTER<br/>City: COLTON<br/>County: SAN BERNARDINO<br/>Fips: 6<br/>Zip4: Not Reported<br/>Low grade: Prekindergarten<br/>Gender: Coed</p> | <p>PVTSCHK9300367<br/>Private Schools</p> |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|

## MAP FINDINGS

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

Site

EDR ID  
Database

|        |                |                                                       |      |       |  |           |
|--------|----------------|-------------------------------------------------------|------|-------|--|-----------|
| 23     |                |                                                       |      |       |  | COL432302 |
| SSW    |                |                                                       |      |       |  | Colleges  |
| 2-4 mi |                |                                                       |      |       |  |           |
| 12649  | Schoolid:      | 432302                                                |      |       |  |           |
| Lower  | Name:          | COMPUTER EDUCATION INSTITUTE-RIVERSIDE                |      |       |  |           |
|        | Address:       | 1635 SPRUCE ST                                        |      |       |  |           |
|        | City:          | RIVERSIDE                                             |      |       |  |           |
|        | State:         | CA                                                    | Zip: | 92507 |  |           |
|        | Telephone:     | 9092761704                                            |      |       |  |           |
|        | Sector:        | Less than 2-year private, for-profit                  |      |       |  |           |
|        | Level:         | Less than 2 years (below associate)                   |      |       |  |           |
|        | Control:       | Private, for-profit                                   |      |       |  |           |
|        | Affiliation:   | Private, for-profit                                   |      |       |  |           |
|        | Has Hospital?: | 2                                                     |      |       |  |           |
|        | Open to Pub?:  | Insitution is open to the public                      |      |       |  |           |
|        | Active?:       | Active - institution active and not a new institution |      |       |  |           |

|        |          |                                         |            |
|--------|----------|-----------------------------------------|------------|
| H24    | Name:    | CITY OF COLTON/WILSON ELEMENTARY SCHOOL | DAY1039848 |
| North  | Address: | Not Reported                            | Daycare    |
| 2-4 mi | City:    | Not Reported                            |            |
| 12763  | State:   | CA                                      |            |
| Higher | Zip:     | Not Reported                            |            |

|        |            |               |              |
|--------|------------|---------------|--------------|
| H25    | Name:      | Wilson School | GNS0241504   |
| North  | ID:        | 251695        | GNIS Schools |
| 2-4 mi | Site Type: | school        |              |
| 12984  | Latitude:  | 34.05800      |              |
| Higher | Longitude: | -117.30000    |              |

|        |                |                                          |                 |
|--------|----------------|------------------------------------------|-----------------|
| I26    | Name:          | FREMONT ELEMENTARY                       | PBS063315005137 |
| SW     | NCES ID:       | 063315005137                             | Public Schools  |
| 2-4 mi | Address:       | 1925 ORANGE ST.                          |                 |
| 13114  |                | RIVERSIDE, CA 92501                      |                 |
| Lower  | Telephone:     | 9097887466                               |                 |
|        | Local Code:    | Mid-size Central City                    |                 |
|        | School Type:   | Regular Elementary and Secondary Schools |                 |
|        | School Level:  | Primary                                  |                 |
|        | Lowest Grade:  | Kindergarten                             |                 |
|        | Highest Grade: | 06                                       |                 |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site           |                                                               | EDR ID<br>Database |
|----------------------------------------------------------------|----------------|---------------------------------------------------------------|--------------------|
| 27<br>South<br>2-4 mi<br>13178<br>Higher                       | Name:          | UNIVERSITY HEIGHTS MIDDLE                                     | PBS063315005160    |
|                                                                | NCES ID:       | 063315005160                                                  | Public Schools     |
|                                                                | Address:       | 1155 MASSACHUSETTS AVE.<br>RIVERSIDE, CA 92507                |                    |
|                                                                | Telephone:     | 9097887388                                                    |                    |
|                                                                | Local Code:    | Mid-size Central City                                         |                    |
|                                                                | School Type:   | Regular Elementary and Secondary Schools                      |                    |
|                                                                | School Level:  | Middle                                                        |                    |
|                                                                | Lowest Grade:  | 07                                                            |                    |
|                                                                | Highest Grade: | 08                                                            |                    |
| 128<br>SW<br>2-4 mi<br>13207<br>Lower                          | Name:          | RUSD/FREMONT HEADSTART SITE                                   | DAY1040267         |
|                                                                | Address:       | Not Reported                                                  | Daycare            |
|                                                                | City:          | Not Reported                                                  |                    |
|                                                                | State:         | CA                                                            |                    |
|                                                                | Zip:           | Not Reported                                                  |                    |
| 29<br>North<br>2-4 mi<br>13356<br>Higher                       | Schoolid:      | A9101417                                                      | PVTSCHA9101417     |
|                                                                | Address:       | 580 S. RANCHO                                                 | Private Schools    |
|                                                                | County num:    | 6071                                                          |                    |
|                                                                | State:         | CA                                                            |                    |
|                                                                | Zip5:          | 92324                                                         |                    |
|                                                                | Phone:         | 909-783-0956                                                  |                    |
|                                                                | Hi grde:       | Grade 12                                                      |                    |
|                                                                | Locale:        | Urban fringe of Large City                                    |                    |
|                                                                | School type:   | Regular elementary or secondary                               |                    |
|                                                                | School level:  | Combined                                                      |                    |
|                                                                | Affiliation:   | Christian (no specific denomination)                          |                    |
|                                                                | Association:   | Accelerated Christian Education (ACE) or (School of Tomorrow) |                    |
|                                                                | Name:          | TEMPLE CHRISTIAN SCHOOL                                       |                    |
|                                                                | City:          | COLTON                                                        |                    |
|                                                                | County:        | SAN BERNARDINO                                                |                    |
|                                                                | Fips:          | 6                                                             |                    |
|                                                                | Zip4:          | Not Reported                                                  |                    |
|                                                                | Low grade:     | Grade 1                                                       |                    |
|                                                                | Gender:        | Coed                                                          |                    |
| 130<br>SW<br>2-4 mi<br>13366<br>Lower                          | Name:          | Fremont School                                                | GNS0184603         |
|                                                                | ID:            | 242488                                                        | GNIS Schools       |
|                                                                | Site Type:     | school                                                        |                    |
|                                                                | Latitude:      | 33.99800                                                      |                    |
|                                                                | Longitude:     | -117.40000                                                    |                    |
| J31<br>NNE<br>2-4 mi<br>13668<br>Higher                        | Name:          | EAST VALLEY COMMUNITY DAY                                     | PBS069102908286    |
|                                                                | NCES ID:       | 069102908286                                                  | Public Schools     |
|                                                                | Address:       | 1060 EAST COOLEY DR.<br>COLTON, CA 92324                      |                    |
|                                                                | Telephone:     | 9094334622                                                    |                    |
|                                                                | Local Code:    | Urban Fringe of Large City                                    |                    |
|                                                                | School Type:   | Other                                                         |                    |
|                                                                | School Level:  | Other                                                         |                    |
|                                                                | Lowest Grade:  | 06                                                            |                    |
|                                                                | Highest Grade: | 12                                                            |                    |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                                                                                                                                                          | EDR ID<br>Database                |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| K32<br>South<br>2-4 mi<br>13990<br>Higher                      | Name: HIGHLAND ELEMENTARY<br>NCES ID: 063315005143<br>Address: 700 HIGHLANDER DR.<br>RIVERSIDE, CA 92507<br>Telephone: 9097887292<br>Local Code: Mid-size Central City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade: 06                                                                                                                                   | PBS063315005143<br>Public Schools |
| J33<br>NE<br>2-4 mi<br>14239<br>Higher                         | Schoolid: 400080<br>Name: SUMMIT CAREER COLLEGE<br>Address: 1250 E COOLEY DR<br>City: COLTON<br>State: CA<br>Telephone: 9094228950<br>Sector: Less than 2-year private, for-profit<br>Level: Less than 2 years (below associate)<br>Control: Private, for-profit<br>Affiliation: Private, for-profit<br>Has Hospital?: 2<br>Open to Pub?: Institution is open to the public<br>Active?: Active - institution active and not a new institution | COL400080<br>Colleges             |
| L34<br>South<br>2-4 mi<br>14435<br>Higher                      | Name: GATEWAY NURSERY SCHOOL<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                                                                                                                                                                 | DAY1040352<br>Daycare             |
| K35<br>South<br>2-4 mi<br>14452<br>Higher                      | Name: UNIVERSITY CHILDRENS CENTER & PRESCHOOL<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                                                                                                                                                | DAY1040353<br>Daycare             |
| L36<br>South<br>2-4 mi<br>14866<br>Higher                      | Name: UNIVERSITY OF CALIFORNIA, RIVERSIDE CHILDRENS CTR.<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                                                                                                                                     | DAY1040362<br>Daycare             |

## MAP FINDINGS

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

Site

EDR ID  
Database

37  
SSW  
2-4 mi  
15419  
Higher  
Name: North High School  
ID: 246633  
Site Type: school  
Latitude: 33.98200  
Longitude: -117.30000

GNS0211251  
GNIS Schools

M38  
South  
2-4 mi  
15776  
Higher  
Name: ISLAMIC ACADEMY OF RIVERSIDE  
Address: Not Reported  
City: Not Reported  
State: CA  
Zip: Not Reported

DAY1040373  
Daycare

M39  
South  
2-4 mi  
15817  
Higher  
Schoolid: 00090152  
Address: 1085 W LINDEN  
County num: 6065  
State: CA  
Zip5: 92507  
Phone: 909-683-6602  
Hi grde: Grade 6  
Locale: Mid-size Central City  
School type: Regular elementary or secondary  
School level: Elementary  
Affiliation: Nonsectarian  
Association: No Membership Association

Name: RIVERSIDE GARDEN SCHOOL  
City: RIVERSIDE  
County: RIVERSIDE  
Fips: 6  
Zip4: Not Reported  
Low grade: Kindergarten

Gender: Coed

PVTSCH00090152  
Private Schools

40  
NE  
2-4 mi  
16007  
Higher  
Provnum: 555435  
Street: 1350 RECHE CANYON ROAD  
State: CA  
Phone: 9093704411  
Num Beds: 156  
Occupied %: 87  
Owner Type: For profit - Corporation  
Multi Nursing home ownership?: NO  
Has Resident and Family Councils?: RESIDENT

Name: RECHE CANYON REHAB & HEALTH CARE CENT  
City: COLTON  
Zipcode: 92324  
Last Insp: 20010828  
Num Residents: 135  
Description: Participating in Medicare and Medicaid  
Within Hosp?: NO

SRNH555435  
Nursing Homes

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                                                                                                         | EDR ID<br>Database                |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 41<br>NE<br>2-4 mi<br>16223<br>Higher                          | Name: COOLEY RANCH ELEMENTARY<br>NCES ID: 060939010300<br>Address: 1000 S. COOLEY DR.<br>COLTON, CA 92324<br>Telephone: 9098764272<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade:06                                                                             | PBS060939010300<br>Public Schools |
| 42<br>North<br>2-4 mi<br>16723<br>Higher                       | Name: COLTON HIGH<br>NCES ID: 060939000946<br>Address: 777 W. VALLEY BLVD.<br>COLTON, CA 92324<br>Telephone: 9098764130<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: High<br>Lowest Grade: 09<br>Highest Grade:12                                                                                                     | PBS060939000946<br>Public Schools |
| N43<br>South<br>2-4 mi<br>17021<br>Higher                      | Schoolid: 110671<br>Name: UNIVERSITY OF CALIFORNIA-RIVERSIDE<br>Address: 900 UNIVERSITY AVE<br>City: RIVERSIDE<br>State: CA<br>Telephone: 9097871012<br>Sector: 4-year public<br>Level: Four or more years<br>Control: Public<br>Affiliation: Public<br>Has Hospital?: 2<br>Open to Pub?: Insitution is open to the public<br>Active?: Active - institution active and not a new institution | COL110671<br>Colleges             |
| 44<br>NNW<br>2-4 mi<br>17797<br>Higher                         | Name: SLOVER MOUNTAIN HIGH (CONT.)<br>NCES ID: 060939000956<br>Address: 325 HERMOSA AVE.<br>COLTON, CA 92324<br>Telephone: 9098764171<br>Local Code: Urban Fringe of Large City<br>School Type: Other<br>School Level: High<br>Lowest Grade: 09<br>Highest Grade:12                                                                                                                          | PBS060939000956<br>Public Schools |

## MAP FINDINGS

| Map ID | Direction | Distance | Distance (ft.) | Elevation | Site                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | EDR ID                                                                                                                                                                           | Database   |               |
|--------|-----------|----------|----------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------|
| 45     | North     | 2-4 mi   | 17826          | Higher    | Schoolid: 399920<br>Name: SOMOS HERMANAS UNIDAS<br>Address: 254 EAST E ST<br>City: COLTON<br>State: CA<br>Telephone: 9098245350<br>Sector: Less than 2-year private, not-for-profit<br>Level: Less than 2 years (below associate)<br>Control: Private, nonprofit<br>Affiliation: Private, not for-profit, no religious affiliation<br>Has Hospital?: 2<br>Open to Pub?: Insitution is open to the public<br>Active?: Active - institution active and not a new institution | COL399920                                                                                                                                                                        | Colleges   |               |
| O46    | SW        | 2-4 mi   | 17917          | Lower     | Provnum: 555613<br>Street: 3401 LEMON STREET<br>State: CA<br>Phone: 9096868202<br>Num Beds: 38<br>Occupied %: 95<br>Owner Type: Non profit - Corporation<br>Multi Nursing home ownership?: YES<br>Has Resident and Family Councils?: RESIDENT                                                                                                                                                                                                                              | Name: PLYMOUTH TOWER<br>City: RIVERSIDE<br>Zipcode: 92501<br>Last Insp: 20020204<br>Num Residents: 36<br>Description: Participating in Medicare and Medicaid<br>Within Hosp?: NO | SRNH555613 | Nursing Homes |
| P47    | SSE       | 2-4 mi   | 17949          | Higher    | Name: APPLE TREE LEARNING CENTER<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                  | DAY1040396 | Daycare       |
| N48    | South     | 2-4 mi   | 17951          | Higher    | Name: University Of California Riverside<br>ID: 250825<br>Site Type: school<br>Latitude: 33.97300<br>Longitude: -117.30000                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                  | GNS0236737 | GNIS Schools  |

## MAP FINDINGS

| Map ID | Direction | Distance | Distance (ft.) | Elevation | Site                                                                                                                                                                                                                                                                                                                                                                                                                   | EDR ID          | Database        |
|--------|-----------|----------|----------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|
| P49    | SSE       | 2-4 mi   | 18127          | Higher    | Schoolid: A9100587<br>Address: 190 E BIG SPRINGS ROAD<br>County num: 6065<br>State: CA<br>Zip5: 92507<br>Phone: 909-787-0408<br>Hi grde: Ungraded<br>Locale: Mid-size Central City<br>School type: Special Education - primarily serves students with disabilities<br>School level: Combined<br>Affiliation: Nonsectarian<br>Association: Council for Exceptional Children (CEC),Other Special Emphasis Association(s) | PVTSCHA9100587  | Private Schools |
| Q50    | SSW       | 2-4 mi   | 18179          | Lower     | Name: RUSD/LONGFELLOW HEADSTART<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                                                                                                                                       | DAY1040378      | Daycare         |
| Q51    | SSW       | 2-4 mi   | 18189          | Lower     | Name: LONGFELLOW ELEMENTARY<br>NCES ID: 063315005149<br>Address: 3610 EUCALYPTUS AVE.<br>RIVERSIDE, CA 92507<br>Telephone: 9097887335<br>Local Code: Mid-size Central City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade:06                                                                                                         | PBS063315005149 | Public Schools  |
| Q52    | SSW       | 2-4 mi   | 18192          | Lower     | Name: Longfellow School<br>ID: 245090<br>Site Type: school<br>Latitude: 33.97800<br>Longitude: -117.40000                                                                                                                                                                                                                                                                                                              | GNS0202040      | GNIS Schools    |
| 53     | ENE       | 2-4 mi   | 18257          | Higher    | Name: RECHE CANYON ELEMENTARY<br>NCES ID: 060939009352<br>Address: 3101 CANYON VISTA<br>COLTON, CA 92324<br>Telephone: 9098764155<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade:06                                                                                                        | PBS060939009352 | Public Schools  |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                    | EDR ID<br>Database                |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| O54<br>SW<br>2-4 mi<br>18442<br>Lower                          | Name: Continuation School<br>ID: 240870<br>Site Type: school<br>Latitude: 33.98300<br>Longitude: -117.40000                                                                                                                                                             | GNS0173567<br>GNIS Schools        |
| 55<br>SW<br>2-4 mi<br>18515<br>Lower                           | Name: Bryant School<br>ID: 239752<br>Site Type: school<br>Latitude: 33.99000<br>Longitude: -117.40000                                                                                                                                                                   | GNS0166312<br>GNIS Schools        |
| R56<br>SSW<br>2-4 mi<br>18671<br>Lower                         | Name: NAACP HEAD START/STATE PRESCHOOL<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                 | DAY1040393<br>Daycare             |
| 57<br>North<br>2-4 mi<br>18698<br>Higher                       | Name: PRESBYTERIAN NURSERY SCHOOL<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                      | DAY1039702<br>Daycare             |
| S58<br>NNE<br>2-4 mi<br>18771<br>Higher                        | Name: WASHINGTON HIGH (ALTER.)<br>NCES ID: 060939008126<br>Address: 900 E. C ST.<br>COLTON, CA 92324<br>Telephone: 9098764196<br>Local Code: Urban Fringe of Large City<br>School Type: Other<br>School Level: Other<br>Lowest Grade: Kindergarten<br>Highest Grade: 12 | PBS060939008126<br>Public Schools |
| 59<br>NNW<br>2-4 mi<br>18789<br>Higher                         | Name: ARROWHEAD REGIONAL MEDICAL CENTER<br>ID: 050245<br>Address: 400 NORTH PEPPER AVENUE<br>City: COLTON<br>Zip: 92324<br>State: CA<br>Telephone: 9095801000                                                                                                           | HOSP000480<br>Medical Centers     |
| R60<br>SSW<br>2-4 mi<br>18846<br>Lower                         | Name: University Heights Junior High School<br>ID: 250819<br>Site Type: school<br>Latitude: 33.97500<br>Longitude: -117.40000                                                                                                                                           | GNS0236724<br>GNIS Schools        |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site           |                                                       | EDR ID<br>Database                |
|----------------------------------------------------------------|----------------|-------------------------------------------------------|-----------------------------------|
| S61<br>NNE<br>2-4 mi<br>18890<br>Higher                        | Name:          | Washington School                                     | GNS0238869<br>GNIS Schools        |
|                                                                | ID:            | 251228                                                |                                   |
|                                                                | Site Type:     | school                                                |                                   |
|                                                                | Latitude:      | 34.07200                                              |                                   |
|                                                                | Longitude:     | -117.30000                                            |                                   |
| T62<br>North<br>2-4 mi<br>19851<br>Higher                      | Name:          | Grant School                                          | GNS0187283<br>GNIS Schools        |
|                                                                | ID:            | 242935                                                |                                   |
|                                                                | Site Type:     | school                                                |                                   |
|                                                                | Latitude:      | 34.07700                                              |                                   |
|                                                                | Longitude:     | -117.30000                                            |                                   |
| T63<br>North<br>2-4 mi<br>19975<br>Higher                      | Name:          | GRANT (ULYSSES) ELEMENTARY                            | PBS060939000950<br>Public Schools |
|                                                                | NCES ID:       | 060939000950                                          |                                   |
|                                                                | Address:       | 550 W. OLIVE ST.<br>COLTON, CA 92324                  |                                   |
|                                                                | Telephone:     | 9098764126                                            |                                   |
|                                                                | Local Code:    | Urban Fringe of Large City                            |                                   |
|                                                                | School Type:   | Regular Elementary and Secondary Schools              |                                   |
|                                                                | School Level:  | Primary                                               |                                   |
|                                                                | Lowest Grade:  | Kindergarten                                          |                                   |
|                                                                | Highest Grade: | 06                                                    |                                   |
| 64<br>NE<br>2-4 mi<br>20030<br>Higher                          | Schoolid:      | 399300                                                | COL399300<br>Colleges             |
|                                                                | Name:          | REALTY INSTITUTE                                      |                                   |
|                                                                | Address:       | 2086 SOUTH E ST                                       |                                   |
|                                                                | City:          | SAN BERNARDINO                                        |                                   |
|                                                                | State:         | CA                                                    | Zip: 92408                        |
|                                                                | Telephone:     | 9098721933                                            |                                   |
|                                                                | Sector:        | Less than 2-year private, for-profit                  |                                   |
|                                                                | Level:         | Less than 2 years (below associate)                   |                                   |
|                                                                | Control:       | Private, for-profit                                   |                                   |
|                                                                | Affiliation:   | Private, for-profit                                   |                                   |
|                                                                | Has Hospital?: | 2                                                     |                                   |
|                                                                | Open to Pub?:  | Insitution is open to the public                      |                                   |
|                                                                | Active?:       | Active - institution active and not a new institution |                                   |
| U65<br>North<br>2-4 mi<br>20153<br>Higher                      | Name:          | ST. JOHN'S LUTHERAN EVANGELICAL CHURCH OF COLTON      | DAY1039675<br>Daycare             |
|                                                                | Address:       | Not Reported                                          |                                   |
|                                                                | City:          | Not Reported                                          |                                   |
|                                                                | State:         | CA                                                    |                                   |
|                                                                | Zip:           | Not Reported                                          |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site           |                                           | EDR ID<br>Database                |
|----------------------------------------------------------------|----------------|-------------------------------------------|-----------------------------------|
| U66<br>North<br>2-4 mi<br>20192<br>Higher                      | Name:          | Immaculate Conception School              | GNS0192919<br>GNIS Schools        |
|                                                                | ID:            | 243772                                    |                                   |
|                                                                | Site Type:     | school                                    |                                   |
|                                                                | Latitude:      | 34.07800                                  |                                   |
|                                                                | Longitude:     | -117.30000                                |                                   |
| V67<br>NNE<br>2-4 mi<br>20346<br>Higher                        | Name:          | Lincoln School                            | GNS0200129<br>GNIS Schools        |
|                                                                | ID:            | 244838                                    |                                   |
|                                                                | Site Type:     | school                                    |                                   |
|                                                                | Latitude:      | 34.07700                                  |                                   |
|                                                                | Longitude:     | -117.30000                                |                                   |
| V68<br>NNE<br>2-4 mi<br>20437<br>Higher                        | Name:          | LINCOLN (ABRAHAM) ELEMENTARY              | PBS060939000951<br>Public Schools |
|                                                                | NCES ID:       | 060939000951                              |                                   |
|                                                                | Address:       | 444 E. OLIVE ST.<br>COLTON, CA 92324      |                                   |
|                                                                | Telephone:     | 9098764176                                |                                   |
|                                                                | Local Code:    | Urban Fringe of Large City                |                                   |
|                                                                | School Type:   | Regular Elementary and Secondary Schools  |                                   |
|                                                                | School Level:  | Primary                                   |                                   |
|                                                                | Lowest Grade:  | Kindergarten                              |                                   |
|                                                                | Highest Grade: | 06                                        |                                   |
| 69<br>SSE<br>2-4 mi<br>20561<br>Higher                         | Name:          | Hyatt School                              | GNS0192778<br>GNIS Schools        |
|                                                                | ID:            | 243754                                    |                                   |
|                                                                | Site Type:     | school                                    |                                   |
|                                                                | Latitude:      | 33.96900                                  |                                   |
|                                                                | Longitude:     | -117.30000                                |                                   |
| W70<br>WNW<br>2-4 mi<br>20681<br>Higher                        | Name:          | CRESTMORE ELEMENTARY                      | PBS060939000948<br>Public Schools |
|                                                                | NCES ID:       | 060939000948                              |                                   |
|                                                                | Address:       | 18870 JURUPA ST.<br>BLOOMINGTON, CA 92316 |                                   |
|                                                                | Telephone:     | 9098764151                                |                                   |
|                                                                | Local Code:    | Urban Fringe of Large City                |                                   |
|                                                                | School Type:   | Regular Elementary and Secondary Schools  |                                   |
|                                                                | School Level:  | Primary                                   |                                   |
|                                                                | Lowest Grade:  | Kindergarten                              |                                   |
|                                                                | Highest Grade: | 06                                        |                                   |
| W71<br>WNW<br>2-4 mi<br>20719<br>Higher                        | Name:          | CJUSD/CRESTMORE SITE                      | DAY1039920<br>Daycare             |
|                                                                | Address:       | Not Reported                              |                                   |
|                                                                | City:          | Not Reported                              |                                   |
|                                                                | State:         | CA                                        |                                   |
|                                                                | Zip:           | Not Reported                              |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                      |                                                                                                                                                                                                                                | EDR ID<br>Database                |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| W72<br>WNW<br>2-4 mi<br>20793<br>Higher                        | Name:<br>ID:<br>Site Type:<br>Latitude:<br>Longitude:                                                                                                     | Crestmore School<br>241100<br>school<br>34.04900<br>-117.40000                                                                                                                                                                 | GNS0175084<br>GNIS Schools        |
| X73<br>SW<br>2-4 mi<br>20994<br>Lower                          | Name:<br>Address:<br>City:<br>State:<br>Zip:                                                                                                              | ST. FRANCES DE SALES PRESCHOOL<br>Not Reported<br>Not Reported<br>CA<br>Not Reported                                                                                                                                           | DAY1040392<br>Daycare             |
| X74<br>SW<br>2-4 mi<br>21020<br>Lower                          | Schoolid:<br>Address:<br>County num:<br>State:<br>Zip5:<br>Phone:<br>Hi grde:<br>Locale:<br>School type:<br>School level:<br>Affiliation:<br>Association: | 00076739<br>4205 MULBERRY ST<br>6065<br>CA<br>92501<br>909-683-5083<br>Grade 8<br>Mid-size Central City<br>Regular elementary or secondary<br>Elementary<br>Roman Catholic<br>National Catholic Educational Association (NCEA) | PVTSCH00076739<br>Private Schools |
| Y75<br>NNE<br>4-6 mi<br>21210<br>Higher                        | Name:<br>Address:<br>City:<br>State:<br>Zip:                                                                                                              | CJUSD/ALICE BIRNEY ELEMENTARY SCHOOL<br>Not Reported<br>Not Reported<br>CA<br>Not Reported                                                                                                                                     | DAY1039671<br>Daycare             |
| X76<br>SW<br>4-6 mi<br>21218<br>Lower                          | Name:<br>ID:<br>Site Type:<br>Latitude:<br>Longitude:                                                                                                     | Saint Francis School<br>248605<br>school<br>33.97600<br>-117.40000                                                                                                                                                             | GNS0223060<br>GNIS Schools        |
| 77<br>South<br>4-6 mi<br>21227<br>Higher                       | Name:<br>ID:<br>Site Type:<br>Latitude:<br>Longitude:                                                                                                     | University Of California Experiment Station<br>250823<br>school<br>33.96400<br>-117.30000                                                                                                                                      | GNS0236734<br>GNIS Schools        |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site           |                                              | EDR ID<br>Database                |
|----------------------------------------------------------------|----------------|----------------------------------------------|-----------------------------------|
| Y78<br>NNE<br>4-6 mi<br>21242<br>Higher                        | Name:          | Birney School                                | GNS0163599<br>GNIS Schools        |
|                                                                | ID:            | 239348                                       |                                   |
|                                                                | Site Type:     | school                                       |                                   |
|                                                                | Latitude:      | 34.07800                                     |                                   |
|                                                                | Longitude:     | -117.30000                                   |                                   |
| 79<br>North<br>4-6 mi<br>21305<br>Higher                       | Name:          | COLTON MIDDLE                                | PBS060939000947<br>Public Schools |
|                                                                | NCES ID:       | 060939000947                                 |                                   |
|                                                                | Address:       | 670 W. LAUREL ST.<br>COLTON, CA 92324        |                                   |
|                                                                | Telephone:     | 9098764231                                   |                                   |
|                                                                | Local Code:    | Urban Fringe of Large City                   |                                   |
|                                                                | School Type:   | Regular Elementary and Secondary Schools     |                                   |
|                                                                | School Level:  | Middle                                       |                                   |
|                                                                | Lowest Grade:  | 07                                           |                                   |
|                                                                | Highest Grade: | 08                                           |                                   |
| Z80<br>SSW<br>4-6 mi<br>21359<br>Lower                         | Name:          | LINCOLN (ABRAHAM) CONTINUATION               | PBS063315005148<br>Public Schools |
|                                                                | NCES ID:       | 063315005148                                 |                                   |
|                                                                | Address:       | 4341 VICTORIA AVE.<br>RIVERSIDE, CA 92507    |                                   |
|                                                                | Telephone:     | 9097887371                                   |                                   |
|                                                                | Local Code:    | Mid-size Central City                        |                                   |
|                                                                | School Type:   | Other                                        |                                   |
|                                                                | School Level:  | High                                         |                                   |
|                                                                | Lowest Grade:  | 09                                           |                                   |
|                                                                | Highest Grade: | 12                                           |                                   |
| Z81<br>SSW<br>4-6 mi<br>21449<br>Lower                         | Name:          | Learning Center                              | GNS0199370<br>GNIS Schools        |
|                                                                | ID:            | 244698                                       |                                   |
|                                                                | Site Type:     | school                                       |                                   |
|                                                                | Latitude:      | 33.97100                                     |                                   |
|                                                                | Longitude:     | -117.40000                                   |                                   |
| AA82<br>North<br>4-6 mi<br>21491<br>Higher                     | Name:          | ROGERS (PAUL) ELEMENTARY                     | PBS060939000954<br>Public Schools |
|                                                                | NCES ID:       | 060939000954                                 |                                   |
|                                                                | Address:       | 955 W. LAUREL ST.<br>COLTON, CA 92324        |                                   |
|                                                                | Telephone:     | 9098764211                                   |                                   |
|                                                                | Local Code:    | Urban Fringe of Large City                   |                                   |
|                                                                | School Type:   | Regular Elementary and Secondary Schools     |                                   |
|                                                                | School Level:  | Primary                                      |                                   |
|                                                                | Lowest Grade:  | Kindergarten                                 |                                   |
|                                                                | Highest Grade: | 06                                           |                                   |
| AA83<br>North<br>4-6 mi<br>21533<br>Higher                     | Name:          | CITY OF COLTON/PAUL ROGERS ELEMENTARY SCHOOL | DAY1039644<br>Daycare             |
|                                                                | Address:       | Not Reported                                 |                                   |
|                                                                | City:          | Not Reported                                 |                                   |
|                                                                | State:         | CA                                           |                                   |
|                                                                | Zip:           | Not Reported                                 |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site           |                                                         | EDR ID<br>Database                |
|----------------------------------------------------------------|----------------|---------------------------------------------------------|-----------------------------------|
| Y84<br>NNE<br>4-6 mi<br>21551<br>Higher                        | Name:          | BIRNEY (ALICE) ELEMENTARY                               | PBS060939007687<br>Public Schools |
|                                                                | NCES ID:       | 060939007687                                            |                                   |
|                                                                | Address:       | 1050 E. OLIVE PL.<br>COLTON, CA 92324                   |                                   |
|                                                                | Telephone:     | 9098764206                                              |                                   |
|                                                                | Local Code:    | Urban Fringe of Large City                              |                                   |
|                                                                | School Type:   | Regular Elementary and Secondary Schools                |                                   |
|                                                                | School Level:  | Primary                                                 |                                   |
|                                                                | Lowest Grade:  | Kindergarten                                            |                                   |
|                                                                | Highest Grade: | 06                                                      |                                   |
| AB85<br>SSW<br>4-6 mi<br>21632<br>Lower                        | Name:          | RIVERSIDE FAITH TEMPLE CHURCH TODDLER CENTER            | DAY1040430<br>Daycare             |
|                                                                | Address:       | Not Reported                                            |                                   |
|                                                                | City:          | Not Reported                                            |                                   |
|                                                                | State:         | CA                                                      |                                   |
|                                                                | Zip:           | Not Reported                                            |                                   |
| AB86<br>SSW<br>4-6 mi<br>21642<br>Lower                        | Schoolid:      | A9900350                                                | PVTSCHA9900350<br>Private Schools |
|                                                                | Address:       | 2355 PENNSYLVANIA AVE.                                  |                                   |
|                                                                | County num:    | 6065                                                    |                                   |
|                                                                | State:         | CA                                                      |                                   |
|                                                                | Zip5:          | 92507                                                   |                                   |
|                                                                | Phone:         | 909-778-0608                                            |                                   |
|                                                                | Hi grde:       | Grade 11                                                |                                   |
|                                                                | Locale:        | Mid-size Central City                                   |                                   |
|                                                                | School type:   | Elementary or secondary with a Special Program Emphasis |                                   |
|                                                                | School level:  | Combined                                                |                                   |
|                                                                | Affiliation:   | Christian (no specific denomination)                    |                                   |
|                                                                | Association:   | No Membership Association                               |                                   |
| AC87<br>SSW<br>4-6 mi<br>21679<br>Higher                       | Name:          | Emerson School                                          | GNS0181221<br>GNIS Schools        |
|                                                                | ID:            | 242005                                                  |                                   |
|                                                                | Site Type:     | school                                                  |                                   |
|                                                                | Latitude:      | 33.96600                                                |                                   |
|                                                                | Longitude:     | -117.40000                                              |                                   |
| AA88<br>North<br>4-6 mi<br>21706<br>Higher                     | Name:          | Rogers School                                           | GNS0221636<br>GNIS Schools        |
|                                                                | ID:            | 248332                                                  |                                   |
|                                                                | Site Type:     | school                                                  |                                   |
|                                                                | Latitude:      | 34.08200                                                |                                   |
|                                                                | Longitude:     | -117.30000                                              |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                                                                                                                                                              | EDR ID<br>Database                |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| AC89<br>SSW<br>4-6 mi<br>21726<br>Higher                       | Name: EMERSON ELEMENTARY<br>NCES ID: 063315005136<br>Address: 4660 OTTAWA AVE.<br>RIVERSIDE, CA 92507<br>Telephone: 9097887462<br>Local Code: Mid-size Central City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade:06                                                                                                                                           | PBS063315005136<br>Public Schools |
| 90<br>NNE<br>4-6 mi<br>21790<br>Higher                         | Schoolid: 422862<br>Name: INTERNAL CONTROL<br>Address: 394 ORANGE SHOW LN<br>City: SAN BERNARDINO<br>State: CA<br>Telephone: 9093812588<br>Sector: Less than 2-year private, for-profit<br>Level: Less than 2 years (below associate)<br>Control: Private, for-profit<br>Affiliation: Private, for-profit<br>Has Hospital?: 2<br>Open to Pub?: Insitution is open to the public<br>Active?: Active - institution active and not a new institution | COL422862<br>Colleges             |
| AD91<br>SW<br>4-6 mi<br>22106<br>Lower                         | Name: Grant School<br>ID: 242933<br>Site Type: school<br>Latitude: 33.97800<br>Longitude: -117.40000                                                                                                                                                                                                                                                                                                                                              | GNS0187281<br>GNIS Schools        |
| Z92<br>SSW<br>4-6 mi<br>22237<br>Lower                         | Name: Our Lady of Guadalupe Academy<br>ID: 247017<br>Site Type: school<br>Latitude: 33.96900<br>Longitude: -117.40000                                                                                                                                                                                                                                                                                                                             | GNS0213334<br>GNIS Schools        |
| AD93<br>SW<br>4-6 mi<br>22270<br>Lower                         | Name: RIVERSIDE COMMUNITY HOSPITAL<br>ID: 050022<br>Address: 4445 MAGNOLIA AVE<br>City: RIVERSIDE<br>Zip: 92501<br>State: CA<br>Telephone: 9097883000                                                                                                                                                                                                                                                                                             | HOSP000347<br>Medical Centers     |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                | EDR ID<br>Database                |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| AD94<br>SW<br>4-6 mi<br>22270<br>Lower                         | Provnum: 555510<br>Street: 4445 MAGNOLIA AVE<br>State: CA<br>Phone: 9097883276<br>Num Beds: 34<br>Occupied %: 44<br>Owner Type: For profit - Corporation<br>Multi Nursing home ownership?: NO<br>Has Resident and Family Councils?: NONE                                                            | SRNH555510<br>Nursing Homes       |
| AD95<br>SW<br>4-6 mi<br>22291<br>Lower                         | Name: RUSD/GRANT ELEMENTARY SCHOOL<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                 | DAY1040381<br>Daycare             |
| AD96<br>SW<br>4-6 mi<br>22317<br>Lower                         | Name: GRANT ELEMENTARY<br>NCES ID: 063315005139<br>Address: 4011 14TH ST.<br>RIVERSIDE, CA 92501<br>Telephone: 9097887374<br>Local Code: Mid-size Central City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade: 06 | PBS063315005139<br>Public Schools |
| AD97<br>SW<br>4-6 mi<br>22348<br>Lower                         | Name: RIVERSIDE COMMUNITY HOSPITAL<br>ID: 6209<br>Site Type: Hospital                                                                                                                                                                                                                               | HOS1001749<br>AHA Hospitals       |
| 98<br>NNW<br>4-6 mi<br>22393<br>Higher                         | Provnum: 055213<br>Street: 1471 S RIVERSIDE AVENUE<br>State: CA<br>Phone: 9098771361<br>Num Beds: 201<br>Occupied %: 81<br>Owner Type: For profit - Individual<br>Multi Nursing home ownership?: NO<br>Has Resident and Family Councils?: BOTH                                                      | SRNH055213<br>Nursing Homes       |
|                                                                | Name: CRESTVIEW CONVALESCENT HOSPITAL<br>City: RIALTO<br>Zipcode: 92376<br>Last Insp: 20010724<br>Num Residents: 163<br>Description: Participating in Medicare and Medicaid<br>Within Hosp?: NO                                                                                                     |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site           |                                            | EDR ID<br>Database                |
|----------------------------------------------------------------|----------------|--------------------------------------------|-----------------------------------|
| 99<br>SSW<br>4-6 mi<br>22424<br>Lower                          | Name:          | ABC WONDERWORLD PRESCHOOL                  | DAY1040421<br>Daycare             |
|                                                                | Address:       | Not Reported                               |                                   |
|                                                                | City:          | Not Reported                               |                                   |
|                                                                | State:         | CA                                         |                                   |
|                                                                | Zip:           | Not Reported                               |                                   |
| AD100<br>SW<br>4-6 mi<br>22427<br>Lower                        | Schoolid:      | A9704715                                   | PVTSCHA9704715<br>Private Schools |
|                                                                | Address:       | 4495 MAGNOLIA AVENUE                       |                                   |
|                                                                | County num:    | 6065                                       |                                   |
|                                                                | State:         | CA                                         |                                   |
|                                                                | Zip5:          | 92501                                      |                                   |
|                                                                | Phone:         | 909-683-8497                               |                                   |
|                                                                | Hi grde:       | Grade 2                                    |                                   |
|                                                                | Locale:        | Mid-size Central City                      |                                   |
|                                                                | School type:   | Regular elementary or secondary            |                                   |
|                                                                | School level:  | Elementary                                 |                                   |
|                                                                | Affiliation:   | Presbyterian                               |                                   |
|                                                                | Association:   | No Membership Association                  |                                   |
| AD101<br>SW<br>4-6 mi<br>22668<br>Lower                        | Name:          | CALVARY PRESBYTERIAN CHURCH NURSERY SCHOOL | DAY1040394<br>Daycare             |
|                                                                | Address:       | Not Reported                               |                                   |
|                                                                | City:          | Not Reported                               |                                   |
|                                                                | State:         | CA                                         |                                   |
|                                                                | Zip:           | Not Reported                               |                                   |
| AE102<br>ENE<br>4-6 mi<br>23171<br>Higher                      | Name:          | Loma Linda University                      | GNS0201510<br>GNIS Schools        |
|                                                                | ID:            | 245016                                     |                                   |
|                                                                | Site Type:     | school                                     |                                   |
|                                                                | Latitude:      | 34.05300                                   |                                   |
|                                                                | Longitude:     | -117.30000                                 |                                   |
| 103<br>NNW<br>4-6 mi<br>23231<br>Higher                        | Name:          | GARCIA (ERNEST) ELEMENTARY                 | PBS063237003848<br>Public Schools |
|                                                                | NCES ID:       | 063237003848                               |                                   |
|                                                                | Address:       | 1390 W. RANDALL AVE.<br>COLTON, CA 92324   |                                   |
|                                                                | Telephone:     | 9094217620                                 |                                   |
|                                                                | Local Code:    | Mid-size Central City                      |                                   |
|                                                                | School Type:   | Regular Elementary and Secondary Schools   |                                   |
|                                                                | School Level:  | Primary                                    |                                   |
|                                                                | Lowest Grade:  | Kindergarten                               |                                   |
|                                                                | Highest Grade: | 05                                         |                                   |
| 104<br>ENE<br>4-6 mi<br>23246<br>Higher                        | Name:          | LOMA LINDA UNIVERSITY MED CNTR             | HOS1001730<br>AHA Hospitals       |
|                                                                | ID:            | 6072                                       |                                   |
|                                                                | Site Type:     | Hospital                                   |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                                    | EDR ID<br>Database                |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| AF105<br>SW<br>4-6 mi<br>23299<br>Lower                        | Provnum: 05A263<br>Street: 4580 PALM AVE.<br>State: CA<br>Phone: 9096847701<br>Num Beds: 120<br>Occupied %: 93<br>Owner Type: For profit - Corporation<br>Multi Nursing home ownership?: YES<br>Has Resident and Family Councils?: RESIDENT                                                                             | SRNH05A263<br>Nursing Homes       |
| AG106<br>WSW<br>4-6 mi<br>23379<br>Lower                       | Name: Arbuttle School<br>ID: 238676<br>Site Type: school<br>Latitude: 33.99800<br>Longitude: -117.40000                                                                                                                                                                                                                 | GNS0159142<br>GNIS Schools        |
| 107<br>NNW<br>4-6 mi<br>23574<br>Higher                        | Name: MORRIS (GEORGIA) ELEMENTARY<br>NCES ID: 063237010020<br>Address: 1900 W. RANDALL AVE.<br>COLTON, CA 92324<br>Telephone: 9098206864<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade: 06 | PBS063237010020<br>Public Schools |
| AG108<br>WSW<br>4-6 mi<br>23593<br>Lower                       | Name: INA ARBUCKLE ELEMENTARY SCHOOL/HEADSTART<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                         | DAY1040262<br>Daycare             |
| AG109<br>WSW<br>4-6 mi<br>23595<br>Lower                       | Name: INA ARBUCKLE ELEMENTARY<br>NCES ID: 061926002311<br>Address: 3600 PACKARD AVE.<br>RIVERSIDE, CA 92509<br>Telephone: 9092227788<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade: 06     | PBS061926002311<br>Public Schools |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                                       | EDR ID<br>Database                |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 110<br>NNW<br>4-6 mi<br>23602<br>Higher                        | Name: JEHUE (WILLIAM G.) MIDDLE<br>NCES ID: 063237007621<br>Address: 1500 N. EUCALYPTUS AVE.<br>COLTON, CA 92324<br>Telephone: 9094217377<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Middle<br>Lowest Grade: 06<br>Highest Grade: 08              | PBS063237007621<br>Public Schools |
| AH111<br>WNW<br>4-6 mi<br>23646<br>Higher                      | Name: ZIMMERMAN (WALTER) ELEMENTARY<br>NCES ID: 060939000959<br>Address: 11050 LINDEN ST.<br>BLOOMINGTON, CA 92316<br>Telephone: 9098764246<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade: 06 | PBS060939000959<br>Public Schools |
| AH112<br>WNW<br>4-6 mi<br>23735<br>Higher                      | Name: Zimmerman School<br>ID: 251909<br>Site Type: school<br>Latitude: 34.05300<br>Longitude: -117.40000                                                                                                                                                                                                                   | GNS0242788<br>GNIS Schools        |
| AI113<br>North<br>4-6 mi<br>23793<br>Higher                    | Name: McKinley School<br>ID: 245703<br>Site Type: school<br>Latitude: 34.08800<br>Longitude: -117.30000                                                                                                                                                                                                                    | GNS0205539<br>GNIS Schools        |
| AE114<br>ENE<br>4-6 mi<br>23797<br>Higher                      | Name: LOMA LINDA UNIVERSITY MEDICAL CENTER<br>ID: 050327<br>Address: 11234 ANDERSON ST<br>City: LOMA LINDA<br>Zip: 92354<br>State: CA<br>Telephone: 9095589200                                                                                                                                                             | HOSP000520<br>Medical Centers     |
| 115<br>South<br>4-6 mi<br>23922<br>Higher                      | Name: Sheriffs Academy<br>ID: 249394<br>Site Type: school<br>Latitude: 33.95800<br>Longitude: -117.30000                                                                                                                                                                                                                   | GNS0227049<br>GNIS Schools        |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                               |                                                       | EDR ID<br>Database                |
|----------------------------------------------------------------|------------------------------------|-------------------------------------------------------|-----------------------------------|
| AI116<br>North<br>4-6 mi<br>23945<br>Higher                    | Name:                              | MCKINLEY (WILLIAM) ELEMENTARY                         | PBS060939000953<br>Public Schools |
|                                                                | NCES ID:                           | 060939000953                                          |                                   |
|                                                                | Address:                           | 600 W. JOHNSTON ST.<br>COLTON, CA 92324               |                                   |
|                                                                | Telephone:                         | 9098764201                                            |                                   |
|                                                                | Local Code:                        | Urban Fringe of Large City                            |                                   |
|                                                                | School Type:                       | Regular Elementary and Secondary Schools              |                                   |
|                                                                | School Level:                      | Primary                                               |                                   |
|                                                                | Lowest Grade:                      | Kindergarten                                          |                                   |
|                                                                | Highest Grade:                     | 06                                                    |                                   |
| AF117<br>SW<br>4-6 mi<br>24054<br>Lower                        | Provnum:                           | 555711                                                | SRNH555711<br>Nursing Homes       |
|                                                                | Street:                            | 4768 PALM AVENUE                                      |                                   |
|                                                                | State:                             | CA                                                    |                                   |
|                                                                | Phone:                             | 9096862273                                            |                                   |
|                                                                | Num Beds:                          | 51                                                    |                                   |
|                                                                | Occupied %:                        | 94                                                    |                                   |
|                                                                | Owner Type:                        | For profit - Corporation                              |                                   |
|                                                                | Multi Nursing home ownership?:     | YES                                                   |                                   |
|                                                                | Has Resident and Family Councils?: | BOTH                                                  |                                   |
|                                                                | Name:                              | COMMUNITY CARE ON PALM                                |                                   |
|                                                                | City:                              | RIVERSIDE                                             |                                   |
|                                                                | Zipcode:                           | 92501                                                 |                                   |
|                                                                | Last Insp:                         | 20020513                                              |                                   |
|                                                                | Num Residents:                     | 48                                                    |                                   |
|                                                                | Description:                       | Participating in Medicare and Medicaid                |                                   |
|                                                                | Within Hosp?:                      | NO                                                    |                                   |
| AJ118<br>SW<br>4-6 mi<br>24139<br>Lower                        | Name:                              | CENTRAL MIDDLE                                        | PBS063315005134<br>Public Schools |
|                                                                | NCES ID:                           | 063315005134                                          |                                   |
|                                                                | Address:                           | 4795 MAGNOLIA AVE.<br>RIVERSIDE, CA 92506             |                                   |
|                                                                | Telephone:                         | 9097887282                                            |                                   |
|                                                                | Local Code:                        | Mid-size Central City                                 |                                   |
|                                                                | School Type:                       | Regular Elementary and Secondary Schools              |                                   |
|                                                                | School Level:                      | Middle                                                |                                   |
|                                                                | Lowest Grade:                      | 07                                                    |                                   |
|                                                                | Highest Grade:                     | 08                                                    |                                   |
| AJ119<br>SW<br>4-6 mi<br>24158<br>Lower                        | Schoolid:                          | 121901                                                | COL121901<br>Colleges             |
|                                                                | Name:                              | RIVERSIDE COMMUNITY COLLEGE                           |                                   |
|                                                                | Address:                           | 4800 MAGNOLIA AVE                                     |                                   |
|                                                                | City:                              | RIVERSIDE                                             |                                   |
|                                                                | State:                             | CA                                                    |                                   |
|                                                                | Telephone:                         | 9092228000                                            | Zip: 92506                        |
|                                                                | Sector:                            | 2-year public                                         |                                   |
|                                                                | Level:                             | At least 2 but less than 4 years                      |                                   |
|                                                                | Control:                           | Public                                                |                                   |
|                                                                | Affiliation:                       | Public                                                |                                   |
|                                                                | Has Hospital?:                     | 2                                                     |                                   |
|                                                                | Open to Pub?:                      | Insitution is open to the public                      |                                   |
|                                                                | Active?:                           | Active - institution active and not a new institution |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site          |                                         | EDR ID<br>Database                |
|----------------------------------------------------------------|---------------|-----------------------------------------|-----------------------------------|
| 120<br>NNE<br>4-6 mi<br>24178<br>Higher                        | Name:         | San Bernardino Valley College           | GNS0224072<br>GNIS Schools        |
|                                                                | ID:           | 248804                                  |                                   |
|                                                                | Site Type:    | school                                  |                                   |
|                                                                | Latitude:     | 34.08700                                |                                   |
|                                                                | Longitude:    | -117.30000                              |                                   |
| AK121<br>NW<br>4-6 mi<br>24186<br>Higher                       | Name:         | Bloomington Junior High School          | GNS0164290<br>GNIS Schools        |
|                                                                | ID:           | 239487                                  |                                   |
|                                                                | Site Type:    | school                                  |                                   |
|                                                                | Latitude:     | 34.06500                                |                                   |
|                                                                | Longitude:    | -117.40000                              |                                   |
| AL122<br>SW<br>4-6 mi<br>24248<br>Lower                        | Name:         | EDEN LUTHERAN SCHOOL                    | DAY1040399<br>Daycare             |
|                                                                | Address:      | Not Reported                            |                                   |
|                                                                | City:         | Not Reported                            |                                   |
|                                                                | State:        | CA                                      |                                   |
|                                                                | Zip:          | Not Reported                            |                                   |
| AL123<br>SW<br>4-6 mi<br>24253<br>Lower                        | Schoolid:     | K9300539                                | PVTSCHK9300539<br>Private Schools |
|                                                                | Address:      | 4725 BROCKTON AVE                       |                                   |
|                                                                | County num:   | 6065                                    |                                   |
|                                                                | State:        | CA                                      |                                   |
|                                                                | Zip5:         | 92509                                   |                                   |
|                                                                | Phone:        | 909-683-7001                            |                                   |
|                                                                | Hi grde:      | Kindergarten                            |                                   |
|                                                                | Locale:       | Urban fringe of Large City              |                                   |
|                                                                | School type:  | Early Childhood Program/Day Care Center |                                   |
|                                                                | School level: | Elementary                              |                                   |
|                                                                | Affiliation:  | Lutheran Church - Missouri Synod        |                                   |
|                                                                | Association:  | No Membership Association               |                                   |
| AK124<br>NW<br>4-6 mi<br>24257<br>Higher                       | Name:         | COLTON JUSD HEAD START BLOOMINGTON      | DAY1039783<br>Daycare             |
|                                                                | Address:      | Not Reported                            |                                   |
|                                                                | City:         | Not Reported                            |                                   |
|                                                                | State:        | CA                                      |                                   |
|                                                                | Zip:          | Not Reported                            |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site           |                                              | EDR ID<br>Database                |
|----------------------------------------------------------------|----------------|----------------------------------------------|-----------------------------------|
| AK125<br>NW<br>4-6 mi<br>24260<br>Higher                       | Name:          | BLOOMINGTON MIDDLE                           | PBS060939000945<br>Public Schools |
|                                                                | NCES ID:       | 060939000945                                 |                                   |
|                                                                | Address:       | 18829 ORANGE ST.<br>BLOOMINGTON, CA 92316    |                                   |
|                                                                | Telephone:     | 9098764101                                   |                                   |
|                                                                | Local Code:    | Urban Fringe of Large City                   |                                   |
|                                                                | School Type:   | Regular Elementary and Secondary Schools     |                                   |
|                                                                | School Level:  | Middle                                       |                                   |
|                                                                | Lowest Grade:  | 07                                           |                                   |
|                                                                | Highest Grade: | 08                                           |                                   |
| AM126<br>NNE<br>4-6 mi<br>24274<br>Higher                      | Name:          | Urbita School                                | GNS0237066<br>GNIS Schools        |
|                                                                | ID:            | 250865                                       |                                   |
|                                                                | Site Type:     | school                                       |                                   |
|                                                                | Latitude:      | 34.08600                                     |                                   |
|                                                                | Longitude:     | -117.30000                                   |                                   |
| AM127<br>NNE<br>4-6 mi<br>24426<br>Higher                      | Name:          | URBITA ELEMENTARY                            | PBS063417005389<br>Public Schools |
|                                                                | NCES ID:       | 063417005389                                 |                                   |
|                                                                | Address:       | 771 SOUTH J ST.<br>SAN BERNARDINO, CA 92410  |                                   |
|                                                                | Telephone:     | 9093886488                                   |                                   |
|                                                                | Local Code:    | Mid-size Central City                        |                                   |
|                                                                | School Type:   | Regular Elementary and Secondary Schools     |                                   |
|                                                                | School Level:  | Primary                                      |                                   |
|                                                                | Lowest Grade:  | Kindergarten                                 |                                   |
|                                                                | Highest Grade: | 06                                           |                                   |
| AJ128<br>SW<br>4-6 mi<br>24556<br>Lower                        | Name:          | RIVERSIDE COMMUNITY CHILD DEVELOPMENT CENTER | DAY1040414<br>Daycare             |
|                                                                | Address:       | Not Reported                                 |                                   |
|                                                                | City:          | Not Reported                                 |                                   |
|                                                                | State:         | CA                                           |                                   |
|                                                                | Zip:           | Not Reported                                 |                                   |
| AJ129<br>SW<br>4-6 mi<br>24564<br>Lower                        | Name:          | City College                                 | GNS0171935<br>GNIS Schools        |
|                                                                | ID:            | 240639                                       |                                   |
|                                                                | Site Type:     | school                                       |                                   |
|                                                                | Latitude:      | 33.97000                                     |                                   |
|                                                                | Longitude:     | -117.40000                                   |                                   |
| AN130<br>NW<br>4-6 mi<br>24582<br>Higher                       | Name:          | Grimes School                                | GNS0188008<br>GNIS Schools        |
|                                                                | ID:            | 243041                                       |                                   |
|                                                                | Site Type:     | school                                       |                                   |
|                                                                | Latitude:      | 34.07200                                     |                                   |
|                                                                | Longitude:     | -117.40000                                   |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                      |                                                                                                                                                                                                                        | EDR ID<br>Database                |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| AJ131<br>SW<br>4-6 mi<br>24675<br>Lower                        | Name:<br>ID:<br>Site Type:<br>Latitude:<br>Longitude:                                                                                                     | Central Junior High School<br>240420<br>school<br>33.97200<br>-117.40000                                                                                                                                               | GNS0170371<br>GNIS Schools        |
| AN132<br>NW<br>4-6 mi<br>24716<br>Higher                       | Name:<br>NCES ID:<br>Address:<br>Telephone:<br>Local Code:<br>School Type:<br>School Level:<br>Lowest Grade:<br>Highest Grade:                            | GRIMES (RUTH) ELEMENTARY<br>060939000955<br>10009 SPRUCE ST.<br>BLOOMINGTON, CA 92316<br>9098764156<br>Urban Fringe of Large City<br>Regular Elementary and Secondary Schools<br>Primary<br>Kindergarten<br>06         | PBS060939000955<br>Public Schools |
| AL133<br>SW<br>4-6 mi<br>24906<br>Lower                        | Name:<br>Address:<br>City:<br>State:<br>Zip:                                                                                                              | FIRST UNITED METHODIST CHURCH NURSERY SCHOOL<br>Not Reported<br>Not Reported<br>CA<br>Not Reported                                                                                                                     | DAY1040407<br>Daycare             |
| AO134<br>South<br>4-6 mi<br>24943<br>Higher                    | Name:<br>Address:<br>City:<br>State:<br>Zip:                                                                                                              | KINDER-CARE LEARNING CENTERS<br>Not Reported<br>Not Reported<br>CA<br>Not Reported                                                                                                                                     | DAY1040510<br>Daycare             |
| AO135<br>South<br>4-6 mi<br>25030<br>Higher                    | Schoolid:<br>Address:<br>County num:<br>State:<br>Zip5:<br>Phone:<br>Hi grde:<br>Locale:<br>School type:<br>School level:<br>Affiliation:<br>Association: | K9300540<br>5445 CANYON CREST DR<br>6065<br>CA<br>92507<br>909-683-1626<br>Kindergarten<br>Mid-size Central City<br>Early Childhood Program/Day Care Center<br>Elementary<br>Nonsectarian<br>No Membership Association | PVTSCHK9300540<br>Private Schools |
|                                                                | Name:<br>City:<br>County:<br>Fips:<br>Zip4:<br>Low grade:<br>Gender:                                                                                      | KINDER CARE LEARNING CENTER<br>RIVERSIDE<br>RIVERSIDE<br>6<br>Not Reported<br>Prekindergarten<br>Coed                                                                                                                  |                                   |

## MAP FINDINGS

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

Site

EDR ID  
Database

136  
NE  
4-6 mi  
25153  
Higher

PVTSCHK9300534  
Private Schools

|               |                                         |            |                   |
|---------------|-----------------------------------------|------------|-------------------|
| Schoolid:     | K9300534                                | Name:      | LA PETITE ACADEMY |
| Address:      | 855 E HOSPITALITY LN                    | City:      | SAN BERNARDINO    |
| County num:   | 6071                                    | County:    | SAN BERNARDINO    |
| State:        | CA                                      | Fips:      | 6                 |
| Zip5:         | 92408                                   | Zip4:      | Not Reported      |
| Phone:        | 909-889-0700                            | Low grade: | Prekindergarten   |
| Hi grde:      | Kindergarten                            |            |                   |
| Locale:       | Mid-size Central City                   | Gender:    | Coed              |
| School type:  | Early Childhood Program/Day Care Center |            |                   |
| School level: | Elementary                              |            |                   |
| Affiliation:  | Nonsectarian                            |            |                   |
| Association:  | No Membership Association               |            |                   |

AP137  
ENE  
4-6 mi  
25259  
Higher

Name: Union Academy  
ID: 250783  
Site Type: school  
Latitude: 34.06000  
Longitude: -117.30000

GNS0236531  
GNIS Schools

138  
NNE  
4-6 mi  
25348  
Higher

Name: Urbita School (historical)  
ID: 1670954  
Site Type: school  
Latitude: 34.08700  
Longitude: -117.30000

GNS0237067  
GNIS Schools

AP139  
ENE  
4-6 mi  
25429  
Higher

PVTSCH00094474  
Private Schools

|               |                                                                 |            |                    |
|---------------|-----------------------------------------------------------------|------------|--------------------|
| Schoolid:     | 00094474                                                        | Name:      | LOMA LINDA ACADEMY |
| Address:      | 10656 ANDERSON STREET                                           | City:      | LOMA LINDA         |
| County num:   | 6071                                                            | County:    | SAN BERNARDINO     |
| State:        | CA                                                              | Fips:      | 6                  |
| Zip5:         | 92354                                                           | Zip4:      | Not Reported       |
| Phone:        | 909-796-0161                                                    | Low grade: | Kindergarten       |
| Hi grde:      | Grade 12                                                        |            |                    |
| Locale:       | Urban fringe of Large City                                      | Gender:    | Coed               |
| School type:  | Elementary or secondary with a Special Program Emphasis         |            |                    |
| School level: | Combined                                                        |            |                    |
| Affiliation:  | Seventh-Day Adventist                                           |            |                    |
| Association:  | General Conference of the Seventh-Day Adventist Church (GCSDAC) |            |                    |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EDR ID<br>Database                |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| AQ140<br>ENE<br>4-6 mi<br>25645<br>Higher                      | Provnum: 055183<br>Street: 25271 BARTON ROAD<br>State: CA<br>Phone: 9097960216<br>Num Beds: 110<br>Occupied %: 80<br>Owner Type: For profit - Corporation<br>Multi Nursing home ownership?: YES<br>Has Resident and Family Councils?: RESIDENT                                                                                                                                                                                                                       | SRNH055183<br>Nursing Homes       |
| AR141<br>ENE<br>4-6 mi<br>25805<br>Higher                      | Schoolid: K9300519<br>Address: 25228 SHEPARDSON DR<br>County num: 6071<br>State: CA<br>Zip5: 92754<br>Phone: 909-558-4568<br>Hi grde: Kindergarten<br>Locale: Urban fringe of Large City<br>School type: Early Childhood Program/Day Care Center<br>School level: Elementary<br>Affiliation: Seventh-Day Adventist<br>Association: General Conference of the Seventh-Day Adventist Church (GCSDAC), National Association for the Education of Young Children (NAEYC) | PVTSCHK9300519<br>Private Schools |
| 142<br>NNW<br>4-6 mi<br>25843<br>Higher                        | Name: RIALTO HIGH<br>NCES ID: 063237001126<br>Address: 595 S. EUCALYPTUS AVE.<br>RIALTO, CA 92376<br>Telephone: 9094217500<br>Local Code: Mid-size Central City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: High<br>Lowest Grade: 09<br>Highest Grade: 12                                                                                                                                                                              | PBS063237001126<br>Public Schools |
| AR143<br>ENE<br>4-6 mi<br>25856<br>Higher                      | Name: LOMA LINDA INFANT CENTER<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                                                                                                                                                                                      | DAY1039893<br>Daycare             |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                                    | EDR ID<br>Database                |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 144<br>NNW<br>4-6 mi<br>25950<br>Higher                        | Name: SIMPSON (SAMUEL W.) ELEMENTARY<br>NCES ID: 063237009183<br>Address: 1050 S. LILAC AVE.<br>RIALTO, CA 92376<br>Telephone: 9098207954<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade:05 | PBS063237009183<br>Public Schools |
| AQ145<br>ENE<br>4-6 mi<br>25951<br>Higher                      | Name: LOMA LINDA UNIV COMMUNITY HOSP<br>ID: 6070<br>Site Type: Hospital                                                                                                                                                                                                                                                 | HOS1001728<br>AHA Hospitals       |
| AQ146<br>ENE<br>4-6 mi<br>26019<br>Higher                      | Name: JERRY L PETTIS MEM VET HOSP<br>ID: 6071<br>Site Type: Hospital                                                                                                                                                                                                                                                    | HOS1001727<br>AHA Hospitals       |
| AS147<br>NNW<br>4-6 mi<br>26036<br>Higher                      | Name: MILOR CONTINUATION HIGH<br>NCES ID: 063237007338<br>Address: 266 W. RANDALL<br>RIALTO, CA 92376<br>Telephone: 9098207880<br>Local Code: Urban Fringe of Large City<br>School Type: Other<br>School Level: High<br>Lowest Grade:09<br>Highest Grade:12                                                             | PBS063237007338<br>Public Schools |
| AS148<br>NNW<br>4-6 mi<br>26036<br>Higher                      | Name: ZUPANIC (CHARLES) HIGH (ALTER.<br>NCES ID: 063237010019<br>Address: 266 W. RANDALL AVE.<br>RIALTO, CA 92376<br>Telephone: 9098207955<br>Local Code: Urban Fringe of Large City<br>School Type: Other<br>School Level: High<br>Lowest Grade:09<br>Highest Grade:12                                                 | PBS063237010019<br>Public Schools |
| 149<br>WSW<br>4-6 mi<br>26061<br>Lower                         | Name: RUBIDOUX CHILD CARE CENTER<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                                       | DAY1040299<br>Daycare             |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site          |                                                       | EDR ID<br>Database                |
|----------------------------------------------------------------|---------------|-------------------------------------------------------|-----------------------------------|
| AT150<br>NW<br>4-6 mi<br>26142<br>Higher                       | Name:         | BLOOMINGTON CHRISTIAN DAY SCHOOL                      | DAY1039703<br>Daycare             |
|                                                                | Address:      | Not Reported                                          |                                   |
|                                                                | City:         | Not Reported                                          |                                   |
|                                                                | State:        | CA                                                    |                                   |
|                                                                | Zip:          | Not Reported                                          |                                   |
| AT151<br>NW<br>4-6 mi<br>26167<br>Higher                       | Schoolid:     | 01612919                                              | PVTSCH01612919<br>Private Schools |
|                                                                | Address:      | 9904 BLOOMINGTON AVENUE                               |                                   |
|                                                                | County num:   | 6071                                                  |                                   |
|                                                                | State:        | CA                                                    |                                   |
|                                                                | Zip5:         | 92316                                                 |                                   |
|                                                                | Phone:        | 909-877-1239                                          |                                   |
|                                                                | Hi grde:      | Grade 12                                              |                                   |
|                                                                | Locale:       | Urban fringe of Large City                            |                                   |
|                                                                | School type:  | Regular elementary or secondary                       |                                   |
|                                                                | School level: | Combined                                              |                                   |
|                                                                | Affiliation:  | Christian (no specific denomination)                  |                                   |
|                                                                | Association:  | Association of Christian Schools International (ACSI) |                                   |
| AT152<br>NW<br>4-6 mi<br>26180<br>Higher                       | Name:         | BRIGHT BEGINNINGS PRESCHOOL OF RIALTO                 | DAY1039685<br>Daycare             |
|                                                                | Address:      | Not Reported                                          |                                   |
|                                                                | City:         | Not Reported                                          |                                   |
|                                                                | State:        | CA                                                    |                                   |
|                                                                | Zip:          | Not Reported                                          |                                   |
| 153<br>NW<br>4-6 mi<br>26354<br>Higher                         | Schoolid:     | K9300510                                              | PVTSCHK9300510<br>Private Schools |
|                                                                | Address:      | 960 W BLOOMINGTON AVE                                 |                                   |
|                                                                | County num:   | 6071                                                  |                                   |
|                                                                | State:        | CA                                                    |                                   |
|                                                                | Zip5:         | 92316                                                 |                                   |
|                                                                | Phone:        | 909-877-3399                                          |                                   |
|                                                                | Hi grde:      | Ungraded                                              |                                   |
|                                                                | Locale:       | Urban fringe of Large City                            |                                   |
|                                                                | School type:  | Early Childhood Program/Day Care Center               |                                   |
|                                                                | School level: | Combined                                              |                                   |
|                                                                | Affiliation:  | Nonsectarian                                          |                                   |
|                                                                | Association:  | Other School Association(s)                           |                                   |
| 154<br>WSW<br>4-6 mi<br>26426<br>Lower                         | Name:         | Mission Junior High School                            | GNS0207461<br>GNIS Schools        |
|                                                                | ID:           | 246009                                                |                                   |
|                                                                | Site Type:    | school                                                |                                   |
|                                                                | Latitude:     | 34.00400                                              |                                   |
|                                                                | Longitude:    | -117.40000                                            |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                           |                                                                                                                                                                                                                 | EDR ID<br>Database                |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| AU155<br>NNE<br>4-6 mi<br>26519<br>Higher                      | Name:<br>ID:<br>Site Type:<br>Latitude:<br>Longitude:                                                                          | Richardson Junior High School<br>248169<br>school<br>34.09300<br>-117.30000                                                                                                                                     | GNS0220500<br>GNIS Schools        |
| AU156<br>NNE<br>4-6 mi<br>26528<br>Higher                      | Name:<br>NCES ID:<br>Address:<br>Telephone:<br>Local Code:<br>School Type:<br>School Level:<br>Lowest Grade:<br>Highest Grade: | RICHARDSON PREP HI<br>063417005380<br>455 S. K ST.<br>SAN BERNARDINO, CA 92410<br>9093886438<br>Mid-size Central City<br>Regular Elementary and Secondary Schools<br>Middle<br>06<br>08                         | PBS063417005380<br>Public Schools |
| AV157<br>WSW<br>4-6 mi<br>26550<br>Lower                       | Name:<br>Address:<br>City:<br>State:<br>Zip:                                                                                   | JUSD/WEST ELEMENTARY PRESCHOOL/HEADSTART<br>Not Reported<br>Not Reported<br>CA<br>Not Reported                                                                                                                  | DAY1040258<br>Daycare             |
| AV158<br>WSW<br>4-6 mi<br>26587<br>Lower                       | Name:<br>NCES ID:<br>Address:<br>Telephone:<br>Local Code:<br>School Type:<br>School Level:<br>Lowest Grade:<br>Highest Grade: | WEST RIVERSIDE ELEMENTARY<br>061926002322<br>3972 RIVERVIEW DR.<br>RIVERSIDE, CA 92509<br>9092227759<br>Urban Fringe of Large City<br>Regular Elementary and Secondary Schools<br>Primary<br>Kindergarten<br>06 | PBS061926002322<br>Public Schools |
| AV159<br>WSW<br>4-6 mi<br>26635<br>Lower                       | Name:<br>ID:<br>Site Type:<br>Latitude:<br>Longitude:                                                                          | West Riverside School<br>251374<br>school<br>33.99800<br>-117.40000                                                                                                                                             | GNS0239713<br>GNIS Schools        |
| AW160<br>NNW<br>4-6 mi<br>26639<br>Higher                      | Name:<br>ID:<br>Site Type:<br>Latitude:<br>Longitude:                                                                          | Kelley School<br>244219<br>school<br>34.09400<br>-117.30000                                                                                                                                                     | GNS0196664<br>GNIS Schools        |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                               |                                          | EDR ID<br>Database                |
|----------------------------------------------------------------|------------------------------------|------------------------------------------|-----------------------------------|
| 161<br>NNE<br>4-6 mi<br>26658<br>Higher                        | Name:                              | Metcalf School                           | GNS0206261<br>GNIS Schools        |
|                                                                | ID:                                | 245833                                   |                                   |
|                                                                | Site Type:                         | school                                   |                                   |
|                                                                | Latitude:                          | 34.09400                                 |                                   |
|                                                                | Longitude:                         | -117.30000                               |                                   |
| AW162<br>North<br>4-6 mi<br>26727<br>Higher                    | Name:                              | KELLEY ELEMENTARY                        | PBS063237004993<br>Public Schools |
|                                                                | NCES ID:                           | 063237004993                             |                                   |
|                                                                | Address:                           | 380 S. MERIDIAN AVE.<br>RIALTO, CA 92376 |                                   |
|                                                                | Telephone:                         | 9098207925                               |                                   |
|                                                                | Local Code:                        | Mid-size Central City                    |                                   |
|                                                                | School Type:                       | Regular Elementary and Secondary Schools |                                   |
|                                                                | School Level:                      | Primary                                  |                                   |
|                                                                | Lowest Grade:                      | Kindergarten                             |                                   |
|                                                                | Highest Grade:                     | 05                                       |                                   |
| AX163<br>SSW<br>4-6 mi<br>26811<br>Higher                      | Name:                              | Alcott School                            | GNS0157759<br>GNIS Schools        |
|                                                                | ID:                                | 238486                                   |                                   |
|                                                                | Site Type:                         | school                                   |                                   |
|                                                                | Latitude:                          | 33.95400                                 |                                   |
|                                                                | Longitude:                         | -117.40000                               |                                   |
| AX164<br>SSW<br>4-6 mi<br>26925<br>Higher                      | Name:                              | ALCOTT ELEMENTARY                        | PBS063315005130<br>Public Schools |
|                                                                | NCES ID:                           | 063315005130                             |                                   |
|                                                                | Address:                           | 2433 CENTRAL AVE.<br>RIVERSIDE, CA 92506 |                                   |
|                                                                | Telephone:                         | 9097887451                               |                                   |
|                                                                | Local Code:                        | Mid-size Central City                    |                                   |
|                                                                | School Type:                       | Regular Elementary and Secondary Schools |                                   |
|                                                                | School Level:                      | Primary                                  |                                   |
|                                                                | Lowest Grade:                      | Kindergarten                             |                                   |
|                                                                | Highest Grade:                     | 06                                       |                                   |
| AR165<br>ENE<br>4-6 mi<br>26970<br>Higher                      | Provnum:                           | 055299                                   | SRNH055299<br>Nursing Homes       |
|                                                                | Street:                            | 25383 COLE STREET                        |                                   |
|                                                                | State:                             | CA                                       |                                   |
|                                                                | Phone:                             | 9097960235                               |                                   |
|                                                                | Num Beds:                          | 83                                       |                                   |
|                                                                | Occupied %:                        | 82                                       |                                   |
|                                                                | Owner Type:                        | For profit - Corporation                 |                                   |
|                                                                | Multi Nursing home ownership?:     | YES                                      |                                   |
|                                                                | Has Resident and Family Councils?: | BOTH                                     |                                   |
|                                                                | Name:                              | LINDA VALLEY CARE CENTER                 |                                   |
|                                                                | City:                              | LOMA LINDA                               |                                   |
|                                                                | Zipcode:                           | 92354                                    |                                   |
|                                                                | Last Insp:                         | 20010718                                 |                                   |
|                                                                | Num Residents:                     | 68                                       |                                   |
|                                                                | Description:                       | Participating in Medicare and Medicaid   |                                   |
|                                                                | Within Hosp?:                      | NO                                       |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site           |                                          | EDR ID<br>Database |
|----------------------------------------------------------------|----------------|------------------------------------------|--------------------|
| 166<br>NNE<br>4-6 mi<br>26988<br>Higher                        | Name:          | BARSTOW MIDDLE                           | PBS060402009719    |
|                                                                | NCES ID:       | 060402009719                             | Public Schools     |
|                                                                | Address:       | 500 SOUTH G ST.<br>BARSTOW, CA 92311     |                    |
|                                                                | Telephone:     | 7602556300                               |                    |
|                                                                | Local Code:    | Urban Fringe of Large City               |                    |
|                                                                | School Type:   | Regular Elementary and Secondary Schools |                    |
|                                                                | School Level:  | Middle                                   |                    |
|                                                                | Lowest Grade:  | 05                                       |                    |
|                                                                | Highest Grade: | 08                                       |                    |
| AY167<br>SSW<br>4-6 mi<br>27027<br>Higher                      | Name:          | FIRST BAPTIST DAY NURSERY                | DAY1040519         |
|                                                                | Address:       | Not Reported                             | Daycare            |
|                                                                | City:          | Not Reported                             |                    |
|                                                                | State:         | CA                                       |                    |
|                                                                | Zip:           | Not Reported                             |                    |
| AY168<br>SSW<br>4-6 mi<br>27121<br>Higher                      | Name:          | IMMANUEL LUTHERAN PRESCHOOL              | DAY1040523         |
|                                                                | Address:       | Not Reported                             | Daycare            |
|                                                                | City:          | Not Reported                             |                    |
|                                                                | State:         | CA                                       |                    |
|                                                                | Zip:           | Not Reported                             |                    |
| 169<br>SW<br>4-6 mi<br>27159<br>Lower                          | Name:          | GROWING PLACE, THE                       | DAY1040437         |
|                                                                | Address:       | Not Reported                             | Daycare            |
|                                                                | City:          | Not Reported                             |                    |
|                                                                | State:         | CA                                       |                    |
|                                                                | Zip:           | Not Reported                             |                    |
| AZ170<br>NNW<br>4-6 mi<br>27328<br>Higher                      | Name:          | BOYD ELEMENTARY                          | PBS063237004987    |
|                                                                | NCES ID:       | 063237004987                             | Public Schools     |
|                                                                | Address:       | 310 E. MERRILL ST.<br>RIALTO, CA 92376   |                    |
|                                                                | Telephone:     | 9098207929                               |                    |
|                                                                | Local Code:    | Urban Fringe of Large City               |                    |
|                                                                | School Type:   | Regular Elementary and Secondary Schools |                    |
|                                                                | School Level:  | Primary                                  |                    |
|                                                                | Lowest Grade:  | Kindergarten                             |                    |
|                                                                | Highest Grade: | 05                                       |                    |
| AZ171<br>NNW<br>4-6 mi<br>27549<br>Higher                      | Name:          | Boyd School                              | GNS0165404         |
|                                                                | ID:            | 239632                                   | GNIS Schools       |
|                                                                | Site Type:     | school                                   |                    |
|                                                                | Latitude:      | 34.09300                                 |                    |
|                                                                | Longitude:     | -117.40000                               |                    |
| BA172<br>SSW<br>4-6 mi<br>27570<br>Higher                      | Name:          | RIVERSIDE TEMPLE BETH EL NURSERY SCHOOL  | DAY1040513         |
|                                                                | Address:       | Not Reported                             | Daycare            |
|                                                                | City:          | Not Reported                             |                    |
|                                                                | State:         | CA                                       |                    |
|                                                                | Zip:           | Not Reported                             |                    |

## MAP FINDINGS

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

Site

EDR ID  
Database

BA173 PVTSCHA9500832  
SSW Private Schools

4-6 mi  
27570  
Higher

Schoolid: A9500832  
Address: 2675 CENTRAL AVE  
County num: 6065  
State: CA  
Zip5: 92506  
Phone: 909-682-7282  
Hi grde: Kindergarten  
Locale: Mid-size Central City  
School type: Alternative  
School level: Elementary  
Affiliation: Nonsectarian  
Association: National Association for the Education of Young Children (NAEYC)

Name: TEMPLE BETH EL CHILD DEV CENT  
City: RIVERSIDE  
County: RIVERSIDE  
Fips: 6  
Zip4: Not Reported  
Low grade: Prekindergarten  
Gender: Coed

BB174  
WSW  
4-6 mi  
27716  
Lower

SRNH055361  
Nursing Homes

Provnum: 055361  
Street: 3662 PACIFIC AVENUE  
State: CA  
Phone: 9096824833  
Num Beds: 49  
Occupied %: 90  
Owner Type: For profit - Corporation  
Multi Nursing home ownership?: YES  
Has Resident and Family Councils?: RESIDENT

Name: VISTA PACIFICA CONVALESCENT  
City: RIVERSIDE  
Zipcode: 92509  
Last Insp: 20020619  
Num Residents: 44  
Description: Participating in Medicare and Medicaid  
Within Hosp?: NO

BB175  
WSW  
4-6 mi  
27732  
Lower

SRNH05A264  
Nursing Homes

Provnum: 05A264  
Street: 3674 PACIFIC AVENUE  
State: CA  
Phone: 9096824833  
Num Beds: 108  
Occupied %: 65  
Owner Type: For profit - Corporation  
Multi Nursing home ownership?: YES  
Has Resident and Family Councils?: BOTH

Name: VISTA PACIFICA CENTER  
City: RIVERSIDE  
Zipcode: 92509  
Last Insp: 20020502  
Num Residents: 70  
Description: Participating in Medicaid Only  
Within Hosp?: NO

BC176  
NNE  
4-6 mi  
27840  
Higher

Name: SAN BERNARDINO CITY SCHOOL DIST.-ALLDRED CHILD DE  
Address: Not Reported  
City: Not Reported  
State: CA  
Zip: Not Reported

DAY1039556  
Daycare

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                            | EDR ID<br>Database                |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 177<br>SSE<br>4-6 mi<br>27957<br>Higher                        | Name: SENECA ELEMENTARY<br>NCES ID: 062580001009<br>Address: 11615 WORDSWORTH<br>MORENO VALLEY, CA 92557<br>Telephone: 9096974350<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade:06 | PBS062580001009<br>Public Schools |
| BA178<br>SSW<br>4-6 mi<br>28014<br>Higher                      | Name: POLYTECHNIC HIGH<br>NCES ID: 063315005156<br>Address: 5450 VICTORIA AVE.<br>RIVERSIDE, CA 92506<br>Telephone: 9097887203<br>Local Code: Mid-size Central City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: High<br>Lowest Grade: 09<br>Highest Grade:12                      | PBS063315005156<br>Public Schools |
| 179<br>WNW<br>4-6 mi<br>28038<br>Higher                        | Name: HARRIS (RUTH O.) MIDDLE<br>NCES ID: 060939002599<br>Address: 11150 ALDER AVE.<br>BLOOMINGTON, CA 92316<br>Telephone: 9098766300<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Middle<br>Lowest Grade: 07<br>Highest Grade:08        | PBS060939002599<br>Public Schools |
| 180<br>WNW<br>4-6 mi<br>28036<br>Higher                        | Name: Bloomington High School<br>ID: 239486<br>Site Type: school<br>Latitude: 34.05800<br>Longitude: -117.40000                                                                                                                                                                                                 | GNS0164289<br>GNIS Schools        |
| BC181<br>NNE<br>4-6 mi<br>28196<br>Higher                      | Name: LYTLE CREEK ELEMENTARY<br>NCES ID: 063417005367<br>Address: 275 SOUTH K ST.<br>SAN BERNARDINO, CA 92410<br>Telephone: 9093886382<br>Local Code: Mid-size Central City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade:06 | PBS063417005367<br>Public Schools |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site           |                                          | EDR ID<br>Database                |
|----------------------------------------------------------------|----------------|------------------------------------------|-----------------------------------|
| 182<br>NNW<br>4-6 mi<br>28229<br>Higher                        | Name:          | RIALTO CHILD DEVELOPMENT CENTER          | DAY1039576<br>Daycare             |
|                                                                | Address:       | Not Reported                             |                                   |
|                                                                | City:          | Not Reported                             |                                   |
|                                                                | State:         | CA                                       |                                   |
|                                                                | Zip:           | Not Reported                             |                                   |
| BC183<br>NNE<br>4-6 mi<br>28268<br>Higher                      | Name:          | Lytle Creek School                       | GNS0203318<br>GNIS Schools        |
|                                                                | ID:            | 245329                                   |                                   |
|                                                                | Site Type:     | school                                   |                                   |
|                                                                | Latitude:      | 34.09700                                 |                                   |
|                                                                | Longitude:     | -117.30000                               |                                   |
| BA184<br>SSW<br>4-6 mi<br>28292<br>Higher                      | Name:          | Polytechnic High School                  | GNS0217286<br>GNIS Schools        |
|                                                                | ID:            | 247667                                   |                                   |
|                                                                | Site Type:     | school                                   |                                   |
|                                                                | Latitude:      | 33.95100                                 |                                   |
|                                                                | Longitude:     | -117.40000                               |                                   |
| BD185<br>SW<br>4-6 mi<br>28323<br>Lower                        | Name:          | Magnolia School                          | GNS0203608<br>GNIS Schools        |
|                                                                | ID:            | 245375                                   |                                   |
|                                                                | Site Type:     | school                                   |                                   |
|                                                                | Latitude:      | 33.96200                                 |                                   |
|                                                                | Longitude:     | -117.40000                               |                                   |
| BE186<br>SSW<br>4-6 mi<br>28414<br>Lower                       | Name:          | Carden School                            | GNS0169145<br>GNIS Schools        |
|                                                                | ID:            | 240235                                   |                                   |
|                                                                | Site Type:     | school                                   |                                   |
|                                                                | Latitude:      | 33.95700                                 |                                   |
|                                                                | Longitude:     | -117.40000                               |                                   |
| 187<br>WSW<br>4-6 mi<br>28465<br>Lower                         | Name:          | STEPS COMMUNITY DAY                      | PBS061926007211<br>Public Schools |
|                                                                | NCES ID:       | 061926007211                             |                                   |
|                                                                | Address:       | 4041 PACIFIC AVE.<br>RIVERSIDE, CA 92509 |                                   |
|                                                                | Telephone:     | 9092227739                               |                                   |
|                                                                | Local Code:    | Urban Fringe of Large City               |                                   |
|                                                                | School Type:   | Other                                    |                                   |
|                                                                | School Level:  | High                                     |                                   |
|                                                                | Lowest Grade:  | 07                                       |                                   |
|                                                                | Highest Grade: | 12                                       |                                   |

## MAP FINDINGS

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

Site

EDR ID  
Database

BE188 PVTSCH00087321  
SSW Private Schools

4-6 mi  
28599  
Lower

Schoolid: 00087321  
Address: 6200 PACHAPPA DR  
County num: 6065  
State: CA  
Zip5: 92506  
Phone: 909-682-3380  
Hi grde: Grade 2  
Locale: Mid-size Central City  
School type: Montessori  
School level: Elementary  
Affiliation: Nonsectarian  
Association: No Membership Association

Name: MONTESSORI ACADEMY  
City: RIVERSIDE  
County: RIVERSIDE  
Fips: 6  
Zip4: Not Reported  
Low grade: Prekindergarten  
Gender: Coed

BF189  
NNE  
4-6 mi  
28645  
Higher

Name: BURBANK ELEMENTARY  
NCES ID: 063417005350  
Address: 198 W. MILL ST.  
SAN BERNARDINO, CA 92408  
Telephone: 9093886324  
Local Code: Mid-size Central City  
School Type: Regular Elementary and Secondary Schools  
School Level: Primary  
Lowest Grade: Kindergarten  
Highest Grade: 06

PBS063417005350  
Public Schools

BD190  
SW  
4-6 mi  
28688  
Lower

Name: ANZA CASTLE PRESCHOOL  
Address: Not Reported  
City: Not Reported  
State: CA  
Zip: Not Reported

DAY1040451  
Daycare

BD191  
SW  
4-6 mi  
28719  
Lower

Name: MAGNOLIA ELEMENTARY SCHOOL  
Address: Not Reported  
City: Not Reported  
State: CA  
Zip: Not Reported

DAY1040461  
Daycare

BE192  
SSW  
4-6 mi  
28731  
Lower

Name: MONTESSORI ACADEMY  
Address: Not Reported  
City: Not Reported  
State: CA  
Zip: Not Reported

DAY1040503  
Daycare

## MAP FINDINGS

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

Site

EDR ID  
Database

|        |                |                                          |                 |
|--------|----------------|------------------------------------------|-----------------|
| BD193  | Name:          | MAGNOLIA ELEMENTARY                      | PBS063315005151 |
| SW     | NCES ID:       | 063315005151                             | Public Schools  |
| 4-6 mi | Address:       | 3975 MAPLEWOOD PL.                       |                 |
| 28738  |                | RIVERSIDE, CA 92506                      |                 |
| Lower  | Telephone:     | 9097887274                               |                 |
|        | Local Code:    | Mid-size Central City                    |                 |
|        | School Type:   | Regular Elementary and Secondary Schools |                 |
|        | School Level:  | Primary                                  |                 |
|        | Lowest Grade:  | Kindergarten                             |                 |
|        | Highest Grade: | 06                                       |                 |

|        |               |                                      |                 |
|--------|---------------|--------------------------------------|-----------------|
| BD194  |               |                                      | PVTSCHA9700651  |
| SW     |               |                                      | Private Schools |
| 4-6 mi |               |                                      |                 |
| 28740  | Schoolid:     | A9700651                             |                 |
| Lower  | Address:      | 5939 MAGNOLIA AVE                    |                 |
|        | County num:   | 6065                                 |                 |
|        | State:        | CA                                   |                 |
|        | Zip5:         | 92506                                |                 |
|        | Phone:        | 909-781-9455                         |                 |
|        | Hi grde:      | Grade 8                              |                 |
|        | Locale:       | Mid-size Central City                |                 |
|        | School type:  | Regular elementary or secondary      |                 |
|        | School level: | Elementary                           |                 |
|        | Affiliation:  | Wisconsin Evangelical Lutheran Synod |                 |
|        | Association:  | No Membership Association            |                 |
|        | Name:         | ST PAUL LUTHERAN SCHOOL              |                 |
|        | City:         | RIVERSIDE                            |                 |
|        | County:       | RIVERSIDE                            |                 |
|        | Fips:         | 6                                    |                 |
|        | Zip4:         | Not Reported                         |                 |
|        | Low grade:    | Kindergarten                         |                 |
|        | Gender:       | Coed                                 |                 |

|        |            |             |              |
|--------|------------|-------------|--------------|
| 195    | Name:      | Mill School | GNS0206935   |
| NE     | ID:        | 245918      | GNIS Schools |
| 4-6 mi | Site Type: | school      |              |
| 28773  | Latitude:  | 34.08600    |              |
| Higher | Longitude: | -117.30000  |              |

|        |          |              |            |
|--------|----------|--------------|------------|
| 196    | Name:    | JOYFUL NOISE | DAY1040422 |
| SW     | Address: | Not Reported | Daycare    |
| 4-6 mi | City:    | Not Reported |            |
| 28779  | State:   | CA           |            |
| Lower  | Zip:     | Not Reported |            |

|        |            |                |              |
|--------|------------|----------------|--------------|
| BF197  | Name:      | Burbank School | GNS0167045   |
| NNE    | ID:        | 239841         | GNIS Schools |
| 4-6 mi | Site Type: | school         |              |
| 28896  | Latitude:  | 34.09300       |              |
| Higher | Longitude: | -117.30000     |              |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                                           | EDR ID<br>Database                |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| BG198<br>SE<br>4-6 mi<br>29100<br>Higher                       | Name: HIDDEN SPRINGS ELEMENTARY<br>NCES ID: 062580009588<br>Address: 9801 HIDDEN SPRINGS DR.<br>MORENO VALLEY, CA 92557<br>Telephone: 9094855895<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade:06 | PBS062580009588<br>Public Schools |
| BD199<br>SW<br>4-6 mi<br>29162<br>Lower                        | Name: Knollwood Hospital<br>ID: 1660843<br>Site Type: hospital<br>Latitude: 33.96200<br>Longitude: -117.40000                                                                                                                                                                                                                  | GNS0197547<br>GNIS Hospitals      |
| BH200<br>SW<br>4-6 mi<br>29291<br>Lower                        | Name: KNOLLWOOD PSYCH & CHEMICAL DEPEND CTR<br>ID: 054130<br>Address: 5900 BROCKTON AVE<br>City: RIVERSIDE<br>Zip: 92506<br>State: CA<br>Telephone: 9092758400                                                                                                                                                                 | HOSP000780<br>Medical Centers     |
| BG201<br>SE<br>4-6 mi<br>29371<br>Higher                       | Name: VISTA HEIGHTS (MIDDLE)<br>NCES ID: 062580009159<br>Address: 23049 OLD LAKE DR.<br>MORENO VALLEY, CA 92557<br>Telephone: 9094855816<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Middle<br>Lowest Grade: 06<br>Highest Grade:08                    | PBS062580009159<br>Public Schools |
| 202<br>NNW<br>4-6 mi<br>29424<br>Higher                        | Name: CURTIS (SAM V.) ELEMENTARY<br>NCES ID: 063237007622<br>Address: 451 S. LILAC AVE.<br>RIALTO, CA 92376<br>Telephone: 9094217366<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade:05             | PBS063237007622<br>Public Schools |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                                                                                                                                            | EDR ID<br>Database                |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 203<br>SW<br>4-6 mi<br>29434<br>Lower                          | Schoolid: 112163<br>Name: CALIFORNIA SOUTHERN LAW SCHOOL<br>Address: 3775 ELIZABETH ST<br>City: RIVERSIDE<br>State: CA<br>Telephone: 7146836760<br>Sector: 4-year private, for-profit<br>Level: Four or more years<br>Control: Private, for-profit<br>Affiliation: Private, for-profit<br>Has Hospital?: 2<br>Open to Pub?: Institution is open to the public<br>Active?: Active - institution active and not a new institution | COL112163<br>Colleges             |
| 204<br>SW<br>4-6 mi<br>29466<br>Lower                          | Name: Pachappa School<br>ID: 247062<br>Site Type: school<br>Latitude: 33.95600<br>Longitude: -117.40000                                                                                                                                                                                                                                                                                                                         | GNS0213546<br>GNIS Schools        |
| 205<br>NW<br>4-6 mi<br>29497<br>Higher                         | Name: LEWIS (MARY B.) ELEMENTARY<br>NCES ID: 060939000952<br>Address: 18040 SAN BERNARDINO AVE.<br>BLOOMINGTON, CA 92316<br>Telephone: 9098764236<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade: 06                                                                                                | PBS060939000952<br>Public Schools |
| BI206<br>West<br>4-6 mi<br>29535<br>Lower                      | Name: RIO VISTA HIGH (CONT.)<br>NCES ID: 061926000963<br>Address: 6836 34TH ST.<br>RIVERSIDE, CA 92509<br>Telephone: 9093602818<br>Local Code: Urban Fringe of Large City<br>School Type: Other<br>School Level: High<br>Lowest Grade: 09<br>Highest Grade: 12                                                                                                                                                                  | PBS061926000963<br>Public Schools |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                               |                                          | EDR ID<br>Database                |
|----------------------------------------------------------------|------------------------------------|------------------------------------------|-----------------------------------|
| BI207<br>West<br>4-6 mi<br>29535<br>Lower                      | Name:                              | NUEVA VISTA CONTINUATION HIGH            | PBS061926002315<br>Public Schools |
|                                                                | NCES ID:                           | 061926002315                             |                                   |
|                                                                | Address:                           | 6836 34TH ST.<br>RIVERSIDE, CA 92509     |                                   |
|                                                                | Telephone:                         | 9093602802                               |                                   |
|                                                                | Local Code:                        | Urban Fringe of Large City               |                                   |
|                                                                | School Type:                       | Other                                    |                                   |
|                                                                | School Level:                      | High                                     |                                   |
|                                                                | Lowest Grade:                      | 09                                       |                                   |
|                                                                | Highest Grade:                     | 12                                       |                                   |
| BJ208<br>NW<br>4-6 mi<br>29579<br>Higher                       | Name:                              | Smith School                             | GNS0228618<br>GNIS Schools        |
|                                                                | ID:                                | 249601                                   |                                   |
|                                                                | Site Type:                         | school                                   |                                   |
|                                                                | Latitude:                          | 34.08100                                 |                                   |
|                                                                | Longitude:                         | -117.40000                               |                                   |
| BJ209<br>NW<br>4-6 mi<br>29692<br>Higher                       | Name:                              | SMITH (GERALD A.) ELEMENTARY             | PBS060939008127<br>Public Schools |
|                                                                | NCES ID:                           | 060939008127                             |                                   |
|                                                                | Address:                           | 9551 LINDEN ST.<br>BLOOMINGTON, CA 92316 |                                   |
|                                                                | Telephone:                         | 9098764250                               |                                   |
|                                                                | Local Code:                        | Urban Fringe of Large City               |                                   |
|                                                                | School Type:                       | Regular Elementary and Secondary Schools |                                   |
|                                                                | School Level:                      | Primary                                  |                                   |
|                                                                | Lowest Grade:                      | Kindergarten                             |                                   |
|                                                                | Highest Grade:                     | 06                                       |                                   |
| BH210<br>SW<br>4-6 mi<br>29720<br>Lower                        | Name:                              | FIRST CHRISTIAN NURSERY SCHOOL           | DAY1040472<br>Daycare             |
|                                                                | Address:                           | Not Reported                             |                                   |
|                                                                | City:                              | Not Reported                             |                                   |
|                                                                | State:                             | CA                                       |                                   |
|                                                                | Zip:                               | Not Reported                             |                                   |
| BH211<br>SW<br>4-6 mi<br>29769<br>Lower                        | Provnum:                           | 055409                                   | SRNH055409<br>Nursing Homes       |
|                                                                | Street:                            | 4070 JURUPA AVENUE                       |                                   |
|                                                                | State:                             | CA                                       |                                   |
|                                                                | Phone:                             | 9096822522                               |                                   |
|                                                                | Num Beds:                          | 162                                      |                                   |
|                                                                | Occupied %:                        | 88                                       |                                   |
|                                                                | Owner Type:                        | For profit - Corporation                 |                                   |
|                                                                | Multi Nursing home ownership?:     | YES                                      |                                   |
|                                                                | Has Resident and Family Councils?: | RESIDENT                                 |                                   |
| BK212<br>WSW<br>4-6 mi<br>29831<br>Lower                       | Name:                              | ST. JOHN'S CHILD CARE CENTER             | DAY1040251<br>Daycare             |
|                                                                | Address:                           | Not Reported                             |                                   |
|                                                                | City:                              | Not Reported                             |                                   |
|                                                                | State:                             | CA                                       |                                   |
|                                                                | Zip:                               | Not Reported                             |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                             | EDR ID<br>Database                |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| BK213<br>WSW<br>4-6 mi<br>29829<br>Lower                       | Name: RUSTIC LANE ELEMENTARY<br>NCES ID: 061926002319<br>Address: 6420 RUSTIC LANE<br>RIVERSIDE, CA 92509<br>Telephone: 9092227837<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade:06 | PBS061926002319<br>Public Schools |
| BL214<br>NNW<br>4-6 mi<br>29849<br>Higher                      | Name: CASEY ELEMENTARY<br>NCES ID: 063237004988<br>Address: 219 N. EUCALYPTUS ST.<br>RIALTO, CA 92376<br>Telephone: 9098207904<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade:05     | PBS063237004988<br>Public Schools |
| BL215<br>NNW<br>4-6 mi<br>29886<br>Higher                      | Name: CASEY ELEMENTARY SCHOOL-ROOM E-4<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                          | DAY1039516<br>Daycare             |
| BK216<br>WSW<br>4-6 mi<br>29993<br>Lower                       | Name: Rubidoux High School<br>ID: 248452<br>Site Type: school<br>Latitude: 33.99900<br>Longitude: -117.40000                                                                                                                                                                                                     | GNS0222312<br>GNIS Schools        |
| 217<br>SSW<br>4-6 mi<br>30073<br>Higher                        | Name: VICTORIA ELEMENTARY<br>NCES ID: 063315005161<br>Address: 2910 ARLINGTON AVE.<br>RIVERSIDE, CA 92506<br>Telephone: 9097887441<br>Local Code: Mid-size Central City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade:06      | PBS063315005161<br>Public Schools |
| 218<br>NE<br>4-6 mi<br>30119<br>Higher                         | Name: YMCA/VICTORIA SCHOOL<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                                      | DAY1039708<br>Daycare             |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site           |                                                                  | EDR ID<br>Database                |
|----------------------------------------------------------------|----------------|------------------------------------------------------------------|-----------------------------------|
| BH219<br>SW<br>4-6 mi<br>30123<br>Lower                        | Name:          | GROWING PLACE, TOO                                               | DAY1040471<br>Daycare             |
|                                                                | Address:       | Not Reported                                                     |                                   |
|                                                                | City:          | Not Reported                                                     |                                   |
|                                                                | State:         | CA                                                               |                                   |
|                                                                | Zip:           | Not Reported                                                     |                                   |
| BM220<br>WSW<br>4-6 mi<br>30177<br>Lower                       | Name:          | JUSD/PACIFIC AVENUE ELEMENTARY                                   | DAY1040293<br>Daycare             |
|                                                                | Address:       | Not Reported                                                     |                                   |
|                                                                | City:          | Not Reported                                                     |                                   |
|                                                                | State:         | CA                                                               |                                   |
|                                                                | Zip:           | Not Reported                                                     |                                   |
| BN221<br>WSW<br>4-6 mi<br>30208<br>Lower                       | Name:          | Rustic Lane School                                               | GNS0222515<br>GNIS Schools        |
|                                                                | ID:            | 248483                                                           |                                   |
|                                                                | Site Type:     | school                                                           |                                   |
|                                                                | Latitude:      | 34.00400                                                         |                                   |
|                                                                | Longitude:     | -117.40000                                                       |                                   |
| BH222<br>SW<br>4-6 mi<br>30211<br>Lower                        | Schoolid:      | A9100885                                                         | PVTSCHA9100885<br>Private Schools |
|                                                                | Address:       | 4259 JURUPA AVENUE                                               |                                   |
|                                                                | County num:    | 6065                                                             |                                   |
|                                                                | State:         | CA                                                               |                                   |
|                                                                | Zip5:          | 92506                                                            |                                   |
|                                                                | Phone:         | 909-686-8134                                                     |                                   |
|                                                                | Hi grde:       | Grade 2                                                          |                                   |
|                                                                | Locale:        | Mid-size Central City                                            |                                   |
|                                                                | School type:   | Regular elementary or secondary                                  |                                   |
|                                                                | School level:  | Elementary                                                       |                                   |
|                                                                | Affiliation:   | Nonsectarian                                                     |                                   |
|                                                                | Association:   | National Association for the Education of Young Children (NAEYC) |                                   |
| BM223<br>WSW<br>4-6 mi<br>30216<br>Lower                       | Name:          | PACIFIC AVENUE ELEMENTARY                                        | PBS061926002316<br>Public Schools |
|                                                                | NCES ID:       | 061926002316                                                     |                                   |
|                                                                | Address:       | 6110 45TH ST.<br>RIVERSIDE, CA 92509                             |                                   |
|                                                                | Telephone:     | 9092227877                                                       |                                   |
|                                                                | Local Code:    | Urban Fringe of Large City                                       |                                   |
|                                                                | School Type:   | Regular Elementary and Secondary Schools                         |                                   |
|                                                                | School Level:  | Primary                                                          |                                   |
|                                                                | Lowest Grade:  | Kindergarten                                                     |                                   |
|                                                                | Highest Grade: | 06                                                               |                                   |
| BN224<br>WSW<br>4-6 mi<br>30249<br>Lower                       | Name:          | JUSD/RUSTIC LANE ELEMENTARYSTATE PRESCHOOL                       | DAY1040228<br>Daycare             |
|                                                                | Address:       | Not Reported                                                     |                                   |
|                                                                | City:          | Not Reported                                                     |                                   |
|                                                                | State:         | CA                                                               |                                   |
|                                                                | Zip:           | Not Reported                                                     |                                   |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                     | EDR ID<br>Database                |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| BL225<br>NNW<br>4-6 mi<br>30382<br>Higher                      | Name: Casey School<br>ID: 240312<br>Site Type: school<br>Latitude: 34.10400<br>Longitude: -117.40000                                                                                                                                                                                     | GNS0169607<br>GNIS Schools        |
| BM226<br>WSW<br>4-6 mi<br>30386<br>Lower                       | Name: Pacific Avenue School<br>ID: 247064<br>Site Type: school<br>Latitude: 33.99300<br>Longitude: -117.40000                                                                                                                                                                            | GNS0213572<br>GNIS Schools        |
| 227<br>WSW<br>4-6 mi<br>30542<br>Lower                         | Name: RUBIDOUX HIGH<br>NCES ID: 061926002318<br>Address: 4250 OPAL ST.<br>RIVERSIDE, CA 92509<br>Telephone: 9092227821<br>Local Code: Urban Fringe of Large City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: High<br>Lowest Grade: 09<br>Highest Grade: 12 | PBS061926002318<br>Public Schools |
| BO228<br>SSW<br>4-6 mi<br>30618<br>Lower                       | Name: YMCA OF RIVERSIDE - HOPE LUTHERAN CHURCH<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                          | DAY1040548<br>Daycare             |
| NA<br>NE<br>4-6 mi<br>30677<br>NA                              | Name1: Norton Air Force Base (Closed)<br>Name2: Not Reported<br>Name3: Not Reported<br>Feature1: Air Force DOD<br>Feature2: Not Reported<br>Feature3: Not Reported<br>URL: Not Reported                                                                                                  | CUSA043109<br>FED_LAND            |
| 229<br>NNW<br>4-6 mi<br>30718<br>Higher                        | Name: PEPPERCREEK PRESCHOOL<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                             | DAY1039496<br>Daycare             |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EDR ID<br>Database                |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| BP230<br>South<br>4-6 mi<br>30777<br>Higher                    | Name: CASTLE VIEW ELEMENTARY<br>NCES ID: 063315005133<br>Address: 6201 SHAKER DR.<br>RIVERSIDE, CA 92506<br>Telephone: 9097887460<br>Local Code: Mid-size Central City<br>School Type: Regular Elementary and Secondary Schools<br>School Level: Primary<br>Lowest Grade: Kindergarten<br>Highest Grade:06                                                                                                                                                           | PBS063315005133<br>Public Schools |
| 231<br>SW<br>4-6 mi<br>30786<br>Lower                          | Name: GROWING PLACE, TOO, THE<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                                                                                                                                                                                       | DAY1040466<br>Daycare             |
| BM232<br>WSW<br>4-6 mi<br>30823<br>Lower                       | Name: TREE HOUSE PRE-SCHOOL, THE<br>Address: Not Reported<br>City: Not Reported<br>State: CA<br>Zip: Not Reported                                                                                                                                                                                                                                                                                                                                                    | DAY1040309<br>Daycare             |
| 233<br>NNE<br>4-6 mi<br>30837<br>Higher                        | Schoolid: 427210<br>Name: SECURITY OFFICERS TRAINING ACADEMY<br>Address: 136 S ARROWHEAD AVE<br>City: SAN BERNARDINO<br>State: CA<br>Telephone: 9098883143<br>Sector: Less than 2-year private, for-profit<br>Level: Less than 2 years (below associate)<br>Control: Private, for-profit<br>Affiliation: Private, for-profit<br>Has Hospital?: 2<br>Open to Pub?: Insitution is open to the public<br>Active?: Active - institution active and not a new institution | COL427210<br>Colleges             |

## MAP FINDINGS

| Map ID<br>Direction<br>Distance<br>Distance (ft.)<br>Elevation | Site           |                                                       | EDR ID<br>Database |
|----------------------------------------------------------------|----------------|-------------------------------------------------------|--------------------|
| 234<br>SE<br>4-6 mi<br>30925<br>Higher                         | Name:          | CANYON SPRINGS HIGH                                   | PBS062580008906    |
|                                                                | NCES ID:       | 062580008906                                          | Public Schools     |
|                                                                | Address:       | 23100 COUGAR CANYON DR.<br>MORENO VALLEY, CA 92557    |                    |
|                                                                | Telephone:     | 9094855707                                            |                    |
|                                                                | Local Code:    | Urban Fringe of Large City                            |                    |
|                                                                | School Type:   | Regular Elementary and Secondary Schools              |                    |
|                                                                | School Level:  | High                                                  |                    |
|                                                                | Lowest Grade:  | 09                                                    |                    |
|                                                                | Highest Grade: | 12                                                    |                    |
| BO235<br>SSW<br>4-6 mi<br>31044<br>Lower                       | Name:          | Victoria School                                       | GNS0237855         |
|                                                                | ID:            | 251028                                                | GNIS Schools       |
|                                                                | Site Type:     | school                                                |                    |
|                                                                | Latitude:      | 33.94500                                              |                    |
|                                                                | Longitude:     | -117.40000                                            |                    |
| BP236<br>South<br>4-6 mi<br>31170<br>Higher                    | Name:          | Castle View School                                    | GNS0169778         |
|                                                                | ID:            | 240345                                                | GNIS Schools       |
|                                                                | Site Type:     | school                                                |                    |
|                                                                | Latitude:      | 33.93800                                              |                    |
|                                                                | Longitude:     | -117.30000                                            |                    |
| 237<br>SW<br>4-6 mi<br>31249<br>Lower                          | Schoolid:      | 124964                                                | COL124964          |
|                                                                | Name:          | VALLEY HYPNOSIS CENTER                                | Colleges           |
|                                                                | Address:       | 3705 SUNNYSIDE DR                                     |                    |
|                                                                | City:          | RIVERSIDE                                             |                    |
|                                                                | State:         | CA                                                    |                    |
|                                                                | Telephone:     | 9097810282                                            | Zip: 92506         |
|                                                                | Sector:        | Less than 2-year private, for-profit                  |                    |
|                                                                | Level:         | Less than 2 years (below associate)                   |                    |
|                                                                | Control:       | Private, for-profit                                   |                    |
|                                                                | Affiliation:   | Private, for-profit                                   |                    |
|                                                                | Has Hospital?: | 2                                                     |                    |
|                                                                | Open to Pub?:  | Insitution is open to the public                      |                    |
|                                                                | Active?:       | Active - institution active and not a new institution |                    |
| BQ238<br>NW<br>4-6 mi<br>31300<br>Higher                       | Name:          | Lewis School                                          | GNS0199713         |
|                                                                | ID:            | 244768                                                | GNIS Schools       |
|                                                                | Site Type:     | school                                                |                    |
|                                                                | Latitude:      | 34.07800                                              |                    |
|                                                                | Longitude:     | -117.40000                                            |                    |

## MAP FINDINGS

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation

Site

EDR ID  
Database

|        |                                    |                             |                |                                        |               |
|--------|------------------------------------|-----------------------------|----------------|----------------------------------------|---------------|
| BQ239  |                                    |                             |                |                                        | SRNH055106    |
| NW     |                                    |                             |                |                                        | Nursing Homes |
| 4-6 mi |                                    |                             |                |                                        |               |
| 31403  | Provnum:                           | 055106                      | Name:          | CASA MARIA CONVALESCENT HOSPITAL       |               |
| Higher | Street:                            | 17933 SAN BERNARDINO AVENUE | City:          | FONTANA                                |               |
|        | State:                             | CA                          | Zipcode:       | 92335                                  |               |
|        | Phone:                             | 9098771555                  | Last Insp:     | 20010402                               |               |
|        | Num Beds:                          | 57                          | Num Residents: | 56                                     |               |
|        | Occupied %:                        | 98                          | Description:   | Participating in Medicare and Medicaid |               |
|        | Owner Type:                        | For profit - Corporation    | Within Hosp?:  | NO                                     |               |
|        | Multi Nursing home ownership?:     | YES                         |                |                                        |               |
|        | Has Resident and Family Councils?: | BOTH                        |                |                                        |               |

|        |                |                                          |                 |
|--------|----------------|------------------------------------------|-----------------|
| 240    | Name:          | BRYN MAWR ELEMENTARY                     | PBS063207002617 |
| ENE    | NCES ID:       | 063207002617                             | Public Schools  |
| 4-6 mi | Address:       | 11680 WHITTIER AVE.                      |                 |
| 31454  |                | LOMA LINDA, CA 92354                     |                 |
| Higher | Telephone:     | 9094785650                               |                 |
|        | Local Code:    | Urban Fringe of Large City               |                 |
|        | School Type:   | Regular Elementary and Secondary Schools |                 |
|        | School Level:  | Primary                                  |                 |
|        | Lowest Grade:  | Kindergarten                             |                 |
|        | Highest Grade: | 06                                       |                 |

|        |            |              |              |
|--------|------------|--------------|--------------|
| 241    | Name:      | Watts School | GNS0239055   |
| NNW    | ID:        | 251264       | GNIS Schools |
| 4-6 mi | Site Type: | school       |              |
| 31566  | Latitude:  | 34.10200     |              |
| Higher | Longitude: | -117.40000   |              |

|        |               |                                                       |                 |
|--------|---------------|-------------------------------------------------------|-----------------|
| 242    |               |                                                       | PVTSCH00093459  |
| SSW    |               |                                                       | Private Schools |
| 4-6 mi |               |                                                       |                 |
| 31591  | Schoolid:     | 00093459                                              | Name:           |
| Lower  | Address:      | 3612 ARLINGTON AVENUE                                 | City:           |
|        | County num:   | 6065                                                  | County:         |
|        | State:        | CA                                                    | Fips:           |
|        | Zip5:         | 92506                                                 | Zip4:           |
|        | Phone:        | 909-686-1818                                          | Low grade:      |
|        | Hi grde:      | Grade 6                                               |                 |
|        | Locale:       | Mid-size Central City                                 | Gender:         |
|        | School type:  | Regular elementary or secondary                       |                 |
|        | School level: | Elementary                                            |                 |
|        | Affiliation:  | Christian (no specific denomination)                  |                 |
|        | Association:  | Association of Christian Schools International (ACSI) |                 |

## RECORDS SEARCHED/DATA CURRENCY TRACKING

### Census

Source: U.S. Census Bureau

Telephone: 301-457-4100

2000 U.S. Census data was used to estimate residential population following these EPA guidelines:

*"Census data are presented by Census tract. If your circle covers only a portion of the tract, you should develop an estimate for that portion...Determine the population density per square mile (total population of the Census tract divided by the number of square miles in the tract) and apply that density figure to the number of square miles within your circle."*

### FED LAND: Federal Lands

Source: USGS

Telephone: 888-275-8747

Federal lands data. Includes data from several Federal land management agencies, including Fish and Wildlife Service, Bureau of Land Management, National Park Service, and Forest Service. Includes National Parks, Forests, Monuments; . Wildlife Sanctuaries, Preserves, Refuges; Federal Wilderness Areas.

### AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

### Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

### GNIS Hospitals: Geographic Names Information System

Source: USGS

Telephone: 888-275-8747

The Geographic Names Information System (GNIS), developed by the USGS in cooperation with the U.S. Board on Geographic Names (BGN), contains information about almost 2 million physical and cultural geographic features in the United States. The GNIS is our Nation's official repository of domestic geographic names information.

### Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

### Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

### Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

### Colleges - Integrated Postsecondary Education Data

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on integrated postsecondary education in the United States.

### GNIS Schools: Geographic Names Information System

Source: USGS

Telephone: 888-275-8747

The Geographic Names Information System (GNIS), developed by the USGS in cooperation with the U.S. Board on Geographic Names (BGN), contains information about almost 2 million physical and cultural geographic features in the United States. The GNIS is our Nation's official repository of domestic geographic names information.

## RECORDS SEARCHED/DATA CURRENCY TRACKING

### **Arenas**

Source: Dunhill International

EDR indicates the location of buildings and facilities - arenas - where individuals who are public receptors are likely to be located.

### **Prisons: Bureau of Prisons Facilities**

Source: Federal Bureau of Prisons

Telephone: 202-307-3198

List of facilities operated by the Federal Bureau of Prisons.

### **Daycare Centers: Licensed Facilities**

Source: Department of Social Services

Telephone: 916-657-4041

APPENDIX 8.6B

## **Health Risk Assessment Analysis**

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# Health Risk Assessment Analysis

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## ISCST3 and HARP Configuration Methodology

ISCST3 under HARP was set up in accordance with specifications described in Air Dispersion Modeling Protocol presented in Appendix 8.1C.

Per OEHHA guidelines HARP runs were executed to find the PMI for Acute, Chronic-Cancer, Chronic non-cancer effects. The following sections contain the HARP output and input for each case.

### **A.8.6.1 HARP Transaction File**

(Included in attached CD as "AES.TRA")

### **A.8.6.2 HARP ISC, OUT, INP, SRC, XOQ, ERR and PLT FILE**

(Included in attached CD as "AES.XXX")

### **A.8.6.3 HARP PMI Reports for Residents and Workers**

(Included in attached CD as "REP\_PMI\_xxxxx.PMI")

### **A.8.6.4 HARP MEIR for Chronic Non-Cancer Effects (OEHHA DERIVED)**

(Included in attached CD as  
"Rep\_Chrr\_Res\_DerOEH\_Rec20988\_AllSrc\_AllCh\_ByRec\_ByChem\_Site")

### **A.8.6.5 HARP MEIR for Acute Health Effects**

(Included in attached CD as  
"Rep\_Acu\_Rec12639\_AllSrc\_AllCh\_ByRec\_ByChem\_Site")

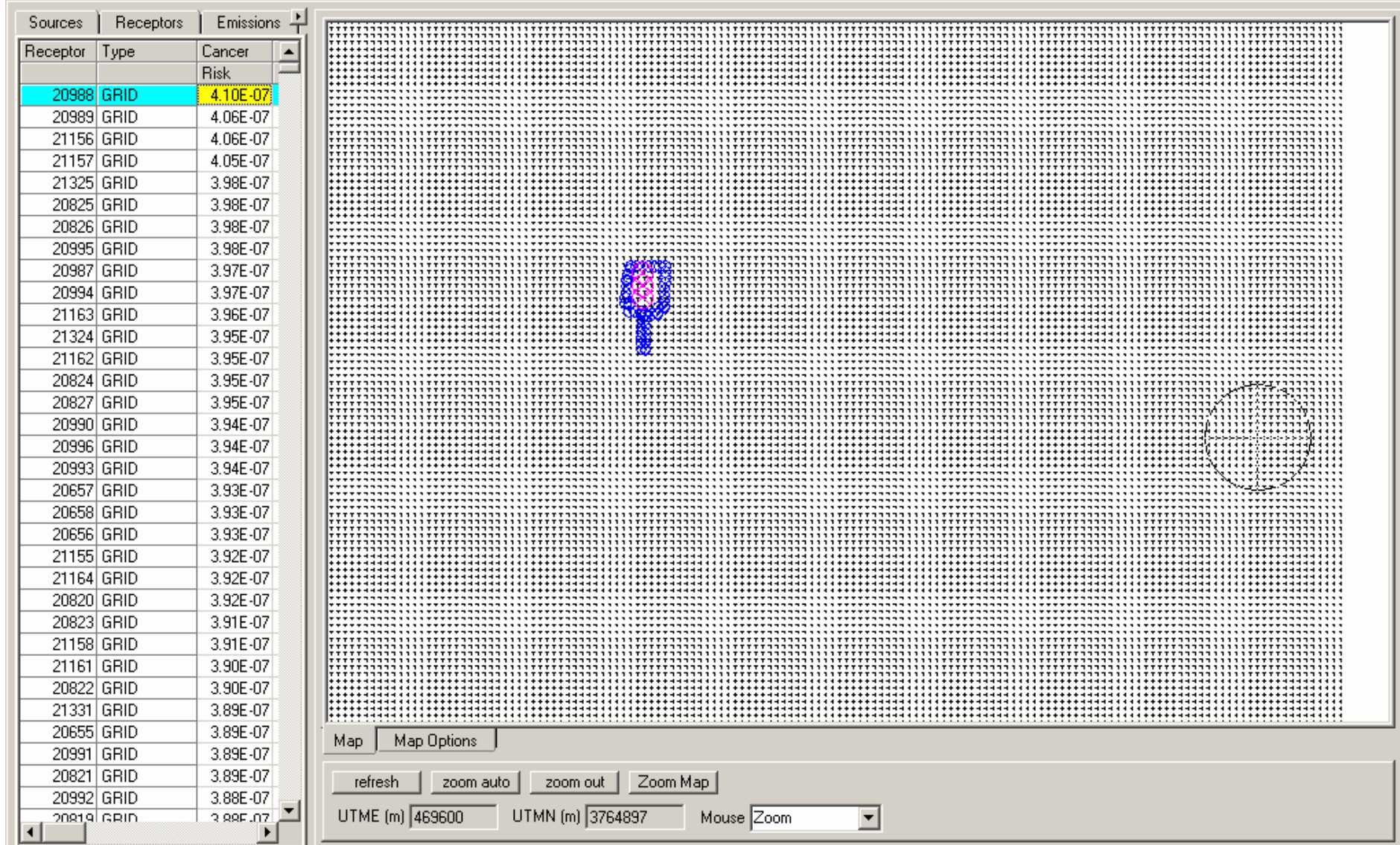
### **A.8.6.6 HARP MEIR for Cancer Health Effects (OEHHA DERIVED)**

(Included in attached CD as  
"Rep\_Can\_70yr\_DerOEH\_Rec21662\_AllSrc\_AllCh\_ByRec\_ByChem\_Site.TXT")

### **A.8.6.7 HARP MEIR for Cancer (OEHHA DERIVED ADJUSTED)**

(Included in attached CD as  
"Rep\_Can\_70yr\_DerAdj\_Rec21662\_AllSrc\_AllCh\_ByRec\_ByChem\_Site")

Harp Screen Capture for this file illustrating location of receptor 21662 for the MEIR:



Risk



APPENDIX 8.8A

## **Environmental Justice Analysis**

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# Environmental Justice

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## Introduction

This report was prepared in compliance with Presidential Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (EO 12898), dated February 11, 1994. The purpose of this report is to determine whether or not disproportionately high and adverse human health or environmental effects of the proposed AES Highgrove power plant (Highgrove Project) are likely to fall on minority and/or low-income populations. This report focuses on the populations that are located within the area potentially affected by the Highgrove Project. In accordance with EO 12898, this report documents where minority and low-income populations reside and examines if there are high and adverse impacts identified (as reported in the various environmental analysis sections of this AFC) where these impacts fall relative to these populations. This report also discusses the specific outreach efforts made to involve minority and low-income populations in the decision-making process. No high and adverse impacts are expected as a result of this project; therefore, no high and adverse human health or environmental effects of this project are expected to fall disproportionately on minority or low-income populations.

## Studies Performed and Coordination Conducted

### Overview of Executive Order 12898

EO 12898, issued by President Clinton in 1994, requires that “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations....” In his memorandum transmitting EO 12898 to federal agencies, President Clinton further specified that, “each Federal agency shall analyze the environmental effects, including human health, economic and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by the National Environmental Policy Act of 1969.” Guidance on how to implement EO 12898 and conduct an Environmental Justice analysis has been issued by the President’s Council on Environmental Quality (CEQ, 1997).

### Methodology and Approach

The Highgrove Project was evaluated for compliance with EO 12898. For this type of analysis, three fundamental evaluation measures are used.

1. *A determination is made as to which impacts of the project are high and adverse.*

The series of environmental analyses prepared for the Highgrove AFC were reviewed, and discussions with the environmental professionals who prepared these sections were

conducted to determine which environmental or human health impacts could reach the level of high and adverse after proposed mitigation measures were implemented. Neither EO 12898, nor any of the environmental justice guidance documents, contain official guidance on the definition of “high and adverse.” For purposes of this analysis, adverse impacts identified by the professional analysts working on this AFC as “significant” under CEQA were considered to be synonymous with high and adverse impacts as described in EO 12898.

2. *A determination is made as to whether minority or low-income populations exist within the high and adverse impact zones.*

For information on the distribution of minority and low-income populations in the Highgrove Project area, 2000 Census data were used. Race/ethnicity and income data were reviewed at the finest level available from the Census (i.e., Census Block for race/ethnicity, and Census Block Group for income). Tables 8.8A-1 and 8.8A-2 (at the end of this document ) show the distribution of the population within a 6-mile radius by race/ethnicity and income, respectively. These tables are located at the end of this appendix.

3. *The spatial distribution of high and adverse impacts is reviewed to determine if these impacts are likely to fall disproportionately on the minority or low-income population.*

Since there is no specific guidance in EO 12898, the test of disproportionately is made on the basis described in the U.S. Environmental Protection Agency’s (USEPA) *Draft Revised Guidance for Investigating Title VI Administrative Complaints Challenging Permits* (USEPA, June 2000). This guidance suggests using two to three standard deviations above the mean as a quantitative measure of disparate effect.

While the first two elements of this approach were conducted, no detailed distribution analysis was required to make a final determination. This was because professional analysts in each environmental and human health discipline reviewed for this AFC determined that no high and adverse (i.e., CEQA significant) human health or environmental effects were expected to remain after implementation of proposed mitigation measures.

## **Outreach to Minority and Low-Income Populations**

EO 12898 requires Federal agencies to ensure effective public participation and access to information. Consequently, a key component of compliance with EO 12898 is outreach to the potentially affected minority and/or low-income population to discover issues of importance that may not otherwise be apparent.

As part of the AFC process, the California Energy Commission will provide information to residents in the area and provide opportunities for their involvement.

The California Energy Commission typically:

- Mails written notice to all property owners within 1,000 feet of the site and within 500 feet of the centerline of all linear corridors
- Publishes notice in the local newspaper announcing public workshops and hearings
- Provides access to information by submitting copies of key documents to local libraries and providing materials via a web page

- Holds hearings and workshops in the local community
- Assigns a public advisor to assist the public in participating in the process

## Demographic Analysis

### Distribution of the Minority Population

Based on the 2000 Census, the total population within a 6-mile radius of the Highgrove Project site is approximately 294,880. The racial minority population, in the Census Blocks within the 6-mile radius of the Highgrove Project site, comprises approximately 67 percent of this total population while the ethnic minority (as represented by individuals of Hispanic origin) comprises about 47 percent (see Table 8.8A-1). Figure 8.8-1 (figures are in Subsection 8.8 of the AFC) identifies the racial minority population percentages of Census Blocks in the vicinity of the Highgrove Project based on 2000 Census data. As shown in Figure 8.8-1, about half of the Census Blocks in the vicinity of the Highgrove Project are above 50 percent minority. These Census Blocks have minority population densities high enough (i.e., greater than 50 percent) to be considered minority populations based on the guidance contained in CEQ (1997).

### Distribution of the Low-Income Population

Based on the 2000 Census, the total population for whom poverty status is determined within a 6-mile radius of the Highgrove Project site was approximately 336,750<sup>1</sup>. The low-income population, in the Census Block Groups within the 6-mile radius of the Highgrove Project site, comprised approximately 20 percent of this total population (see Table 8.8A-2). Figure 8.8-2 identifies the low-income population percentages of Census Block Groups in the vicinity of Highgrove Project based on 2000 Census data. Unlike the CEQ (1997) guidance on minority population, none of the environmental justice guidance documents contain a quantitative definition of how many low-income individuals it takes to comprise a low-income population. In the absence of guidance, for this analysis the density used to identify minority populations (i.e., 50 percent or greater) was also used to identify low-income populations. As shown on Figure 8.8-2, there are a few Census Block Groups in the project vicinity with 50 percent or more low-income population.

## Results and Conclusion

As discussed in the *Methodology and Approach* section above, for purposes of this analysis, CEQA-significant adverse impacts are considered synonymous with high and adverse impacts as described in EO 12898. As reported in the series of environmental analyses prepared for the AES Highgrove AFC, and further confirmed through discussions with the environmental professionals who prepared those sections, no significant adverse impacts are expected as a result of this project after proposed mitigation measures are implemented. Consequently, none of the impacts of this project can be described as high and adverse in

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<sup>1</sup> The population number for low-income is higher than the population number for ethnic groups because Census Block Groups were used to analyze low-income and the Census Block Groups are larger in size. The larger Census Block Groups are used to maintain privacy.

the context of EO 12898. As there are no high and adverse impacts expected as a result of this project, this analysis concludes that no high and adverse human health or environmental effects of this project are expected to fall disproportionately on minority or low-income populations. The Highgrove Project can, therefore, be considered to be consistent with the policy established in EO 12898.

## Bibliography and References

Clinton, William. 1994. Memorandum for the Heads of All Departments and Agencies; Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Presidential Documents, Vol. 30, No. 6, 279-280. February 11.

CEQ (Council on Environmental Quality). 1997. *Environmental Justice; Guidance Under the National Environmental Policy Act*. Council on Environmental Quality, Executive Office of the President, Washington, DC. December 10. Released July 1998.

Executive Order 12898. 1994. *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. Federal Register, Vol. 59, No. 32, 7629-7633. February 11.

U.S. Census Bureau. 2000 Census of Population.

U.S. Environmental Protection Agency, Office of Federal Activities. 1995. *Draft Guidance for Consideration of Environmental Justice in Clean Air Act 309 Reviews*. USEPA, Office of Federal Activities, NEPA Compliance Division, Washington, DC. July 19.

U.S. Environmental Protection Agency. 1998. *Guidance for Incorporating Environmental Justice in USEPA's NEPA Compliance Analyses*. USEPA, Office of Federal Activities, NEPA Compliance Division, Washington, DC. April.

U.S. Environmental Protection Agency. *Draft Title VI Guidance for EPA Assistance Recipients Administering Environmental Permitting Programs (Draft Recipient Guidance) and Draft Revised Guidance for Investigating Title VI Administrative Complaints Challenging Permits (Draft Revised Investigation Guidance)*. Federal Register Volume 65, Number 124, pages 39649-39701. Washington, D.C. June 27, 2000.

U.S. Environmental Protection Agency. *Interim Guidance for Investigating Title VI Administrative Complaints Challenging Permits*. Washington, D.C. February 5, 1998.

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650401009024 | 113   | 47         | 66       | 58.4             | 63               | 55.8             |
| 060710026035000 | 767   | 157        | 610      | 79.5             | 361              | 47.1             |
| 060650312005005 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650312003000 | 175   | 51         | 124      | 70.9             | 83               | 47.4             |
| 060650312002005 | 168   | 117        | 51       | 30.4             | 27               | 16.1             |
| 060650312002008 | 34    | 18         | 16       | 47.1             | 7                | 20.6             |
| 060650312001009 | 93    | 65         | 28       | 30.1             | 27               | 29.0             |
| 060650312002004 | 32    | 15         | 17       | 53.1             | 15               | 46.9             |
| 060650312002003 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650312002001 | 26    | 25         | 1        | 3.8              | 1                | 3.8              |
| 060650312001005 | 139   | 96         | 43       | 30.9             | 34               | 24.5             |
| 060650312002002 | 65    | 65         | 0        | 0.0              | 0                | 0.0              |
| 060650306023003 | 50    | 35         | 15       | 30.0             | 8                | 16.0             |
| 060650306023002 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060650306023000 | 72    | 56         | 16       | 22.2             | 6                | 8.3              |
| 060650306023005 | 36    | 24         | 12       | 33.3             | 0                | 0.0              |
| 060650312002000 | 24    | 23         | 1        | 4.2              | 0                | 0.0              |
| 060650306023004 | 41    | 31         | 10       | 24.4             | 7                | 17.1             |
| 060650306021014 | 5     | 1          | 4        | 80.0             | 0                | 0.0              |
| 060650306021015 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650306011000 | 948   | 703        | 245      | 25.8             | 68               | 7.2              |
| 060650306023001 | 27    | 24         | 3        | 11.1             | 3                | 11.1             |
| 060650306011001 | 54    | 46         | 8        | 14.8             | 1                | 1.9              |
| 060650306021001 | 287   | 211        | 76       | 26.5             | 24               | 8.4              |
| 060650306011002 | 65    | 56         | 9        | 13.8             | 5                | 7.7              |
| 060650306021019 | 141   | 114        | 27       | 19.1             | 5                | 3.5              |
| 060650306021016 | 19    | 16         | 3        | 15.8             | 1                | 5.3              |
| 060650306021017 | 52    | 38         | 14       | 26.9             | 3                | 5.8              |
| 060650306021020 | 67    | 29         | 38       | 56.7             | 24               | 35.8             |
| 060650306021018 | 47    | 27         | 20       | 42.6             | 8                | 17.0             |
| 060650422082011 | 104   | 76         | 28       | 26.9             | 5                | 4.8              |
| 060650422082003 | 59    | 50         | 9        | 15.3             | 9                | 15.3             |
| 060650422082002 | 36    | 34         | 2        | 5.6              | 2                | 5.6              |
| 060650306032011 | 60    | 49         | 11       | 18.3             | 10               | 16.7             |
| 060650306033015 | 51    | 48         | 3        | 5.9              | 0                | 0.0              |
| 060650422082001 | 65    | 60         | 5        | 7.7              | 5                | 7.7              |
| 060650306032010 | 12    | 12         | 0        | 0.0              | 0                | 0.0              |
| 060650422082006 | 148   | 104        | 44       | 29.7             | 11               | 7.4              |
| 060650422082007 | 127   | 91         | 36       | 28.3             | 9                | 7.1              |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650422081012 | 81    | 76         | 5        | 6.2              | 5                | 6.2              |
| 060650422082000 | 336   | 281        | 55       | 16.4             | 29               | 8.6              |
| 060650422082005 | 43    | 38         | 5        | 11.6             | 0                | 0.0              |
| 060650422082004 | 90    | 71         | 19       | 21.1             | 8                | 8.9              |
| 060650422081007 | 37    | 33         | 4        | 10.8             | 2                | 5.4              |
| 060650422081008 | 63    | 48         | 15       | 23.8             | 14               | 22.2             |
| 060650422081009 | 54    | 40         | 14       | 25.9             | 5                | 9.3              |
| 060650422081011 | 55    | 34         | 21       | 38.2             | 8                | 14.5             |
| 060650422081006 | 83    | 74         | 9        | 10.8             | 6                | 7.2              |
| 060650422081003 | 59    | 40         | 19       | 32.2             | 14               | 23.7             |
| 060650422081010 | 46    | 32         | 14       | 30.4             | 1                | 2.2              |
| 060650422081002 | 61    | 55         | 6        | 9.8              | 2                | 3.3              |
| 060650422081014 | 160   | 128        | 32       | 20.0             | 24               | 15.0             |
| 060650422081013 | 70    | 58         | 12       | 17.1             | 10               | 14.3             |
| 060650422071001 | 99    | 69         | 30       | 30.3             | 17               | 17.2             |
| 060650422071000 | 77    | 66         | 11       | 14.3             | 2                | 2.6              |
| 060650422072004 | 448   | 365        | 83       | 18.5             | 30               | 6.7              |
| 060650422052000 | 363   | 273        | 90       | 24.8             | 45               | 12.4             |
| 060650422072005 | 56    | 24         | 32       | 57.1             | 8                | 14.3             |
| 060650422052001 | 112   | 89         | 23       | 20.5             | 6                | 5.4              |
| 060650422052015 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650422053009 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650422052036 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650422051033 | 60    | 50         | 10       | 16.7             | 8                | 13.3             |
| 060650422051034 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650402011016 | 7     | 5          | 2        | 28.6             | 2                | 28.6             |
| 060650308003004 | 245   | 153        | 92       | 37.6             | 62               | 25.3             |
| 060650308009003 | 373   | 273        | 100      | 26.8             | 69               | 18.5             |
| 060650302009008 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650402011015 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650308003002 | 25    | 21         | 4        | 16.0             | 1                | 4.0              |
| 060650308003003 | 122   | 86         | 36       | 29.5             | 30               | 24.6             |
| 060650308009002 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650402011992 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650302009994 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650402011014 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650302009995 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650402011993 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650402021006 | 226   | 123        | 103      | 45.6             | 85               | 37.6             |
| 060650402021007 | 1     | 0          | 1        | 100.0            | 1                | 100.0            |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650402021004 | 46    | 26         | 20       | 43.5             | 20               | 43.5             |
| 060650402021003 | 88    | 34         | 54       | 61.4             | 50               | 56.8             |
| 060650402021005 | 62    | 24         | 38       | 61.3             | 38               | 61.3             |
| 060650402021002 | 112   | 64         | 48       | 42.9             | 39               | 34.8             |
| 060650403021011 | 104   | 42         | 62       | 59.6             | 30               | 28.8             |
| 060650403011008 | 24    | 11         | 13       | 54.2             | 8                | 33.3             |
| 060650403021012 | 176   | 75         | 101      | 57.4             | 62               | 35.2             |
| 060650403021010 | 57    | 26         | 31       | 54.4             | 28               | 49.1             |
| 060650403021008 | 105   | 56         | 49       | 46.7             | 40               | 38.1             |
| 060650403021006 | 64    | 35         | 29       | 45.3             | 22               | 34.4             |
| 060650403011005 | 130   | 47         | 83       | 63.8             | 83               | 63.8             |
| 060650403011007 | 68    | 23         | 45       | 66.2             | 21               | 30.9             |
| 060650403011003 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650402021001 | 140   | 66         | 74       | 52.9             | 62               | 44.3             |
| 060650403011011 | 5     | 5          | 0        | 0.0              | 0                | 0.0              |
| 060650403011009 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650403011010 | 20    | 11         | 9        | 45.0             | 9                | 45.0             |
| 060650403011006 | 99    | 23         | 76       | 76.8             | 62               | 62.6             |
| 060650403021004 | 965   | 426        | 539      | 55.9             | 414              | 42.9             |
| 060650403021021 | 8     | 1          | 7        | 87.5             | 7                | 87.5             |
| 060650403021020 | 66    | 44         | 22       | 33.3             | 20               | 30.3             |
| 060650403021016 | 213   | 65         | 148      | 69.5             | 129              | 60.6             |
| 060650403031021 | 103   | 46         | 57       | 55.3             | 50               | 48.5             |
| 060650403031022 | 61    | 7          | 54       | 88.5             | 51               | 83.6             |
| 060650403031001 | 5     | 0          | 5        | 100.0            | 5                | 100.0            |
| 060650401003015 | 3     | 2          | 1        | 33.3             | 0                | 0.0              |
| 060650403012009 | 204   | 113        | 91       | 44.6             | 90               | 44.1             |
| 060650403021002 | 133   | 37         | 96       | 72.2             | 76               | 57.1             |
| 060650403021000 | 174   | 72         | 102      | 58.6             | 64               | 36.8             |
| 060650403031023 | 38    | 15         | 23       | 60.5             | 23               | 60.5             |
| 060650403031000 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650401003021 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650403012007 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650401003020 | 14    | 7          | 7        | 50.0             | 7                | 50.0             |
| 060650403011004 | 37    | 16         | 21       | 56.8             | 17               | 45.9             |
| 060650403021005 | 40    | 14         | 26       | 65.0             | 26               | 65.0             |
| 060650403021014 | 24    | 5          | 19       | 79.2             | 14               | 58.3             |
| 060650403011001 | 177   | 69         | 108      | 61.0             | 95               | 53.7             |
| 060650403011002 | 49    | 11         | 38       | 77.6             | 38               | 77.6             |
| 060650403012022 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650403012020 | 186   | 41         | 145      | 78.0             | 138              | 74.2             |
| 060650403021019 | 63    | 10         | 53       | 84.1             | 53               | 84.1             |
| 060650403012019 | 15    | 5          | 10       | 66.7             | 8                | 53.3             |
| 060650403021015 | 112   | 38         | 74       | 66.1             | 51               | 45.5             |
| 060650403021018 | 74    | 15         | 59       | 79.7             | 49               | 66.2             |
| 060650403012016 | 29    | 3          | 26       | 89.7             | 26               | 89.7             |
| 060650403021017 | 35    | 4          | 31       | 88.6             | 14               | 40.0             |
| 060650403012018 | 86    | 27         | 59       | 68.6             | 45               | 52.3             |
| 060650403012014 | 93    | 36         | 57       | 61.3             | 41               | 44.1             |
| 060650403012015 | 23    | 6          | 17       | 73.9             | 10               | 43.5             |
| 060650403012011 | 337   | 113        | 224      | 66.5             | 196              | 58.2             |
| 060650403012021 | 66    | 8          | 58       | 87.9             | 48               | 72.7             |
| 060650403011000 | 286   | 83         | 203      | 71.0             | 175              | 61.2             |
| 060650403012017 | 184   | 89         | 95       | 51.6             | 81               | 44.0             |
| 060650403021001 | 142   | 21         | 121      | 85.2             | 90               | 63.4             |
| 060650403012010 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650403012008 | 12    | 1          | 11       | 91.7             | 11               | 91.7             |
| 060650403012005 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650403012006 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650401003018 | 36    | 16         | 20       | 55.6             | 16               | 44.4             |
| 060650401003007 | 102   | 40         | 62       | 60.8             | 39               | 38.2             |
| 060650403012012 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650403012003 | 90    | 19         | 71       | 78.9             | 59               | 65.6             |
| 060650403012002 | 37    | 19         | 18       | 48.6             | 15               | 40.5             |
| 060650403012001 | 79    | 18         | 61       | 77.2             | 46               | 58.2             |
| 060650403012004 | 2     | 1          | 1        | 50.0             | 0                | 0.0              |
| 060650401002004 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650401002008 | 38    | 7          | 31       | 81.6             | 31               | 81.6             |
| 060650401002005 | 29    | 7          | 22       | 75.9             | 22               | 75.9             |
| 060650402021000 | 242   | 79         | 163      | 67.4             | 127              | 52.5             |
| 060650402011017 | 31    | 7          | 24       | 77.4             | 19               | 61.3             |
| 060650403014003 | 315   | 119        | 196      | 62.2             | 180              | 57.1             |
| 060650402011019 | 79    | 42         | 37       | 46.8             | 33               | 41.8             |
| 060650402011018 | 380   | 100        | 280      | 73.7             | 207              | 54.5             |
| 060650402011022 | 59    | 2          | 57       | 96.6             | 52               | 88.1             |
| 060650402011020 | 63    | 14         | 49       | 77.8             | 49               | 77.8             |
| 060650402011007 | 1,027 | 342        | 685      | 66.7             | 562              | 54.7             |
| 060650402011023 | 158   | 11         | 147      | 93.0             | 145              | 91.8             |
| 060650402011021 | 230   | 47         | 183      | 79.6             | 169              | 73.5             |
| 060650402031008 | 276   | 23         | 253      | 91.7             | 222              | 80.4             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650402032009 | 2     | 0          | 2        | 100.0            | 2                | 100.0            |
| 060650402032008 | 91    | 8          | 83       | 91.2             | 74               | 81.3             |
| 060650402031009 | 154   | 37         | 117      | 76.0             | 115              | 74.7             |
| 060650402031007 | 682   | 50         | 632      | 92.7             | 582              | 85.3             |
| 060650402031006 | 202   | 34         | 168      | 83.2             | 155              | 76.7             |
| 060650402031004 | 137   | 16         | 121      | 88.3             | 111              | 81.0             |
| 060650403014002 | 214   | 33         | 181      | 84.6             | 174              | 81.3             |
| 060650403014001 | 239   | 37         | 202      | 84.5             | 177              | 74.1             |
| 060650403012013 | 189   | 69         | 120      | 63.5             | 119              | 63.0             |
| 060650403014000 | 470   | 127        | 343      | 73.0             | 304              | 64.7             |
| 060650403013002 | 548   | 237        | 311      | 56.8             | 232              | 42.3             |
| 060650403012000 | 125   | 50         | 75       | 60.0             | 58               | 46.4             |
| 060650401002007 | 52    | 8          | 44       | 84.6             | 43               | 82.7             |
| 060650401003002 | 174   | 114        | 60       | 34.5             | 45               | 25.9             |
| 060650401002009 | 34    | 6          | 28       | 82.4             | 28               | 82.4             |
| 060650401002006 | 72    | 14         | 58       | 80.6             | 55               | 76.4             |
| 060650401003003 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650401003000 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650401003001 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650402031002 | 273   | 50         | 223      | 81.7             | 204              | 74.7             |
| 060650403013004 | 512   | 86         | 426      | 83.2             | 409              | 79.9             |
| 060650403013003 | 115   | 15         | 100      | 87.0             | 87               | 75.7             |
| 060650403013001 | 61    | 10         | 51       | 83.6             | 44               | 72.1             |
| 060650403013007 | 312   | 123        | 189      | 60.6             | 173              | 55.4             |
| 060650402031003 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650402031001 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650402041006 | 192   | 50         | 142      | 74.0             | 101              | 52.6             |
| 060650403013005 | 71    | 10         | 61       | 85.9             | 55               | 77.5             |
| 060650403013006 | 65    | 2          | 63       | 96.9             | 57               | 87.7             |
| 060650403013000 | 534   | 149        | 385      | 72.1             | 351              | 65.7             |
| 060650401002010 | 92    | 10         | 82       | 89.1             | 46               | 50.0             |
| 060650401002011 | 88    | 1          | 87       | 98.9             | 63               | 71.6             |
| 060650401002002 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650401002003 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650401002013 | 85    | 0          | 85       | 100.0            | 62               | 72.9             |
| 060650401002012 | 99    | 1          | 98       | 99.0             | 67               | 67.7             |
| 060650401002018 | 65    | 10         | 55       | 84.6             | 29               | 44.6             |
| 060650401002017 | 57    | 3          | 54       | 94.7             | 40               | 70.2             |
| 060650401002015 | 69    | 1          | 68       | 98.6             | 55               | 79.7             |
| 060650401002016 | 35    | 2          | 33       | 94.3             | 33               | 94.3             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650401002014 | 72    | 8          | 64       | 88.9             | 57               | 79.2             |
| 060650308003001 | 301   | 195        | 106      | 35.2             | 88               | 29.2             |
| 060650308003005 | 366   | 141        | 225      | 61.5             | 131              | 35.8             |
| 060650308004000 | 307   | 161        | 146      | 47.6             | 120              | 39.1             |
| 060650308004006 | 56    | 34         | 22       | 39.3             | 15               | 26.8             |
| 060650308004005 | 107   | 84         | 23       | 21.5             | 13               | 12.1             |
| 060650308004004 | 87    | 58         | 29       | 33.3             | 22               | 25.3             |
| 060650308003007 | 387   | 224        | 163      | 42.1             | 105              | 27.1             |
| 060650308003006 | 51    | 43         | 8        | 15.7             | 2                | 3.9              |
| 060650308003000 | 91    | 64         | 27       | 29.7             | 23               | 25.3             |
| 060650311005022 | 103   | 74         | 29       | 28.2             | 28               | 27.2             |
| 060650311005018 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650311003004 | 65    | 54         | 11       | 16.9             | 8                | 12.3             |
| 060650311003001 | 40    | 31         | 9        | 22.5             | 3                | 7.5              |
| 060650311005020 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650311005019 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650311003000 | 139   | 106        | 33       | 23.7             | 23               | 16.5             |
| 060650311005017 | 122   | 92         | 30       | 24.6             | 27               | 22.1             |
| 060650311005016 | 107   | 60         | 47       | 43.9             | 40               | 37.4             |
| 060650311005009 | 6     | 5          | 1        | 16.7             | 1                | 16.7             |
| 060650311005008 | 49    | 25         | 24       | 49.0             | 22               | 44.9             |
| 060650311005007 | 191   | 146        | 45       | 23.6             | 37               | 19.4             |
| 060650311005015 | 3     | 1          | 2        | 66.7             | 2                | 66.7             |
| 060650311005010 | 4     | 2          | 2        | 50.0             | 1                | 25.0             |
| 060650311005005 | 173   | 149        | 24       | 13.9             | 17               | 9.8              |
| 060650311005006 | 119   | 83         | 36       | 30.3             | 27               | 22.7             |
| 060650307004006 | 192   | 122        | 70       | 36.5             | 29               | 15.1             |
| 060650307004005 | 66    | 45         | 21       | 31.8             | 15               | 22.7             |
| 060650311005014 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650311005004 | 12    | 1          | 11       | 91.7             | 10               | 83.3             |
| 060650311005012 | 42    | 24         | 18       | 42.9             | 2                | 4.8              |
| 060650311005003 | 34    | 33         | 1        | 2.9              | 0                | 0.0              |
| 060650307003004 | 88    | 62         | 26       | 29.5             | 12               | 13.6             |
| 060650307003005 | 20    | 16         | 4        | 20.0             | 0                | 0.0              |
| 060650307003003 | 143   | 113        | 30       | 21.0             | 25               | 17.5             |
| 060650308002002 | 184   | 143        | 41       | 22.3             | 30               | 16.3             |
| 060650308009001 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650308002003 | 220   | 163        | 57       | 25.9             | 47               | 21.4             |
| 060650308002004 | 59    | 57         | 2        | 3.4              | 2                | 3.4              |
| 060650308002001 | 127   | 96         | 31       | 24.4             | 19               | 15.0             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650308001005 | 161   | 124        | 37       | 23.0             | 16               | 9.9              |
| 060650308001004 | 21    | 17         | 4        | 19.0             | 4                | 19.0             |
| 060650308001003 | 26    | 24         | 2        | 7.7              | 1                | 3.8              |
| 060650302009996 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650302009006 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650302009007 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650308009000 | 259   | 224        | 35       | 13.5             | 22               | 8.5              |
| 060650402011994 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650307004004 | 59    | 49         | 10       | 16.9             | 9                | 15.3             |
| 060650307004003 | 115   | 84         | 31       | 27.0             | 24               | 20.9             |
| 060650307004002 | 129   | 90         | 39       | 30.2             | 29               | 22.5             |
| 060650307004001 | 91    | 67         | 24       | 26.4             | 19               | 20.9             |
| 060650308002000 | 72    | 64         | 8        | 11.1             | 5                | 6.9              |
| 060650308001008 | 87    | 72         | 15       | 17.2             | 13               | 14.9             |
| 060650308001006 | 66    | 43         | 23       | 34.8             | 20               | 30.3             |
| 060650308001002 | 37    | 32         | 5        | 13.5             | 3                | 8.1              |
| 060650308001001 | 67    | 60         | 7        | 10.4             | 7                | 10.4             |
| 060650308001000 | 36    | 30         | 6        | 16.7             | 5                | 13.9             |
| 060650308001007 | 41    | 19         | 22       | 53.7             | 15               | 36.6             |
| 060650307004000 | 79    | 64         | 15       | 19.0             | 14               | 17.7             |
| 060650307003002 | 114   | 90         | 24       | 21.1             | 15               | 13.2             |
| 060650307005005 | 121   | 94         | 27       | 22.3             | 19               | 15.7             |
| 060650307005004 | 159   | 104        | 55       | 34.6             | 31               | 19.5             |
| 060650307005003 | 112   | 80         | 32       | 28.6             | 22               | 19.6             |
| 060650302009001 | 336   | 173        | 163      | 48.5             | 91               | 27.1             |
| 060650302004014 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650311002005 | 111   | 82         | 29       | 26.1             | 14               | 12.6             |
| 060650311002011 | 24    | 18         | 6        | 25.0             | 5                | 20.8             |
| 060650311002003 | 45    | 33         | 12       | 26.7             | 11               | 24.4             |
| 060650311002001 | 59    | 39         | 20       | 33.9             | 16               | 27.1             |
| 060650311002010 | 83    | 56         | 27       | 32.5             | 3                | 3.6              |
| 060650311005013 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650311002004 | 37    | 19         | 18       | 48.6             | 15               | 40.5             |
| 060650312005006 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650311002002 | 34    | 32         | 2        | 5.9              | 2                | 5.9              |
| 060650311002000 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650311001003 | 132   | 104        | 28       | 21.2             | 24               | 18.2             |
| 060650311001002 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650311005011 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650311005002 | 99    | 75         | 24       | 24.2             | 20               | 20.2             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650311005001 | 76    | 55         | 21       | 27.6             | 15               | 19.7             |
| 060650311005000 | 66    | 42         | 24       | 36.4             | 19               | 28.8             |
| 060650311001010 | 151   | 98         | 53       | 35.1             | 32               | 21.2             |
| 060650307003006 | 39    | 30         | 9        | 23.1             | 5                | 12.8             |
| 060650307003007 | 71    | 56         | 15       | 21.1             | 7                | 9.9              |
| 060650307003008 | 75    | 57         | 18       | 24.0             | 15               | 20.0             |
| 060650311001006 | 85    | 44         | 41       | 48.2             | 26               | 30.6             |
| 060650311001005 | 20    | 14         | 6        | 30.0             | 4                | 20.0             |
| 060650311001004 | 158   | 96         | 62       | 39.2             | 54               | 34.2             |
| 060650311001007 | 40    | 29         | 11       | 27.5             | 8                | 20.0             |
| 060650307003010 | 65    | 52         | 13       | 20.0             | 5                | 7.7              |
| 060650311001009 | 98    | 53         | 45       | 45.9             | 27               | 27.6             |
| 060650307003000 | 148   | 105        | 43       | 29.1             | 33               | 22.3             |
| 060650307003009 | 44    | 40         | 4        | 9.1              | 3                | 6.8              |
| 060650311001008 | 25    | 16         | 9        | 36.0             | 3                | 12.0             |
| 060650307002014 | 47    | 28         | 19       | 40.4             | 13               | 27.7             |
| 060650312005000 | 452   | 280        | 172      | 38.1             | 95               | 21.0             |
| 060650312001008 | 73    | 48         | 25       | 34.2             | 18               | 24.7             |
| 060650312005001 | 37    | 29         | 8        | 21.6             | 4                | 10.8             |
| 060650312001007 | 60    | 58         | 2        | 3.3              | 0                | 0.0              |
| 060650312005002 | 70    | 58         | 12       | 17.1             | 10               | 14.3             |
| 060650311001011 | 57    | 41         | 16       | 28.1             | 12               | 21.1             |
| 060650311001001 | 907   | 325        | 582      | 64.2             | 247              | 27.2             |
| 060650306031024 | 4     | 4          | 0        | 0.0              | 0                | 0.0              |
| 060650307002013 | 189   | 58         | 131      | 69.3             | 92               | 48.7             |
| 060650307002012 | 326   | 93         | 233      | 71.5             | 111              | 34.0             |
| 060650306031014 | 34    | 27         | 7        | 20.6             | 4                | 11.8             |
| 060650306031013 | 216   | 163        | 53       | 24.5             | 33               | 15.3             |
| 060650306031012 | 23    | 18         | 5        | 21.7             | 3                | 13.0             |
| 060650306031009 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650311001000 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650306031010 | 16    | 15         | 1        | 6.3              | 1                | 6.3              |
| 060650307003001 | 138   | 104        | 34       | 24.6             | 24               | 17.4             |
| 060650307001008 | 90    | 63         | 27       | 30.0             | 18               | 20.0             |
| 060650307001007 | 116   | 84         | 32       | 27.6             | 12               | 10.3             |
| 060650307001006 | 114   | 86         | 28       | 24.6             | 26               | 22.8             |
| 060650307001005 | 85    | 72         | 13       | 15.3             | 5                | 5.9              |
| 060650307001004 | 82    | 56         | 26       | 31.7             | 19               | 23.2             |
| 060650307001003 | 106   | 72         | 34       | 32.1             | 30               | 28.3             |
| 060650307001009 | 141   | 101        | 40       | 28.4             | 25               | 17.7             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650307001010 | 80    | 70         | 10       | 12.5             | 5                | 6.3              |
| 060650307001013 | 16    | 11         | 5        | 31.3             | 5                | 31.3             |
| 060650307001011 | 42    | 36         | 6        | 14.3             | 3                | 7.1              |
| 060650307001012 | 57    | 44         | 13       | 22.8             | 5                | 8.8              |
| 060650307001014 | 74    | 59         | 15       | 20.3             | 10               | 13.5             |
| 060650307002011 | 74    | 57         | 17       | 23.0             | 12               | 16.2             |
| 060650307002010 | 75    | 56         | 19       | 25.3             | 14               | 18.7             |
| 060650307001015 | 70    | 58         | 12       | 17.1             | 9                | 12.9             |
| 060650307001016 | 80    | 52         | 28       | 35.0             | 26               | 32.5             |
| 060650307001017 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650307005000 | 653   | 483        | 170      | 26.0             | 122              | 18.7             |
| 060650307005002 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650307005001 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650302004013 | 253   | 161        | 92       | 36.4             | 71               | 28.1             |
| 060650303003021 | 337   | 203        | 134      | 39.8             | 87               | 25.8             |
| 060650307001001 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650307001002 | 33    | 26         | 7        | 21.2             | 1                | 3.0              |
| 060650303003019 | 41    | 30         | 11       | 26.8             | 9                | 22.0             |
| 060650303003020 | 8     | 7          | 1        | 12.5             | 1                | 12.5             |
| 060650302003019 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650302003020 | 35    | 22         | 13       | 37.1             | 9                | 25.7             |
| 060650302003018 | 86    | 31         | 55       | 64.0             | 46               | 53.5             |
| 060650307002006 | 65    | 57         | 8        | 12.3             | 5                | 7.7              |
| 060650307002005 | 59    | 40         | 19       | 32.2             | 10               | 16.9             |
| 060650307002004 | 72    | 59         | 13       | 18.1             | 11               | 15.3             |
| 060650307002009 | 108   | 25         | 83       | 76.9             | 28               | 25.9             |
| 060650307002007 | 283   | 131        | 152      | 53.7             | 104              | 36.7             |
| 060650307002003 | 28    | 17         | 11       | 39.3             | 6                | 21.4             |
| 060650307001000 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650307002002 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650303002019 | 13    | 8          | 5        | 38.5             | 1                | 7.7              |
| 060650307002008 | 91    | 17         | 74       | 81.3             | 44               | 48.4             |
| 060650307002000 | 139   | 31         | 108      | 77.7             | 72               | 51.8             |
| 060650304004020 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650304004021 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650304004008 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650304004009 | 13    | 0          | 13       | 100.0            | 13               | 100.0            |
| 060650304004010 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650304004006 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650307002001 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650304004007 | 2     | 2          | 0        | 0.0              | 0                | 0.0              |
| 060650303002028 | 60    | 28         | 32       | 53.3             | 21               | 35.0             |
| 060650303002020 | 98    | 47         | 51       | 52.0             | 28               | 28.6             |
| 060650303002021 | 46    | 26         | 20       | 43.5             | 16               | 34.8             |
| 060650303002018 | 26    | 19         | 7        | 26.9             | 3                | 11.5             |
| 060650303002017 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650303003015 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650302003017 | 5     | 1          | 4        | 80.0             | 0                | 0.0              |
| 060650303003014 | 19    | 1          | 18       | 94.7             | 18               | 94.7             |
| 060650303003016 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650303003013 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650303003012 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060650303003006 | 28    | 6          | 22       | 78.6             | 19               | 67.9             |
| 060650303002016 | 25    | 13         | 12       | 48.0             | 9                | 36.0             |
| 060650303002015 | 73    | 33         | 40       | 54.8             | 27               | 37.0             |
| 060650303003018 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650303002022 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650303002027 | 40    | 16         | 24       | 60.0             | 18               | 45.0             |
| 060650303002023 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650303002014 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650303002013 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650303003017 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060650303003011 | 3     | 2          | 1        | 33.3             | 1                | 33.3             |
| 060650303003007 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650303003008 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650303003002 | 7     | 3          | 4        | 57.1             | 3                | 42.9             |
| 060650303003010 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650303003009 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650303002009 | 9     | 0          | 9        | 100.0            | 9                | 100.0            |
| 060650303003001 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650303003000 | 220   | 78         | 142      | 64.5             | 90               | 40.9             |
| 060650402011013 | 76    | 25         | 51       | 67.1             | 29               | 38.2             |
| 060650402011011 | 25    | 7          | 18       | 72.0             | 18               | 72.0             |
| 060650402011012 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650402011010 | 11    | 9          | 2        | 18.2             | 2                | 18.2             |
| 060650302009999 | 0     | 0          | 0        | 0.0              | 0                | 0.0              |
| 060650402011009 | 103   | 37         | 66       | 64.1             | 43               | 41.7             |
| 060650402011008 | 65    | 41         | 24       | 36.9             | 7                | 10.8             |
| 060650402032005 | 307   | 18         | 289      | 94.1             | 244              | 79.5             |
| 060650402032006 | 345   | 94         | 251      | 72.8             | 241              | 69.9             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650402031005 | 40    | 7          | 33       | 82.5             | 33               | 82.5             |
| 060650402032004 | 79    | 5          | 74       | 93.7             | 73               | 92.4             |
| 060650402031000 | 4     | 4          | 0        | 0.0              | 0                | 0.0              |
| 060650402032007 | 363   | 88         | 275      | 75.8             | 252              | 69.4             |
| 060650402032003 | 4     | 4          | 0        | 0.0              | 0                | 0.0              |
| 060650402032002 | 28    | 5          | 23       | 82.1             | 18               | 64.3             |
| 060650402042003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650402032000 | 795   | 375        | 420      | 52.8             | 379              | 47.7             |
| 060650402042004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650402032001 | 3     | 0          | 3        | 100.0            | 3                | 100.0            |
| 060650402042005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650402042010 | 6     | 3          | 3        | 50.0             | 3                | 50.0             |
| 060650402042006 | 272   | 28         | 244      | 89.7             | 218              | 80.1             |
| 060650402042009 | 110   | 5          | 105      | 95.5             | 85               | 77.3             |
| 060650302009997 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302009005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650402011006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302009002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302009000 | 74    | 66         | 8        | 10.8             | 6                | 8.1              |
| 060650302009998 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650402042011 | 15    | 7          | 8        | 53.3             | 5                | 33.3             |
| 060650402042008 | 133   | 4          | 129      | 97.0             | 121              | 91.0             |
| 060650402042007 | 138   | 3          | 135      | 97.8             | 119              | 86.2             |
| 060650402042012 | 136   | 7          | 129      | 94.9             | 110              | 80.9             |
| 060650402042013 | 94    | 3          | 91       | 96.8             | 80               | 85.1             |
| 060650402042014 | 122   | 10         | 112      | 91.8             | 106              | 86.9             |
| 060650402042000 | 105   | 8          | 97       | 92.4             | 76               | 72.4             |
| 060650402011995 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650402011996 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302009004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650402011005 | 243   | 104        | 139      | 57.2             | 125              | 51.4             |
| 060650402011004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650402041011 | 7     | 1          | 6        | 85.7             | 4                | 57.1             |
| 060650402041009 | 67    | 11         | 56       | 83.6             | 54               | 80.6             |
| 060650402041010 | 85    | 12         | 73       | 85.9             | 73               | 85.9             |
| 060650402041007 | 83    | 23         | 60       | 72.3             | 60               | 72.3             |
| 060650402041008 | 112   | 11         | 101      | 90.2             | 93               | 83.0             |
| 060650402041005 | 84    | 13         | 71       | 84.5             | 71               | 84.5             |
| 060650402042002 | 835   | 97         | 738      | 88.4             | 630              | 75.4             |
| 060650402041004 | 418   | 83         | 335      | 80.1             | 281              | 67.2             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650402041003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401002000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401002001 | 36    | 2          | 34       | 94.4             | 30               | 83.3             |
| 060650401001028 | 46    | 3          | 43       | 93.5             | 27               | 58.7             |
| 060650401001025 | 52    | 2          | 50       | 96.2             | 25               | 48.1             |
| 060650401001027 | 64    | 2          | 62       | 96.9             | 47               | 73.4             |
| 060650401001006 | 79    | 3          | 76       | 96.2             | 43               | 54.4             |
| 060650401001005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401001007 | 114   | 6          | 108      | 94.7             | 65               | 57.0             |
| 060650401001008 | 102   | 3          | 99       | 97.1             | 78               | 76.5             |
| 060650401001009 | 67    | 5          | 62       | 92.5             | 60               | 89.6             |
| 060650402042001 | 142   | 15         | 127      | 89.4             | 96               | 67.6             |
| 060650401001024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650402041001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650402041000 | 331   | 72         | 259      | 78.2             | 213              | 64.4             |
| 060650402041002 | 21    | 8          | 13       | 61.9             | 6                | 28.6             |
| 060650402011000 | 173   | 21         | 152      | 87.9             | 133              | 76.9             |
| 060650401001026 | 91    | 5          | 86       | 94.5             | 63               | 69.2             |
| 060650401001010 | 115   | 1          | 114      | 99.1             | 72               | 62.6             |
| 060650401001020 | 146   | 6          | 140      | 95.9             | 114              | 78.1             |
| 060650401001011 | 62    | 2          | 60       | 96.8             | 38               | 61.3             |
| 060650401001021 | 70    | 0          | 70       | 100.0            | 49               | 70.0             |
| 060650401001023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401001022 | 5     | 0          | 5        | 100.0            | 5                | 100.0            |
| 060650401001019 | 112   | 39         | 73       | 65.2             | 49               | 43.8             |
| 060650302004007 | 55    | 52         | 3        | 5.5              | 1                | 1.8              |
| 060650302004012 | 36    | 35         | 1        | 2.8              | 0                | 0.0              |
| 060650302004011 | 66    | 58         | 8        | 12.1             | 4                | 6.1              |
| 060650302009003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302004015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302004016 | 47    | 39         | 8        | 17.0             | 8                | 17.0             |
| 060650302004008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302004010 | 60    | 42         | 18       | 30.0             | 17               | 28.3             |
| 060650302003015 | 25    | 21         | 4        | 16.0             | 4                | 16.0             |
| 060650302003014 | 36    | 26         | 10       | 27.8             | 4                | 11.1             |
| 060650302003016 | 78    | 49         | 29       | 37.2             | 21               | 26.9             |
| 060650302003013 | 67    | 29         | 38       | 56.7             | 21               | 31.3             |
| 060650302004009 | 66    | 49         | 17       | 25.8             | 16               | 24.2             |
| 060650302003009 | 54    | 28         | 26       | 48.1             | 18               | 33.3             |
| 060650302004006 | 6     | 6          | 0        | 0.0              | 0                | 0.0              |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650302004005 | 18    | 18         | 0        | 0.0              | 0                | 0.0              |
| 060650302004002 | 39    | 32         | 7        | 17.9             | 2                | 5.1              |
| 060650302004004 | 55    | 41         | 14       | 25.5             | 9                | 16.4             |
| 060650302004003 | 119   | 58         | 61       | 51.3             | 42               | 35.3             |
| 060650302004001 | 42    | 31         | 11       | 26.2             | 9                | 21.4             |
| 060650302002008 | 29    | 29         | 0        | 0.0              | 0                | 0.0              |
| 060650402011003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650402011999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302002007 | 17    | 14         | 3        | 17.6             | 2                | 11.8             |
| 060650302002004 | 52    | 47         | 5        | 9.6              | 5                | 9.6              |
| 060650302002005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302002006 | 28    | 25         | 3        | 10.7             | 3                | 10.7             |
| 060650302003012 | 45    | 12         | 33       | 73.3             | 23               | 51.1             |
| 060650302003011 | 10    | 3          | 7        | 70.0             | 2                | 20.0             |
| 060650302003010 | 42    | 21         | 21       | 50.0             | 8                | 19.0             |
| 060650302003008 | 47    | 28         | 19       | 40.4             | 15               | 31.9             |
| 060650302003007 | 70    | 28         | 42       | 60.0             | 31               | 44.3             |
| 060650302003004 | 83    | 41         | 42       | 50.6             | 35               | 42.2             |
| 060650303003005 | 19    | 12         | 7        | 36.8             | 4                | 21.1             |
| 060650303003004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303004025 | 79    | 32         | 47       | 59.5             | 45               | 57.0             |
| 060650302003006 | 50    | 22         | 28       | 56.0             | 22               | 44.0             |
| 060650302003005 | 42    | 28         | 14       | 33.3             | 10               | 23.8             |
| 060650302003003 | 94    | 47         | 47       | 50.0             | 33               | 35.1             |
| 060650302003002 | 64    | 47         | 17       | 26.6             | 9                | 14.1             |
| 060650302004000 | 91    | 52         | 39       | 42.9             | 23               | 25.3             |
| 060650302002017 | 50    | 43         | 7        | 14.0             | 4                | 8.0              |
| 060650302003001 | 88    | 41         | 47       | 53.4             | 33               | 37.5             |
| 060650302003000 | 76    | 32         | 44       | 57.9             | 35               | 46.1             |
| 060650302002015 | 49    | 40         | 9        | 18.4             | 8                | 16.3             |
| 060650302002016 | 59    | 32         | 27       | 45.8             | 25               | 42.4             |
| 060650302002011 | 45    | 34         | 11       | 24.4             | 7                | 15.6             |
| 060650302002012 | 47    | 24         | 23       | 48.9             | 6                | 12.8             |
| 060650303003003 | 32    | 20         | 12       | 37.5             | 4                | 12.5             |
| 060650303004024 | 215   | 150        | 65       | 30.2             | 22               | 10.2             |
| 060650303004026 | 34    | 13         | 21       | 61.8             | 14               | 41.2             |
| 060650303004023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303004014 | 27    | 5          | 22       | 81.5             | 7                | 25.9             |
| 060650303004022 | 2     | 1          | 1        | 50.0             | 1                | 50.0             |
| 060650303004015 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650303004021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303004027 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303004020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303004016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303004011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302002014 | 91    | 56         | 35       | 38.5             | 23               | 25.3             |
| 060650303004013 | 78    | 18         | 60       | 76.9             | 48               | 61.5             |
| 060650302002001 | 51    | 27         | 24       | 47.1             | 22               | 43.1             |
| 060650302002013 | 59    | 18         | 41       | 69.5             | 32               | 54.2             |
| 060650302002000 | 94    | 29         | 65       | 69.1             | 57               | 60.6             |
| 060650303004012 | 18    | 6          | 12       | 66.7             | 10               | 55.6             |
| 060650303004004 | 80    | 38         | 42       | 52.5             | 29               | 36.3             |
| 060650303004005 | 102   | 50         | 52       | 51.0             | 32               | 31.4             |
| 060650303004003 | 101   | 40         | 61       | 60.4             | 41               | 40.6             |
| 060650303004002 | 105   | 55         | 50       | 47.6             | 38               | 36.2             |
| 060650303005012 | 40    | 15         | 25       | 62.5             | 20               | 50.0             |
| 060650302002009 | 2     | 1          | 1        | 50.0             | 0                | 0.0              |
| 060650302002010 | 45    | 32         | 13       | 28.9             | 12               | 26.7             |
| 060650302002003 | 41    | 27         | 14       | 34.1             | 7                | 17.1             |
| 060650302001034 | 31    | 20         | 11       | 35.5             | 11               | 35.5             |
| 060650302002002 | 31    | 20         | 11       | 35.5             | 11               | 35.5             |
| 060650302001033 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001001 | 208   | 154        | 54       | 26.0             | 20               | 9.6              |
| 060650302001997 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001032 | 57    | 27         | 30       | 52.6             | 24               | 42.1             |
| 060650302001029 | 58    | 42         | 16       | 27.6             | 11               | 19.0             |
| 060650302001028 | 59    | 34         | 25       | 42.4             | 19               | 32.2             |
| 060650302001014 | 76    | 66         | 10       | 13.2             | 4                | 5.3              |
| 060650302001027 | 44    | 21         | 23       | 52.3             | 21               | 47.7             |
| 060650302001015 | 35    | 25         | 10       | 28.6             | 9                | 25.7             |
| 060650302001031 | 71    | 24         | 47       | 66.2             | 32               | 45.1             |
| 060650302001030 | 28    | 11         | 17       | 60.7             | 11               | 39.3             |
| 060650303005005 | 64    | 25         | 39       | 60.9             | 30               | 46.9             |
| 060650302001026 | 59    | 31         | 28       | 47.5             | 19               | 32.2             |
| 060650302001025 | 61    | 40         | 21       | 34.4             | 11               | 18.0             |
| 060650302001016 | 48    | 34         | 14       | 29.2             | 11               | 22.9             |
| 060650302001013 | 35    | 25         | 10       | 28.6             | 10               | 28.6             |
| 060650402011001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650402011997 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650402011002 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650402011998 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001998 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401001013 | 60    | 5          | 55       | 91.7             | 48               | 80.0             |
| 060650401009016 | 200   | 2          | 198      | 99.0             | 135              | 67.5             |
| 060650401009997 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401001017 | 114   | 3          | 111      | 97.4             | 94               | 82.5             |
| 060650401001016 | 90    | 0          | 90       | 100.0            | 71               | 78.9             |
| 060650401001018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001996 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301004006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401009998 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401003011 | 149   | 32         | 117      | 78.5             | 115              | 77.2             |
| 060650401003016 | 121   | 45         | 76       | 62.8             | 74               | 61.2             |
| 060650401003017 | 170   | 48         | 122      | 71.8             | 115              | 67.6             |
| 060650401003010 | 102   | 33         | 69       | 67.6             | 67               | 65.7             |
| 060650401003009 | 126   | 68         | 58       | 46.0             | 58               | 46.0             |
| 060650401003008 | 155   | 39         | 116      | 74.8             | 110              | 71.0             |
| 060650401009031 | 9     | 0          | 9        | 100.0            | 0                | 0.0              |
| 060650401003019 | 138   | 25         | 113      | 81.9             | 95               | 68.8             |
| 060650401003005 | 312   | 93         | 219      | 70.2             | 181              | 58.0             |
| 060650401003006 | 157   | 54         | 103      | 65.6             | 86               | 54.8             |
| 060650401009060 | 70    | 38         | 32       | 45.7             | 30               | 42.9             |
| 060650401009056 | 115   | 31         | 84       | 73.0             | 70               | 60.9             |
| 060650401009032 | 14    | 8          | 6        | 42.9             | 6                | 42.9             |
| 060650401009033 | 117   | 58         | 59       | 50.4             | 53               | 45.3             |
| 060650401009034 | 80    | 48         | 32       | 40.0             | 32               | 40.0             |
| 060650401009041 | 121   | 57         | 64       | 52.9             | 57               | 47.1             |
| 060650401009040 | 79    | 43         | 36       | 45.6             | 17               | 21.5             |
| 060650401009023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401003004 | 83    | 15         | 68       | 81.9             | 66               | 79.5             |
| 060650401009055 | 121   | 43         | 78       | 64.5             | 62               | 51.2             |
| 060650401009059 | 75    | 38         | 37       | 49.3             | 32               | 42.7             |
| 060650401009058 | 60    | 28         | 32       | 53.3             | 28               | 46.7             |
| 060650401009057 | 60    | 19         | 41       | 68.3             | 29               | 48.3             |
| 060650401009053 | 226   | 50         | 176      | 77.9             | 152              | 67.3             |
| 060650401009052 | 34    | 8          | 26       | 76.5             | 21               | 61.8             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650401009054 | 67    | 44         | 23       | 34.3             | 20               | 29.9             |
| 060650401009017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401009018 | 33    | 22         | 11       | 33.3             | 6                | 18.2             |
| 060650401009039 | 70    | 44         | 26       | 37.1             | 23               | 32.9             |
| 060650401009042 | 154   | 68         | 86       | 55.8             | 71               | 46.1             |
| 060650401009038 | 55    | 31         | 24       | 43.6             | 20               | 36.4             |
| 060650401009037 | 36    | 13         | 23       | 63.9             | 21               | 58.3             |
| 060650401009019 | 97    | 57         | 40       | 41.2             | 29               | 29.9             |
| 060650401009051 | 75    | 51         | 24       | 32.0             | 22               | 29.3             |
| 060650401009050 | 39    | 27         | 12       | 30.8             | 9                | 23.1             |
| 060650401009020 | 154   | 68         | 86       | 55.8             | 64               | 41.6             |
| 060650401009043 | 19    | 15         | 4        | 21.1             | 4                | 21.1             |
| 060650401009044 | 27    | 10         | 17       | 63.0             | 15               | 55.6             |
| 060650401009045 | 59    | 32         | 27       | 45.8             | 19               | 32.2             |
| 060650401009049 | 67    | 31         | 36       | 53.7             | 29               | 43.3             |
| 060650401009036 | 37    | 28         | 9        | 24.3             | 4                | 10.8             |
| 060650401009035 | 47    | 25         | 22       | 46.8             | 21               | 44.7             |
| 060650401009022 | 10    | 6          | 4        | 40.0             | 4                | 40.0             |
| 060650401009021 | 7     | 1          | 6        | 85.7             | 6                | 85.7             |
| 060710026015024 | 261   | 53         | 208      | 79.7             | 117              | 44.8             |
| 060650401009046 | 54    | 28         | 26       | 48.1             | 25               | 46.3             |
| 060650401009047 | 22    | 15         | 7        | 31.8             | 7                | 31.8             |
| 060650401009048 | 15    | 11         | 4        | 26.7             | 2                | 13.3             |
| 060710040002039 | 5     | 5          | 0        | 0.0              | 0                | 0.0              |
| 060710040002038 | 135   | 7          | 128      | 94.8             | 128              | 94.8             |
| 060710040002031 | 106   | 15         | 91       | 85.8             | 89               | 84.0             |
| 060710040002030 | 115   | 13         | 102      | 88.7             | 93               | 80.9             |
| 060710026015025 | 339   | 81         | 258      | 76.1             | 133              | 39.2             |
| 060710026015019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710026015012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710026015023 | 24    | 21         | 3        | 12.5             | 3                | 12.5             |
| 060710026015021 | 102   | 58         | 44       | 43.1             | 44               | 43.1             |
| 060710026015020 | 24    | 3          | 21       | 87.5             | 16               | 66.7             |
| 060710026015018 | 159   | 71         | 88       | 55.3             | 78               | 49.1             |
| 060710026015017 | 57    | 17         | 40       | 70.2             | 36               | 63.2             |
| 060710026015022 | 225   | 109        | 116      | 51.6             | 108              | 48.0             |
| 060710026015016 | 119   | 60         | 59       | 49.6             | 57               | 47.9             |
| 060710040002011 | 90    | 7          | 83       | 92.2             | 70               | 77.8             |
| 060710026015013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710033008004 | 40    | 8          | 32       | 80.0             | 32               | 80.0             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710026015014 | 29    | 6          | 23       | 79.3             | 23               | 79.3             |
| 060710026015000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710033007002 | 538   | 196        | 342      | 63.6             | 300              | 55.8             |
| 060710026015015 | 58    | 22         | 36       | 62.1             | 34               | 58.6             |
| 060710033008005 | 93    | 39         | 54       | 58.1             | 54               | 58.1             |
| 060710033008003 | 133   | 50         | 83       | 62.4             | 81               | 60.9             |
| 060710040002001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710033008002 | 116   | 47         | 69       | 59.5             | 62               | 53.4             |
| 060710033008001 | 694   | 279        | 415      | 59.8             | 313              | 45.1             |
| 060710034033009 | 31    | 11         | 20       | 64.5             | 19               | 61.3             |
| 060710033008000 | 138   | 40         | 98       | 71.0             | 92               | 66.7             |
| 060710036025005 | 205   | 81         | 124      | 60.5             | 107              | 52.2             |
| 060650401009006 | 401   | 131        | 270      | 67.3             | 209              | 52.1             |
| 060650401001004 | 3     | 1          | 2        | 66.7             | 2                | 66.7             |
| 060650401001003 | 53    | 11         | 42       | 79.2             | 29               | 54.7             |
| 060650401001012 | 6     | 1          | 5        | 83.3             | 1                | 16.7             |
| 060650401009005 | 74    | 46         | 28       | 37.8             | 24               | 32.4             |
| 060710040004029 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040002040 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040002037 | 120   | 11         | 109      | 90.8             | 109              | 90.8             |
| 060710040002041 | 92    | 2          | 90       | 97.8             | 90               | 97.8             |
| 060710040002036 | 97    | 27         | 70       | 72.2             | 66               | 68.0             |
| 060710040002032 | 90    | 23         | 67       | 74.4             | 67               | 74.4             |
| 060710040002029 | 83    | 11         | 72       | 86.7             | 71               | 85.5             |
| 060710040002033 | 102   | 23         | 79       | 77.5             | 71               | 69.6             |
| 060710040002028 | 126   | 20         | 106      | 84.1             | 105              | 83.3             |
| 060710040004028 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040002042 | 102   | 31         | 71       | 69.6             | 71               | 69.6             |
| 060710040002035 | 108   | 15         | 93       | 86.1             | 93               | 86.1             |
| 060710040003014 | 84    | 19         | 65       | 77.4             | 65               | 77.4             |
| 060710040003013 | 125   | 9          | 116      | 92.8             | 107              | 85.6             |
| 060710040002034 | 118   | 26         | 92       | 78.0             | 90               | 76.3             |
| 060710040002027 | 124   | 22         | 102      | 82.3             | 98               | 79.0             |
| 060710040003010 | 92    | 20         | 72       | 78.3             | 66               | 71.7             |
| 060710040003009 | 105   | 8          | 97       | 92.4             | 96               | 91.4             |
| 060710040002026 | 9     | 0          | 9        | 100.0            | 9                | 100.0            |
| 060710040003006 | 52    | 0          | 52       | 100.0            | 49               | 94.2             |
| 060710040004030 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040004032 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040004031 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710040004035 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401009004 | 38    | 18         | 20       | 52.6             | 20               | 52.6             |
| 060650401009003 | 81    | 31         | 50       | 61.7             | 50               | 61.7             |
| 060650401009002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040004034 | 44    | 7          | 37       | 84.1             | 28               | 63.6             |
| 060710040004033 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040004027 | 90    | 6          | 84       | 93.3             | 82               | 91.1             |
| 060710040004036 | 78    | 12         | 66       | 84.6             | 63               | 80.8             |
| 060710040004039 | 179   | 25         | 154      | 86.0             | 148              | 82.7             |
| 060710040003017 | 103   | 12         | 91       | 88.3             | 81               | 78.6             |
| 060710040003016 | 237   | 17         | 220      | 92.8             | 198              | 83.5             |
| 060710040003015 | 68    | 15         | 53       | 77.9             | 53               | 77.9             |
| 060710040003012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040004023 | 55    | 2          | 53       | 96.4             | 52               | 94.5             |
| 060710040004017 | 46    | 5          | 41       | 89.1             | 41               | 89.1             |
| 060710040004018 | 61    | 10         | 51       | 83.6             | 47               | 77.0             |
| 060710040003011 | 74    | 26         | 48       | 64.9             | 42               | 56.8             |
| 060710040003008 | 84    | 19         | 65       | 77.4             | 65               | 77.4             |
| 060710040003007 | 40    | 5          | 35       | 87.5             | 35               | 87.5             |
| 060710040004019 | 66    | 7          | 59       | 89.4             | 56               | 84.8             |
| 060710040004020 | 85    | 25         | 60       | 70.6             | 49               | 57.6             |
| 060710040004021 | 27    | 8          | 19       | 70.4             | 17               | 63.0             |
| 060710040004026 | 80    | 23         | 57       | 71.3             | 50               | 62.5             |
| 060710040004025 | 97    | 14         | 83       | 85.6             | 75               | 77.3             |
| 060710040004024 | 22    | 14         | 8        | 36.4             | 4                | 18.2             |
| 060710040004016 | 37    | 8          | 29       | 78.4             | 29               | 78.4             |
| 060650401001014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401001002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401001001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401001015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401009007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401001000 | 8     | 0          | 8        | 100.0            | 8                | 100.0            |
| 060650401009001 | 120   | 18         | 102      | 85.0             | 98               | 81.7             |
| 060650401009014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401009008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401009015 | 9     | 4          | 5        | 55.6             | 3                | 33.3             |
| 060650401009009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401009013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401009012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401009010 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650401009011 | 5     | 0          | 5        | 100.0            | 0                | 0.0              |
| 060710040004037 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040004038 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040004015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040004011 | 523   | 138        | 385      | 73.6             | 368              | 70.4             |
| 060710040004014 | 17    | 7          | 10       | 58.8             | 10               | 58.8             |
| 060710040009097 | 128   | 52         | 76       | 59.4             | 72               | 56.3             |
| 060650401009000 | 50    | 14         | 36       | 72.0             | 34               | 68.0             |
| 060710040009098 | 43    | 11         | 32       | 74.4             | 31               | 72.1             |
| 060710040009095 | 18    | 11         | 7        | 38.9             | 7                | 38.9             |
| 060710040009096 | 45    | 23         | 22       | 48.9             | 22               | 48.9             |
| 060710040002023 | 8     | 0          | 8        | 100.0            | 8                | 100.0            |
| 060710040002024 | 145   | 58         | 87       | 60.0             | 76               | 52.4             |
| 060710040002022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040002025 | 16    | 0          | 16       | 100.0            | 15               | 93.8             |
| 060710040003005 | 39    | 8          | 31       | 79.5             | 29               | 74.4             |
| 060710040003002 | 86    | 22         | 64       | 74.4             | 63               | 73.3             |
| 060710040003001 | 69    | 22         | 47       | 68.1             | 47               | 68.1             |
| 060710040002020 | 162   | 76         | 86       | 53.1             | 82               | 50.6             |
| 060710040002010 | 351   | 129        | 222      | 63.2             | 185              | 52.7             |
| 060710040002012 | 49    | 15         | 34       | 69.4             | 34               | 69.4             |
| 060710040002019 | 54    | 19         | 35       | 64.8             | 34               | 63.0             |
| 060710040002009 | 97    | 24         | 73       | 75.3             | 61               | 62.9             |
| 060710040002008 | 121   | 29         | 92       | 76.0             | 82               | 67.8             |
| 060710040002007 | 121   | 29         | 92       | 76.0             | 71               | 58.7             |
| 060710040002015 | 60    | 6          | 54       | 90.0             | 52               | 86.7             |
| 060710040002013 | 179   | 73         | 106      | 59.2             | 104              | 58.1             |
| 060710040002014 | 263   | 12         | 251      | 95.4             | 240              | 91.3             |
| 060710040002016 | 310   | 69         | 241      | 77.7             | 192              | 61.9             |
| 060710040003004 | 39    | 22         | 17       | 43.6             | 17               | 43.6             |
| 060710040003003 | 91    | 25         | 66       | 72.5             | 66               | 72.5             |
| 060710040003000 | 68    | 17         | 51       | 75.0             | 45               | 66.2             |
| 060710040004022 | 51    | 4          | 47       | 92.2             | 43               | 84.3             |
| 060710040004010 | 81    | 15         | 66       | 81.5             | 65               | 80.2             |
| 060710040004009 | 25    | 6          | 19       | 76.0             | 19               | 76.0             |
| 060710040002021 | 85    | 23         | 62       | 72.9             | 50               | 58.8             |
| 060710040004008 | 39    | 17         | 22       | 56.4             | 16               | 41.0             |
| 060710040002017 | 407   | 127        | 280      | 68.8             | 255              | 62.7             |
| 060710040002018 | 84    | 5          | 79       | 94.0             | 76               | 90.5             |
| 060710040001047 | 80    | 27         | 53       | 66.3             | 46               | 57.5             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710040001024 | 885   | 311        | 574      | 64.9             | 509              | 57.5             |
| 060710040002006 | 90    | 30         | 60       | 66.7             | 60               | 66.7             |
| 060710036025019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036025018 | 609   | 235        | 374      | 61.4             | 277              | 45.5             |
| 060710036025020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040002005 | 122   | 11         | 111      | 91.0             | 111              | 91.0             |
| 060710040002000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036025017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036025016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036025015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036025009 | 190   | 94         | 96       | 50.5             | 76               | 40.0             |
| 060710036025006 | 226   | 60         | 166      | 73.5             | 159              | 70.4             |
| 060710036025004 | 124   | 2          | 122      | 98.4             | 96               | 77.4             |
| 060710036025010 | 99    | 19         | 80       | 80.8             | 79               | 79.8             |
| 060710036025003 | 209   | 25         | 184      | 88.0             | 168              | 80.4             |
| 060710036025007 | 109   | 15         | 94       | 86.2             | 93               | 85.3             |
| 060710036025002 | 105   | 1          | 104      | 99.0             | 92               | 87.6             |
| 060710040002004 | 100   | 31         | 69       | 69.0             | 63               | 63.0             |
| 060710040002002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040002003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036025021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036025022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036025014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036025023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036025013 | 5     | 0          | 5        | 100.0            | 5                | 100.0            |
| 060710036024007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036024006 | 11    | 2          | 9        | 81.8             | 9                | 81.8             |
| 060710040001023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036024009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036024008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036024010 | 38    | 18         | 20       | 52.6             | 16               | 42.1             |
| 060710040001013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036024013 | 28    | 7          | 21       | 75.0             | 21               | 75.0             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710036024011 | 27    | 14         | 13       | 48.1             | 12               | 44.4             |
| 060710036025011 | 110   | 28         | 82       | 74.5             | 80               | 72.7             |
| 060710036025008 | 194   | 28         | 166      | 85.6             | 149              | 76.8             |
| 060710036025012 | 83    | 25         | 58       | 69.9             | 49               | 59.0             |
| 060710036025001 | 183   | 18         | 165      | 90.2             | 138              | 75.4             |
| 060710036025000 | 174   | 39         | 135      | 77.6             | 135              | 77.6             |
| 060710036021030 | 99    | 9          | 90       | 90.9             | 75               | 75.8             |
| 060710036024005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036024012 | 50    | 1          | 49       | 98.0             | 49               | 98.0             |
| 060710036024004 | 64    | 12         | 52       | 81.3             | 52               | 81.3             |
| 060710036023015 | 68    | 18         | 50       | 73.5             | 46               | 67.6             |
| 060710036024003 | 60    | 12         | 48       | 80.0             | 47               | 78.3             |
| 060710036023014 | 27    | 15         | 12       | 44.4             | 11               | 40.7             |
| 060710036024002 | 365   | 111        | 254      | 69.6             | 232              | 63.6             |
| 060710036021029 | 25    | 2          | 23       | 92.0             | 23               | 92.0             |
| 060710036024000 | 119   | 66         | 53       | 44.5             | 51               | 42.9             |
| 060710036024001 | 66    | 31         | 35       | 53.0             | 28               | 42.4             |
| 060710036023004 | 61    | 5          | 56       | 91.8             | 56               | 91.8             |
| 060710036021028 | 41    | 6          | 35       | 85.4             | 34               | 82.9             |
| 060710036022033 | 12    | 4          | 8        | 66.7             | 6                | 50.0             |
| 060710040004007 | 109   | 55         | 54       | 49.5             | 41               | 37.6             |
| 060710040004012 | 15    | 6          | 9        | 60.0             | 8                | 53.3             |
| 060710040004005 | 130   | 48         | 82       | 63.1             | 54               | 41.5             |
| 060710040004013 | 143   | 61         | 82       | 57.3             | 81               | 56.6             |
| 060710040004006 | 87    | 41         | 46       | 52.9             | 38               | 43.7             |
| 060710040001048 | 46    | 20         | 26       | 56.5             | 26               | 56.5             |
| 060710040001050 | 108   | 49         | 59       | 54.6             | 59               | 54.6             |
| 060710040001049 | 87    | 48         | 39       | 44.8             | 39               | 44.8             |
| 060710040001046 | 207   | 86         | 121      | 58.5             | 110              | 53.1             |
| 060710040001045 | 60    | 42         | 18       | 30.0             | 18               | 30.0             |
| 060710040001025 | 117   | 53         | 64       | 54.7             | 58               | 49.6             |
| 060710040001041 | 26    | 18         | 8        | 30.8             | 8                | 30.8             |
| 060710040001043 | 57    | 27         | 30       | 52.6             | 21               | 36.8             |
| 060710040001044 | 60    | 19         | 41       | 68.3             | 36               | 60.0             |
| 060710040001026 | 42    | 13         | 29       | 69.0             | 29               | 69.0             |
| 060710040004003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040004002 | 224   | 78         | 146      | 65.2             | 143              | 63.8             |
| 060710040004001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040004004 | 23    | 13         | 10       | 43.5             | 10               | 43.5             |
| 060710040009094 | 12    | 6          | 6        | 50.0             | 6                | 50.0             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710040004000 | 30    | 13         | 17       | 56.7             | 14               | 46.7             |
| 060710040001042 | 36    | 13         | 23       | 63.9             | 14               | 38.9             |
| 060710040001040 | 11    | 7          | 4        | 36.4             | 4                | 36.4             |
| 060710040001027 | 59    | 31         | 28       | 47.5             | 22               | 37.3             |
| 060710040001039 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060710040001019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036023019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036023021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036023020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036023016 | 56    | 17         | 39       | 69.6             | 35               | 62.5             |
| 060710036023017 | 51    | 30         | 21       | 41.2             | 21               | 41.2             |
| 060710036023013 | 37    | 20         | 17       | 45.9             | 17               | 45.9             |
| 060710036023012 | 46    | 13         | 33       | 71.7             | 32               | 69.6             |
| 060710036023005 | 85    | 26         | 59       | 69.4             | 57               | 67.1             |
| 060710036023018 | 67    | 7          | 60       | 89.6             | 57               | 85.1             |
| 060710036023011 | 67    | 13         | 54       | 80.6             | 54               | 80.6             |
| 060710036023003 | 4     | 4          | 0        | 0.0              | 0                | 0.0              |
| 060710036023002 | 63    | 1          | 62       | 98.4             | 53               | 84.1             |
| 060710036022034 | 27    | 2          | 25       | 92.6             | 21               | 77.8             |
| 060710036023010 | 155   | 24         | 131      | 84.5             | 100              | 64.5             |
| 060710036023006 | 59    | 12         | 47       | 79.7             | 21               | 35.6             |
| 060710036023009 | 86    | 11         | 75       | 87.2             | 53               | 61.6             |
| 060710036023007 | 64    | 17         | 47       | 73.4             | 32               | 50.0             |
| 060710036023001 | 70    | 21         | 49       | 70.0             | 23               | 32.9             |
| 060710036023008 | 71    | 10         | 61       | 85.9             | 25               | 35.2             |
| 060710036023000 | 97    | 18         | 79       | 81.4             | 45               | 46.4             |
| 060710036022038 | 35    | 10         | 25       | 71.4             | 15               | 42.9             |
| 060710040001029 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036015008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001028 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001030 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036016011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001006 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710036016010 | 2     | 0          | 2        | 100.0            | 0                | 0.0              |
| 060710036015007 | 64    | 11         | 53       | 82.8             | 44               | 68.8             |
| 060710036015009 | 46    | 26         | 20       | 43.5             | 20               | 43.5             |
| 060710036015010 | 55    | 24         | 31       | 56.4             | 30               | 54.5             |
| 060710036015011 | 64    | 27         | 37       | 57.8             | 37               | 57.8             |
| 060710036015006 | 92    | 38         | 54       | 58.7             | 41               | 44.6             |
| 060710036015005 | 103   | 43         | 60       | 58.3             | 55               | 53.4             |
| 060710036015012 | 36    | 12         | 24       | 66.7             | 13               | 36.1             |
| 060710036015003 | 39    | 9          | 30       | 76.9             | 19               | 48.7             |
| 060710036015002 | 104   | 24         | 80       | 76.9             | 54               | 51.9             |
| 060710036014013 | 95    | 16         | 79       | 83.2             | 54               | 56.8             |
| 060710036015004 | 190   | 57         | 133      | 70.0             | 110              | 57.9             |
| 060710036015001 | 48    | 6          | 42       | 87.5             | 30               | 62.5             |
| 060710036014014 | 44    | 11         | 33       | 75.0             | 17               | 38.6             |
| 060710036015000 | 53    | 11         | 42       | 79.2             | 26               | 49.1             |
| 060710036014015 | 24    | 3          | 21       | 87.5             | 7                | 29.2             |
| 060710036016003 | 13    | 9          | 4        | 30.8             | 2                | 15.4             |
| 060710036016004 | 2     | 0          | 2        | 100.0            | 0                | 0.0              |
| 060710036016002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036016001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650312001006 | 53    | 41         | 12       | 22.6             | 9                | 17.0             |
| 060650312001004 | 105   | 90         | 15       | 14.3             | 5                | 4.8              |
| 060650312005004 | 67    | 61         | 6        | 9.0              | 2                | 3.0              |
| 060650312001002 | 160   | 124        | 36       | 22.5             | 15               | 9.4              |
| 060650312001003 | 42    | 39         | 3        | 7.1              | 0                | 0.0              |
| 060650312005003 | 51    | 41         | 10       | 19.6             | 7                | 13.7             |
| 060650312001001 | 7     | 5          | 2        | 28.6             | 2                | 28.6             |
| 060650312001000 | 33    | 28         | 5        | 15.2             | 2                | 6.1              |
| 060650306031015 | 22    | 20         | 2        | 9.1              | 2                | 9.1              |
| 060650306021013 | 26    | 26         | 0        | 0.0              | 0                | 0.0              |
| 060650306021012 | 44    | 40         | 4        | 9.1              | 2                | 4.5              |
| 060650306021011 | 156   | 123        | 33       | 21.2             | 18               | 11.5             |
| 060650306031004 | 119   | 98         | 21       | 17.6             | 18               | 15.1             |
| 060650306031007 | 14    | 10         | 4        | 28.6             | 0                | 0.0              |
| 060650306031011 | 35    | 33         | 2        | 5.7              | 1                | 2.9              |
| 060650306031008 | 48    | 43         | 5        | 10.4             | 5                | 10.4             |
| 060650304004019 | 54    | 15         | 39       | 72.2             | 34               | 63.0             |
| 060650304004018 | 77    | 15         | 62       | 80.5             | 49               | 63.6             |
| 060650306031006 | 1     | 0          | 1        | 100.0            | 0                | 0.0              |
| 060650306031005 | 48    | 42         | 6        | 12.5             | 5                | 10.4             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650306031016 | 22    | 22         | 0        | 0.0              | 0                | 0.0              |
| 060650306031002 | 79    | 73         | 6        | 7.6              | 4                | 5.1              |
| 060650306031003 | 16    | 16         | 0        | 0.0              | 0                | 0.0              |
| 060650306031017 | 124   | 99         | 25       | 20.2             | 13               | 10.5             |
| 060650306021021 | 33    | 15         | 18       | 54.5             | 11               | 33.3             |
| 060650306021009 | 43    | 32         | 11       | 25.6             | 8                | 18.6             |
| 060650306021008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650306021002 | 34    | 26         | 8        | 23.5             | 8                | 23.5             |
| 060650306021007 | 80    | 56         | 24       | 30.0             | 9                | 11.3             |
| 060650306021003 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060650306021004 | 56    | 38         | 18       | 32.1             | 11               | 19.6             |
| 060650306021005 | 32    | 20         | 12       | 37.5             | 7                | 21.9             |
| 060650306021006 | 57    | 38         | 19       | 33.3             | 4                | 7.0              |
| 060650306021010 | 49    | 25         | 24       | 49.0             | 8                | 16.3             |
| 060650306033006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650306031023 | 8     | 1          | 7        | 87.5             | 0                | 0.0              |
| 060650306031022 | 100   | 86         | 14       | 14.0             | 2                | 2.0              |
| 060650306031001 | 55    | 55         | 0        | 0.0              | 0                | 0.0              |
| 060650306031018 | 55    | 40         | 15       | 27.3             | 6                | 10.9             |
| 060650306032001 | 24    | 22         | 2        | 8.3              | 1                | 4.2              |
| 060650304002012 | 84    | 54         | 30       | 35.7             | 17               | 20.2             |
| 060650306031019 | 45    | 25         | 20       | 44.4             | 17               | 37.8             |
| 060650306031020 | 48    | 36         | 12       | 25.0             | 7                | 14.6             |
| 060650306031021 | 53    | 49         | 4        | 7.5              | 4                | 7.5              |
| 060650306031000 | 123   | 118        | 5        | 4.1              | 4                | 3.3              |
| 060650304004011 | 105   | 13         | 92       | 87.6             | 85               | 81.0             |
| 060650304004005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304004004 | 51    | 19         | 32       | 62.7             | 26               | 51.0             |
| 060650304004017 | 50    | 7          | 43       | 86.0             | 31               | 62.0             |
| 060650304004016 | 41    | 1          | 40       | 97.6             | 29               | 70.7             |
| 060650304004012 | 58    | 2          | 56       | 96.6             | 48               | 82.8             |
| 060650304004002 | 68    | 0          | 68       | 100.0            | 58               | 85.3             |
| 060650304004013 | 89    | 9          | 80       | 89.9             | 77               | 86.5             |
| 060650304003021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304003022 | 13    | 0          | 13       | 100.0            | 0                | 0.0              |
| 060650304003020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304004003 | 8     | 0          | 8        | 100.0            | 8                | 100.0            |
| 060650304003007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304003009 | 2     | 2          | 0        | 0.0              | 0                | 0.0              |
| 060650304003023 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650304003019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304003024 | 86    | 8          | 78       | 90.7             | 78               | 90.7             |
| 060650304003018 | 70    | 6          | 64       | 91.4             | 58               | 82.9             |
| 060650304003010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304003005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304003011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304003004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304004015 | 94    | 9          | 85       | 90.4             | 49               | 52.1             |
| 060650304004014 | 97    | 5          | 92       | 94.8             | 47               | 48.5             |
| 060650304004001 | 62    | 4          | 58       | 93.5             | 54               | 87.1             |
| 060650304003025 | 36    | 0          | 36       | 100.0            | 19               | 52.8             |
| 060650304004000 | 73    | 6          | 67       | 91.8             | 59               | 80.8             |
| 060650304002011 | 76    | 27         | 49       | 64.5             | 35               | 46.1             |
| 060650304002010 | 166   | 39         | 127      | 76.5             | 50               | 30.1             |
| 060650304003026 | 96    | 0          | 96       | 100.0            | 77               | 80.2             |
| 060650304003016 | 101   | 8          | 93       | 92.1             | 69               | 68.3             |
| 060650304003017 | 70    | 8          | 62       | 88.6             | 52               | 74.3             |
| 060650304003013 | 44    | 0          | 44       | 100.0            | 33               | 75.0             |
| 060650304003012 | 58    | 0          | 58       | 100.0            | 47               | 81.0             |
| 060650304003003 | 16    | 0          | 16       | 100.0            | 16               | 100.0            |
| 060650304003014 | 45    | 3          | 42       | 93.3             | 30               | 66.7             |
| 060650304003015 | 1     | 0          | 1        | 100.0            | 1                | 100.0            |
| 060650304003002 | 161   | 1          | 160      | 99.4             | 148              | 91.9             |
| 060650304003001 | 24    | 3          | 21       | 87.5             | 21               | 87.5             |
| 060650304005028 | 46    | 0          | 46       | 100.0            | 46               | 100.0            |
| 060650303002024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304003008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303002025 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303002012 | 21    | 12         | 9        | 42.9             | 5                | 23.8             |
| 060650303002010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303002026 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303002011 | 22    | 3          | 19       | 86.4             | 19               | 86.4             |
| 060650304003006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303002006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304005010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303002008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303002007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303002004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303002003 | 779   | 297        | 482      | 61.9             | 261              | 33.5             |
| 060650303002002 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650303002005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304005009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303002001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303002000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303001021 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060650303001022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304005027 | 17    | 1          | 16       | 94.1             | 12               | 70.6             |
| 060650304005014 | 6     | 1          | 5        | 83.3             | 5                | 83.3             |
| 060650304005026 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304005021 | 70    | 2          | 68       | 97.1             | 68               | 97.1             |
| 060650304005020 | 104   | 3          | 101      | 97.1             | 101              | 97.1             |
| 060650304005013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304005008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304005007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304005011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304005006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304005015 | 86    | 0          | 86       | 100.0            | 63               | 73.3             |
| 060650304005012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304005005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304005004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304005003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304002005 | 36    | 11         | 25       | 69.4             | 14               | 38.9             |
| 060650304002009 | 107   | 2          | 105      | 98.1             | 27               | 25.2             |
| 060650304002013 | 48    | 25         | 23       | 47.9             | 0                | 0.0              |
| 060650304002006 | 127   | 18         | 109      | 85.8             | 47               | 37.0             |
| 060650304002007 | 69    | 13         | 56       | 81.2             | 35               | 50.7             |
| 060650304002008 | 156   | 15         | 141      | 90.4             | 100              | 64.1             |
| 060650304002003 | 16    | 0          | 16       | 100.0            | 16               | 100.0            |
| 060650304002004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304003000 | 74    | 7          | 67       | 90.5             | 67               | 90.5             |
| 060650304005029 | 99    | 0          | 99       | 100.0            | 80               | 80.8             |
| 060650304005024 | 82    | 0          | 82       | 100.0            | 77               | 93.9             |
| 060650304002002 | 215   | 8          | 207      | 96.3             | 134              | 62.3             |
| 060650304002000 | 253   | 23         | 230      | 90.9             | 175              | 69.2             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650304002001 | 68    | 3          | 65       | 95.6             | 31               | 45.6             |
| 060650304005030 | 56    | 2          | 54       | 96.4             | 48               | 85.7             |
| 060650305013011 | 92    | 23         | 69       | 75.0             | 30               | 32.6             |
| 060650305013012 | 102   | 17         | 85       | 83.3             | 39               | 38.2             |
| 060650305013010 | 107   | 21         | 86       | 80.4             | 65               | 60.7             |
| 060650305013009 | 49    | 6          | 43       | 87.8             | 19               | 38.8             |
| 060650305013008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304005031 | 53    | 3          | 50       | 94.3             | 42               | 79.2             |
| 060650305013007 | 28    | 0          | 28       | 100.0            | 6                | 21.4             |
| 060650305013005 | 75    | 1          | 74       | 98.7             | 64               | 85.3             |
| 060650305013002 | 96    | 0          | 96       | 100.0            | 86               | 89.6             |
| 060650304005025 | 98    | 0          | 98       | 100.0            | 83               | 84.7             |
| 060650304005022 | 124   | 3          | 121      | 97.6             | 116              | 93.5             |
| 060650304005019 | 68    | 0          | 68       | 100.0            | 65               | 95.6             |
| 060650304005023 | 146   | 7          | 139      | 95.2             | 129              | 88.4             |
| 060650304005018 | 163   | 1          | 162      | 99.4             | 144              | 88.3             |
| 060650304005016 | 142   | 2          | 140      | 98.6             | 139              | 97.9             |
| 060650304005002 | 44    | 0          | 44       | 100.0            | 42               | 95.5             |
| 060650304001024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001025 | 17    | 1          | 16       | 94.1             | 16               | 94.1             |
| 060650304005001 | 53    | 1          | 52       | 98.1             | 32               | 60.4             |
| 060650304001026 | 105   | 14         | 91       | 86.7             | 88               | 83.8             |
| 060650304001018 | 101   | 6          | 95       | 94.1             | 80               | 79.2             |
| 060650304005017 | 130   | 0          | 130      | 100.0            | 106              | 81.5             |
| 060650304005000 | 83    | 4          | 79       | 95.2             | 53               | 63.9             |
| 060650305013001 | 67    | 0          | 67       | 100.0            | 58               | 86.6             |
| 060650305022011 | 96    | 2          | 94       | 97.9             | 87               | 90.6             |
| 060650305022008 | 88    | 1          | 87       | 98.9             | 79               | 89.8             |
| 060650305022007 | 51    | 8          | 43       | 84.3             | 31               | 60.8             |
| 060650304001028 | 155   | 32         | 123      | 79.4             | 110              | 71.0             |
| 060650304001027 | 129   | 11         | 118      | 91.5             | 102              | 79.1             |
| 060650304001017 | 158   | 30         | 128      | 81.0             | 114              | 72.2             |
| 060650305022003 | 41    | 8          | 33       | 80.5             | 33               | 80.5             |
| 060650305022002 | 145   | 8          | 137      | 94.5             | 136              | 93.8             |
| 060650305022004 | 9     | 2          | 7        | 77.8             | 5                | 55.6             |
| 060650305022001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305021033 | 110   | 7          | 103      | 93.6             | 103              | 93.6             |
| 060650305021032 | 110   | 1          | 109      | 99.1             | 109              | 99.1             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650306033007 | 68    | 65         | 3        | 4.4              | 2                | 2.9              |
| 060650306021000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650306033013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650306033004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650306033003 | 43    | 37         | 6        | 14.0             | 0                | 0.0              |
| 060650306033005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650306033002 | 23    | 22         | 1        | 4.3              | 0                | 0.0              |
| 060650306033001 | 19    | 19         | 0        | 0.0              | 0                | 0.0              |
| 060650306033008 | 45    | 35         | 10       | 22.2             | 1                | 2.2              |
| 060650306033009 | 54    | 47         | 7        | 13.0             | 0                | 0.0              |
| 060650306033014 | 69    | 63         | 6        | 8.7              | 3                | 4.3              |
| 060650306033012 | 51    | 42         | 9        | 17.6             | 3                | 5.9              |
| 060650306033010 | 46    | 38         | 8        | 17.4             | 3                | 6.5              |
| 060650306033011 | 35    | 33         | 2        | 5.7              | 2                | 5.7              |
| 060650306033000 | 54    | 26         | 28       | 51.9             | 13               | 24.1             |
| 060650306032009 | 137   | 117        | 20       | 14.6             | 10               | 7.3              |
| 060650306032006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650306032005 | 36    | 31         | 5        | 13.9             | 1                | 2.8              |
| 060650306032000 | 184   | 149        | 35       | 19.0             | 25               | 13.6             |
| 060650306032004 | 78    | 70         | 8        | 10.3             | 5                | 6.4              |
| 060650306032002 | 7     | 7          | 0        | 0.0              | 0                | 0.0              |
| 060650306032003 | 120   | 108        | 12       | 10.0             | 8                | 6.7              |
| 060650305011004 | 263   | 147        | 116      | 44.1             | 61               | 23.2             |
| 060650306032007 | 250   | 183        | 67       | 26.8             | 41               | 16.4             |
| 060650422081005 | 29    | 25         | 4        | 13.8             | 2                | 6.9              |
| 060650306032008 | 67    | 43         | 24       | 35.8             | 9                | 13.4             |
| 060650422072003 | 20    | 19         | 1        | 5.0              | 1                | 5.0              |
| 060650422081004 | 51    | 43         | 8        | 15.7             | 6                | 11.8             |
| 060650422072002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422062011 | 387   | 169        | 218      | 56.3             | 92               | 23.8             |
| 060650422062012 | 33    | 20         | 13       | 39.4             | 0                | 0.0              |
| 060650422062005 | 170   | 104        | 66       | 38.8             | 29               | 17.1             |
| 060650422062006 | 45    | 32         | 13       | 28.9             | 2                | 4.4              |
| 060650305013013 | 8     | 0          | 8        | 100.0            | 0                | 0.0              |
| 060650305013014 | 79    | 1          | 78       | 98.7             | 39               | 49.4             |
| 060650305014006 | 51    | 0          | 51       | 100.0            | 17               | 33.3             |
| 060650305014005 | 101   | 20         | 81       | 80.2             | 13               | 12.9             |
| 060650305013006 | 71    | 2          | 69       | 97.2             | 36               | 50.7             |
| 060650305014004 | 94    | 2          | 92       | 97.9             | 13               | 13.8             |
| 060650305013004 | 68    | 0          | 68       | 100.0            | 47               | 69.1             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650305013003 | 63    | 0          | 63       | 100.0            | 42               | 66.7             |
| 060650305014003 | 145   | 12         | 133      | 91.7             | 71               | 49.0             |
| 060650305014002 | 134   | 1          | 133      | 99.3             | 70               | 52.2             |
| 060650305014001 | 148   | 11         | 137      | 92.6             | 93               | 62.8             |
| 060650305014000 | 122   | 2          | 120      | 98.4             | 71               | 58.2             |
| 060650305011003 | 123   | 10         | 113      | 91.9             | 86               | 69.9             |
| 060650305011002 | 222   | 58         | 164      | 73.9             | 120              | 54.1             |
| 060650305011001 | 246   | 7          | 239      | 97.2             | 166              | 67.5             |
| 060650305011000 | 327   | 19         | 308      | 94.2             | 201              | 61.5             |
| 060650305013000 | 110   | 0          | 110      | 100.0            | 94               | 85.5             |
| 060650305022010 | 125   | 4          | 121      | 96.8             | 107              | 85.6             |
| 060650305022009 | 120   | 3          | 117      | 97.5             | 108              | 90.0             |
| 060650305022006 | 64    | 5          | 59       | 92.2             | 47               | 73.4             |
| 060650305012007 | 94    | 0          | 94       | 100.0            | 59               | 62.8             |
| 060650305012005 | 4     | 0          | 4        | 100.0            | 2                | 50.0             |
| 060650305012004 | 44    | 10         | 34       | 77.3             | 30               | 68.2             |
| 060650305012003 | 89    | 37         | 52       | 58.4             | 29               | 32.6             |
| 060650305022005 | 78    | 8          | 70       | 89.7             | 68               | 87.2             |
| 060650305022000 | 226   | 22         | 204      | 90.3             | 194              | 85.8             |
| 060650305031003 | 87    | 14         | 73       | 83.9             | 67               | 77.0             |
| 060650305031004 | 115   | 8          | 107      | 93.0             | 83               | 72.2             |
| 060650305031002 | 353   | 14         | 339      | 96.0             | 312              | 88.4             |
| 060650305031001 | 169   | 14         | 155      | 91.7             | 132              | 78.1             |
| 060650305012006 | 224   | 6          | 218      | 97.3             | 179              | 79.9             |
| 060650305012008 | 321   | 9          | 312      | 97.2             | 294              | 91.6             |
| 060650305012002 | 128   | 17         | 111      | 86.7             | 52               | 40.6             |
| 060650305012010 | 326   | 30         | 296      | 90.8             | 197              | 60.4             |
| 060650305012009 | 190   | 57         | 133      | 70.0             | 71               | 37.4             |
| 060650305012001 | 88    | 3          | 85       | 96.6             | 77               | 87.5             |
| 060650305031005 | 40    | 0          | 40       | 100.0            | 40               | 100.0            |
| 060650305031000 | 157   | 6          | 151      | 96.2             | 144              | 91.7             |
| 060650305033000 | 1,225 | 122        | 1,103    | 90.0             | 991              | 80.9             |
| 060650305033001 | 338   | 34         | 304      | 89.9             | 251              | 74.3             |
| 060650422022006 | 8     | 8          | 0        | 0.0              | 0                | 0.0              |
| 060650422022005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305012000 | 30    | 2          | 28       | 93.3             | 17               | 56.7             |
| 060650422092027 | 4     | 0          | 4        | 100.0            | 0                | 0.0              |
| 060650305032008 | 184   | 7          | 177      | 96.2             | 167              | 90.8             |
| 060650422092023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422092024 | 208   | 36         | 172      | 82.7             | 48               | 23.1             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650422092022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303004019 | 3     | 0          | 3        | 100.0            | 2                | 66.7             |
| 060650303001020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303004018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303004017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303004010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303001019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303001018 | 1     | 0          | 1        | 100.0            | 0                | 0.0              |
| 060650303004009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303004008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303001016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303001015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303004006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303004001 | 69    | 31         | 38       | 55.1             | 28               | 40.6             |
| 060650303004007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303005011 | 35    | 25         | 10       | 28.6             | 7                | 20.0             |
| 060650303005010 | 19    | 13         | 6        | 31.6             | 4                | 21.1             |
| 060650303004000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303005007 | 118   | 60         | 58       | 49.2             | 46               | 39.0             |
| 060650303005008 | 4     | 0          | 4        | 100.0            | 4                | 100.0            |
| 060650303001023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303001017 | 36    | 10         | 26       | 72.2             | 23               | 63.9             |
| 060650303001014 | 163   | 59         | 104      | 63.8             | 25               | 15.3             |
| 060650303001011 | 119   | 37         | 82       | 68.9             | 73               | 61.3             |
| 060650303001024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303001013 | 14    | 1          | 13       | 92.9             | 13               | 92.9             |
| 060650303001012 | 66    | 4          | 62       | 93.9             | 45               | 68.2             |
| 060650303001010 | 220   | 198        | 22       | 10.0             | 15               | 6.8              |
| 060650303001009 | 52    | 16         | 36       | 69.2             | 25               | 48.1             |
| 060650303001004 | 49    | 20         | 29       | 59.2             | 20               | 40.8             |
| 060650303005009 | 116   | 63         | 53       | 45.7             | 26               | 22.4             |
| 060650303005001 | 17    | 7          | 10       | 58.8             | 5                | 29.4             |
| 060650303005000 | 66    | 11         | 55       | 83.3             | 48               | 72.7             |
| 060650303001008 | 116   | 21         | 95       | 81.9             | 71               | 61.2             |
| 060650303001005 | 65    | 35         | 30       | 46.2             | 23               | 35.4             |
| 060650303001007 | 99    | 19         | 80       | 80.8             | 69               | 69.7             |
| 060650303001006 | 77    | 17         | 60       | 77.9             | 42               | 54.5             |
| 060650303001003 | 60    | 19         | 41       | 68.3             | 30               | 50.0             |
| 060650303001002 | 62    | 22         | 40       | 64.5             | 21               | 33.9             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650303005004 | 49    | 32         | 17       | 34.7             | 16               | 32.7             |
| 060650303005006 | 47    | 26         | 21       | 44.7             | 8                | 17.0             |
| 060650303005003 | 73    | 19         | 54       | 74.0             | 49               | 67.1             |
| 060650302001017 | 39    | 30         | 9        | 23.1             | 7                | 17.9             |
| 060650302001018 | 48    | 34         | 14       | 29.2             | 13               | 27.1             |
| 060650302001019 | 19    | 19         | 0        | 0.0              | 0                | 0.0              |
| 060650303005002 | 17    | 1          | 16       | 94.1             | 14               | 82.4             |
| 060650302001024 | 87    | 21         | 66       | 75.9             | 48               | 55.2             |
| 060650302001023 | 52    | 40         | 12       | 23.1             | 11               | 21.2             |
| 060650302001020 | 16    | 16         | 0        | 0.0              | 0                | 0.0              |
| 060650302001005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001995 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001012 | 156   | 92         | 64       | 41.0             | 34               | 21.8             |
| 060650302001010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001994 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650302001021 | 114   | 36         | 78       | 68.4             | 64               | 56.1             |
| 060650301003012 | 97    | 54         | 43       | 44.3             | 20               | 20.6             |
| 060650301002011 | 118   | 27         | 91       | 77.1             | 66               | 55.9             |
| 060650301003003 | 65    | 12         | 53       | 81.5             | 50               | 76.9             |
| 060650302001022 | 31    | 12         | 19       | 61.3             | 10               | 32.3             |
| 060650301003002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301003001 | 179   | 36         | 143      | 79.9             | 118              | 65.9             |
| 060650301003004 | 43    | 20         | 23       | 53.5             | 21               | 48.8             |
| 060650304001011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001015 | 95    | 2          | 93       | 97.9             | 85               | 89.5             |
| 060650304001003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650304001002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650303001001 | 64    | 38         | 26       | 40.6             | 15               | 23.4             |
| 060650305021023 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650305021011 | 9     | 2          | 7        | 77.8             | 7                | 77.8             |
| 060650303001000 | 75    | 19         | 56       | 74.7             | 32               | 42.7             |
| 060650301002012 | 167   | 73         | 94       | 56.3             | 81               | 48.5             |
| 060650305021010 | 71    | 18         | 53       | 74.6             | 50               | 70.4             |
| 060650304001001 | 119   | 24         | 95       | 79.8             | 75               | 63.0             |
| 060650304001016 | 128   | 9          | 119      | 93.0             | 99               | 77.3             |
| 060650304001000 | 29    | 5          | 24       | 82.8             | 24               | 82.8             |
| 060650305021029 | 92    | 5          | 87       | 94.6             | 85               | 92.4             |
| 060650305021028 | 169   | 14         | 155      | 91.7             | 127              | 75.1             |
| 060650305021030 | 72    | 3          | 69       | 95.8             | 69               | 95.8             |
| 060650305021027 | 137   | 22         | 115      | 83.9             | 101              | 73.7             |
| 060650305021022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305021024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301002010 | 242   | 102        | 140      | 57.9             | 114              | 47.1             |
| 060650301002007 | 112   | 35         | 77       | 68.8             | 71               | 63.4             |
| 060650301002009 | 207   | 71         | 136      | 65.7             | 130              | 62.8             |
| 060650301002005 | 153   | 44         | 109      | 71.2             | 88               | 57.5             |
| 060650301003011 | 98    | 20         | 78       | 79.6             | 70               | 71.4             |
| 060650301003010 | 25    | 4          | 21       | 84.0             | 13               | 52.0             |
| 060650301002004 | 72    | 31         | 41       | 56.9             | 36               | 50.0             |
| 060650301002003 | 20    | 9          | 11       | 55.0             | 5                | 25.0             |
| 060650301003009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301003000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301004010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301002008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305021008 | 3     | 0          | 3        | 100.0            | 3                | 100.0            |
| 060650305021009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305021012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301002001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301002006 | 81    | 39         | 42       | 51.9             | 39               | 48.1             |
| 060650301002002 | 2     | 1          | 1        | 50.0             | 1                | 50.0             |
| 060650301004013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301004000 | 51    | 29         | 22       | 43.1             | 9                | 17.6             |
| 060650302001004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301003008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301003007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301004007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301004004 | 138   | 35         | 103      | 74.6             | 93               | 67.4             |
| 060650301003006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301003005 | 59    | 19         | 40       | 67.8             | 38               | 64.4             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650301004008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301004005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301004003 | 60    | 20         | 40       | 66.7             | 40               | 66.7             |
| 060650301005015 | 341   | 75         | 266      | 78.0             | 216              | 63.3             |
| 060650301009007 | 288   | 80         | 208      | 72.2             | 145              | 50.3             |
| 060650301009006 | 116   | 40         | 76       | 65.5             | 44               | 37.9             |
| 060650301009010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301009997 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650401009999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301009009 | 71    | 17         | 54       | 76.1             | 28               | 39.4             |
| 060650301009008 | 77    | 13         | 64       | 83.1             | 35               | 45.5             |
| 060650301005014 | 143   | 20         | 123      | 86.0             | 112              | 78.3             |
| 060650301009003 | 72    | 16         | 56       | 77.8             | 39               | 54.2             |
| 060650301005013 | 199   | 29         | 170      | 85.4             | 142              | 71.4             |
| 060650301009004 | 140   | 64         | 76       | 54.3             | 52               | 37.1             |
| 060650301009005 | 92    | 31         | 61       | 66.3             | 46               | 50.0             |
| 060650301009001 | 513   | 171        | 342      | 66.7             | 271              | 52.8             |
| 060650301004009 | 85    | 34         | 51       | 60.0             | 50               | 58.8             |
| 060650301004011 | 153   | 41         | 112      | 73.2             | 100              | 65.4             |
| 060650301004012 | 160   | 48         | 112      | 70.0             | 109              | 68.1             |
| 060650301004002 | 125   | 33         | 92       | 73.6             | 85               | 68.0             |
| 060650301004001 | 86    | 27         | 59       | 68.6             | 53               | 61.6             |
| 060650301005016 | 155   | 37         | 118      | 76.1             | 90               | 58.1             |
| 060650301005017 | 284   | 72         | 212      | 74.6             | 149              | 52.5             |
| 060650301005004 | 166   | 62         | 104      | 62.7             | 89               | 53.6             |
| 060650301005003 | 405   | 165        | 240      | 59.3             | 214              | 52.8             |
| 060650301005007 | 160   | 50         | 110      | 68.8             | 106              | 66.3             |
| 060650301005010 | 152   | 41         | 111      | 73.0             | 93               | 61.2             |
| 060650301005011 | 43    | 10         | 33       | 76.7             | 27               | 62.8             |
| 060650301005012 | 109   | 34         | 75       | 68.8             | 60               | 55.0             |
| 060650301005009 | 150   | 28         | 122      | 81.3             | 99               | 66.0             |
| 060650301009002 | 30    | 4          | 26       | 86.7             | 24               | 80.0             |
| 060650423001027 | 8     | 0          | 8        | 100.0            | 5                | 62.5             |
| 060650301005008 | 25    | 1          | 24       | 96.0             | 23               | 92.0             |
| 060650423001026 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001025 | 16    | 10         | 6        | 37.5             | 6                | 37.5             |
| 060650305021031 | 69    | 6          | 63       | 91.3             | 62               | 89.9             |
| 060650305021026 | 123   | 5          | 118      | 95.9             | 115              | 93.5             |
| 060650305021025 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305032004 | 792   | 67         | 725      | 91.5             | 662              | 83.6             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650305032005 | 99    | 16         | 83       | 83.8             | 70               | 70.7             |
| 060650305032003 | 77    | 18         | 59       | 76.6             | 46               | 59.7             |
| 060650305021021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305021020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305032007 | 345   | 24         | 321      | 93.0             | 314              | 91.0             |
| 060650305032006 | 84    | 4          | 80       | 95.2             | 71               | 84.5             |
| 060650305032002 | 80    | 14         | 66       | 82.5             | 53               | 66.3             |
| 060650305021018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305021014 | 6     | 0          | 6        | 100.0            | 6                | 100.0            |
| 060650305021017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305021013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305021007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305021005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301002000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305021004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305021006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301001019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650305021003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301001018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301004014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301001020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301001021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301001006 | 57    | 32         | 25       | 43.9             | 15               | 26.3             |
| 060650305021002 | 80    | 32         | 48       | 60.0             | 33               | 41.3             |
| 060650305021001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301001017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301001016 | 124   | 22         | 102      | 82.3             | 85               | 68.5             |
| 060650301001015 | 103   | 32         | 71       | 68.9             | 65               | 63.1             |
| 060650305021000 | 3     | 0          | 3        | 100.0            | 2                | 66.7             |
| 060650301001012 | 123   | 40         | 83       | 67.5             | 62               | 50.4             |
| 060650305032001 | 180   | 6          | 174      | 96.7             | 157              | 87.2             |
| 060650305032000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422092012 | 64    | 17         | 47       | 73.4             | 39               | 60.9             |
| 060650305021019 | 2     | 0          | 2        | 100.0            | 2                | 100.0            |
| 060650305021016 | 4     | 4          | 0        | 0.0              | 0                | 0.0              |
| 060650422092011 | 33    | 11         | 22       | 66.7             | 20               | 60.6             |
| 060650422092008 | 70    | 22         | 48       | 68.6             | 29               | 41.4             |
| 060650422092006 | 43    | 28         | 15       | 34.9             | 12               | 27.9             |
| 060650422092017 | 12    | 0          | 12       | 100.0            | 0                | 0.0              |
| 060650422092013 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650422092007 | 25    | 3          | 22       | 88.0             | 22               | 88.0             |
| 060650422092005 | 40    | 30         | 10       | 25.0             | 5                | 12.5             |
| 060650422092001 | 356   | 190        | 166      | 46.6             | 128              | 36.0             |
| 060650422092004 | 24    | 10         | 14       | 58.3             | 14               | 58.3             |
| 060650422092020 | 37    | 31         | 6        | 16.2             | 5                | 13.5             |
| 060650422092019 | 23    | 23         | 0        | 0.0              | 0                | 0.0              |
| 060650422092021 | 38    | 28         | 10       | 26.3             | 8                | 21.1             |
| 060650422092000 | 132   | 101        | 31       | 23.5             | 18               | 13.6             |
| 060650422091046 | 294   | 61         | 233      | 79.3             | 128              | 43.5             |
| 060650422091047 | 177   | 35         | 142      | 80.2             | 128              | 72.3             |
| 060650305021015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422092009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422092010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301001011 | 17    | 6          | 11       | 64.7             | 6                | 35.3             |
| 060650422091032 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422092002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422092003 | 22    | 12         | 10       | 45.5             | 10               | 45.5             |
| 060650422091041 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091045 | 20    | 5          | 15       | 75.0             | 15               | 75.0             |
| 060650422091042 | 73    | 27         | 46       | 63.0             | 18               | 24.7             |
| 060650301005005 | 23    | 19         | 4        | 17.4             | 4                | 17.4             |
| 060650301005001 | 366   | 164        | 202      | 55.2             | 140              | 38.3             |
| 060650301005006 | 109   | 54         | 55       | 50.5             | 35               | 32.1             |
| 060650301005002 | 177   | 76         | 101      | 57.1             | 66               | 37.3             |
| 060650423001035 | 307   | 64         | 243      | 79.2             | 98               | 31.9             |
| 060650301001013 | 52    | 15         | 37       | 71.2             | 30               | 57.7             |
| 060650301001007 | 57    | 26         | 31       | 54.4             | 31               | 54.4             |
| 060650301001014 | 82    | 36         | 46       | 56.1             | 43               | 52.4             |
| 060650301001005 | 58    | 5          | 53       | 91.4             | 46               | 79.3             |
| 060650301001008 | 66    | 23         | 43       | 65.2             | 42               | 63.6             |
| 060650301001003 | 17    | 0          | 17       | 100.0            | 17               | 100.0            |
| 060650301005000 | 51    | 23         | 28       | 54.9             | 24               | 47.1             |
| 060650423001039 | 10    | 5          | 5        | 50.0             | 5                | 50.0             |
| 060650423001036 | 84    | 57         | 27       | 32.1             | 16               | 19.0             |
| 060650422091026 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001034 | 359   | 104        | 255      | 71.0             | 150              | 41.8             |
| 060650423001019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001033 | 140   | 64         | 76       | 54.3             | 62               | 44.3             |
| 060650423001028 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001029 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650423001030 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001032 | 29    | 15         | 14       | 48.3             | 9                | 31.0             |
| 060650423001031 | 38    | 13         | 25       | 65.8             | 23               | 60.5             |
| 060650422091031 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301001009 | 2     | 0          | 2        | 100.0            | 2                | 100.0            |
| 060650301001010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301001004 | 31    | 5          | 26       | 83.9             | 26               | 83.9             |
| 060650301001002 | 43    | 11         | 32       | 74.4             | 30               | 69.8             |
| 060650301001001 | 20    | 1          | 19       | 95.0             | 12               | 60.0             |
| 060650301001000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091025 | 6     | 0          | 6        | 100.0            | 6                | 100.0            |
| 060650422091024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001037 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091027 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091029 | 3     | 3          | 0        | 0.0              | 0                | 0.0              |
| 060650422091028 | 22    | 11         | 11       | 50.0             | 6                | 27.3             |
| 060650422091030 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091021 | 46    | 20         | 26       | 56.5             | 24               | 52.2             |
| 060650422091023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001038 | 58    | 41         | 17       | 29.3             | 4                | 6.9              |
| 060650422091022 | 58    | 13         | 45       | 77.6             | 45               | 77.6             |
| 060650422091009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001015 | 2     | 0          | 2        | 100.0            | 2                | 100.0            |
| 060650423001017 | 186   | 78         | 108      | 58.1             | 97               | 52.2             |
| 060650423001016 | 4     | 4          | 0        | 0.0              | 0                | 0.0              |
| 060650423001014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001009 | 106   | 36         | 70       | 66.0             | 65               | 61.3             |
| 060650423001011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091010 | 13    | 3          | 10       | 76.9             | 9                | 69.2             |
| 060650422091008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001008 | 109   | 32         | 77       | 70.6             | 66               | 60.6             |
| 060650422091007 | 3     | 0          | 3        | 100.0            | 0                | 0.0              |
| 060650423002045 | 11    | 0          | 11       | 100.0            | 9                | 81.8             |
| 060650423002046 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002044 | 45    | 6          | 39       | 86.7             | 35               | 77.8             |
| 060650422081001 | 38    | 32         | 6        | 15.8             | 4                | 10.5             |
| 060650422081000 | 176   | 151        | 25       | 14.2             | 9                | 5.1              |
| 060650422072001 | 80    | 71         | 9        | 11.3             | 5                | 6.3              |
| 060650422072000 | 341   | 301        | 40       | 11.7             | 15               | 4.4              |
| 060650422063007 | 68    | 46         | 22       | 32.4             | 4                | 5.9              |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650422063005 | 69    | 56         | 13       | 18.8             | 7                | 10.1             |
| 060650422063006 | 262   | 161        | 101      | 38.5             | 27               | 10.3             |
| 060650422062007 | 48    | 29         | 19       | 39.6             | 10               | 20.8             |
| 060650422062010 | 26    | 19         | 7        | 26.9             | 3                | 11.5             |
| 060650422062008 | 91    | 71         | 20       | 22.0             | 13               | 14.3             |
| 060650422062002 | 72    | 58         | 14       | 19.4             | 4                | 5.6              |
| 060650422062009 | 30    | 20         | 10       | 33.3             | 7                | 23.3             |
| 060650422062004 | 137   | 104        | 33       | 24.1             | 7                | 5.1              |
| 060650422062003 | 38    | 28         | 10       | 26.3             | 6                | 15.8             |
| 060650422062001 | 151   | 125        | 26       | 17.2             | 5                | 3.3              |
| 060650422063001 | 643   | 295        | 348      | 54.1             | 67               | 10.4             |
| 060650422063004 | 173   | 92         | 81       | 46.8             | 27               | 15.6             |
| 060650422063003 | 377   | 196        | 181      | 48.0             | 59               | 15.6             |
| 060650422051032 | 79    | 75         | 4        | 5.1              | 0                | 0.0              |
| 060650422051028 | 47    | 47         | 0        | 0.0              | 0                | 0.0              |
| 060650422051029 | 12    | 8          | 4        | 33.3             | 4                | 33.3             |
| 060650422051030 | 100   | 74         | 26       | 26.0             | 16               | 16.0             |
| 060650422051031 | 49    | 39         | 10       | 20.4             | 4                | 8.2              |
| 060650422051025 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051024 | 679   | 485        | 194      | 28.6             | 70               | 10.3             |
| 060650422063002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422063000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422061010 | 128   | 91         | 37       | 28.9             | 20               | 15.6             |
| 060650422062000 | 34    | 28         | 6        | 17.6             | 4                | 11.8             |
| 060650422061015 | 30    | 23         | 7        | 23.3             | 3                | 10.0             |
| 060650422061013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422061014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422061009 | 44    | 26         | 18       | 40.9             | 2                | 4.5              |
| 060650422061008 | 297   | 186        | 111      | 37.4             | 51               | 17.2             |
| 060650422022007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422022004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422092026 | 256   | 97         | 159      | 62.1             | 30               | 11.7             |
| 060650422092025 | 309   | 104        | 205      | 66.3             | 117              | 37.9             |
| 060650422112002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422111003 | 112   | 18         | 94       | 83.9             | 56               | 50.0             |
| 060650422112008 | 254   | 42         | 212      | 83.5             | 46               | 18.1             |
| 060650422022003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422112003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422112007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422112005 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650422112001 | 453   | 97         | 356      | 78.6             | 77               | 17.0             |
| 060650422112004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422022002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422061006 | 18    | 3          | 15       | 83.3             | 11               | 61.1             |
| 060650422061007 | 39    | 27         | 12       | 30.8             | 10               | 25.6             |
| 060650422022008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422061005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422022001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422112006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422112000 | 744   | 219        | 525      | 70.6             | 97               | 13.0             |
| 060650422021005 | 23    | 11         | 12       | 52.2             | 9                | 39.1             |
| 060650422021008 | 48    | 14         | 34       | 70.8             | 15               | 31.3             |
| 060650422021004 | 159   | 40         | 119      | 74.8             | 44               | 27.7             |
| 060650422051027 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051026 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422061011 | 1,329 | 555        | 774      | 58.2             | 249              | 18.7             |
| 060650422061012 | 100   | 56         | 44       | 44.0             | 6                | 6.0              |
| 060650422061016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422061004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422061003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422132010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422132011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051022 | 448   | 177        | 271      | 60.5             | 78               | 17.4             |
| 060650422051013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051012 | 17    | 16         | 1        | 5.9              | 0                | 0.0              |
| 060650422051003 | 28    | 28         | 0        | 0.0              | 0                | 0.0              |
| 060650422051010 | 43    | 35         | 8        | 18.6             | 4                | 9.3              |
| 060650422061017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422061002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422132017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422132012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051002 | 47    | 20         | 27       | 57.4             | 17               | 36.2             |
| 060650422061018 | 351   | 165        | 186      | 53.0             | 43               | 12.3             |
| 060650422051004 | 59    | 35         | 24       | 40.7             | 7                | 11.9             |
| 060650422061001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422061000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422121021 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650422132013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422132014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422132016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422132015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422022000 | 877   | 210        | 667      | 76.1             | 172              | 19.6             |
| 060650422132009 | 55    | 37         | 18       | 32.7             | 13               | 23.6             |
| 060650422132003 | 162   | 125        | 37       | 22.8             | 10               | 6.2              |
| 060650422132008 | 57    | 34         | 23       | 40.4             | 14               | 24.6             |
| 060650422132007 | 66    | 38         | 28       | 42.4             | 12               | 18.2             |
| 060650422132002 | 84    | 65         | 19       | 22.6             | 12               | 14.3             |
| 060650422132001 | 41    | 33         | 8        | 19.5             | 1                | 2.4              |
| 060650422132004 | 1,124 | 256        | 868      | 77.2             | 169              | 15.0             |
| 060650422132006 | 65    | 40         | 25       | 38.5             | 11               | 16.9             |
| 060650422132005 | 224   | 95         | 129      | 57.6             | 31               | 13.8             |
| 060650422133014 | 25    | 18         | 7        | 28.0             | 2                | 8.0              |
| 060650422133013 | 220   | 118        | 102      | 46.4             | 29               | 13.2             |
| 060650422133012 | 57    | 32         | 25       | 43.9             | 16               | 28.1             |
| 060650422132000 | 235   | 179        | 56       | 23.8             | 33               | 14.0             |
| 060650422133011 | 48    | 36         | 12       | 25.0             | 10               | 20.8             |
| 060650422092018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422092016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422092014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422092015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091048 | 284   | 76         | 208      | 73.2             | 86               | 30.3             |
| 060650422111002 | 1,529 | 306        | 1,223    | 80.0             | 458              | 30.0             |
| 060650422102004 | 673   | 200        | 473      | 70.3             | 204              | 30.3             |
| 060650422111001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422102005 | 76    | 35         | 41       | 53.9             | 20               | 26.3             |
| 060650422102003 | 89    | 30         | 59       | 66.3             | 31               | 34.8             |
| 060650422102002 | 771   | 307        | 464      | 60.2             | 171              | 22.2             |
| 060650422101007 | 83    | 26         | 57       | 68.7             | 21               | 25.3             |
| 060650422091044 | 355   | 140        | 215      | 60.6             | 98               | 27.6             |
| 060650422091043 | 42    | 19         | 23       | 54.8             | 9                | 21.4             |
| 060650422091040 | 12    | 2          | 10       | 83.3             | 0                | 0.0              |
| 060650422091033 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422102001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422102000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422101004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422111000 | 479   | 125        | 354      | 73.9             | 63               | 13.2             |
| 060650422021006 | 31    | 14         | 17       | 54.8             | 10               | 32.3             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650422101008 | 801   | 142        | 659      | 82.3             | 362              | 45.2             |
| 060650422101009 | 370   | 142        | 228      | 61.6             | 145              | 39.2             |
| 060650422021007 | 33    | 8          | 25       | 75.8             | 15               | 45.5             |
| 060650422021002 | 137   | 60         | 77       | 56.2             | 28               | 20.4             |
| 060650422021003 | 91    | 34         | 57       | 62.6             | 21               | 23.1             |
| 060650422021001 | 111   | 33         | 78       | 70.3             | 17               | 15.3             |
| 060650422101010 | 852   | 232        | 620      | 72.8             | 229              | 26.9             |
| 060650422131009 | 108   | 66         | 42       | 38.9             | 23               | 21.3             |
| 060650422101005 | 298   | 112        | 186      | 62.4             | 83               | 27.9             |
| 060650422101000 | 6     | 1          | 5        | 83.3             | 0                | 0.0              |
| 060650422101006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422101001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422131008 | 51    | 35         | 16       | 31.4             | 5                | 9.8              |
| 060650422131007 | 130   | 101        | 29       | 22.3             | 15               | 11.5             |
| 060650422142047 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091034 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091035 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422101003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422101002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002042 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002043 | 126   | 47         | 79       | 62.7             | 66               | 52.4             |
| 060650422091006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002041 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002029 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002040 | 4     | 4          | 0        | 0.0              | 0                | 0.0              |
| 060650423002030 | 38    | 1          | 37       | 97.4             | 34               | 89.5             |
| 060650422091012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002039 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002031 | 171   | 24         | 147      | 86.0             | 107              | 62.6             |
| 060650423002032 | 4     | 4          | 0        | 0.0              | 0                | 0.0              |
| 060650423002038 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002033 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091036 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091037 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091017 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650422142046 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091038 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091039 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091004 | 20    | 6          | 14       | 70.0             | 14               | 70.0             |
| 060650422091015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002037 | 165   | 45         | 120      | 72.7             | 119              | 72.1             |
| 060650423003042 | 64    | 0          | 64       | 100.0            | 64               | 100.0            |
| 060650423003043 | 31    | 23         | 8        | 25.8             | 8                | 25.8             |
| 060650423003044 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060650423003041 | 16    | 13         | 3        | 18.8             | 1                | 6.3              |
| 060650423003040 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422091001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423003039 | 22    | 9          | 13       | 59.1             | 13               | 59.1             |
| 060650423003038 | 104   | 64         | 40       | 38.5             | 34               | 32.7             |
| 060650423003045 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422133010 | 38    | 25         | 13       | 34.2             | 5                | 13.2             |
| 060650422021000 | 108   | 35         | 73       | 67.6             | 36               | 33.3             |
| 060650422133007 | 168   | 107        | 61       | 36.3             | 33               | 19.6             |
| 060650422133006 | 73    | 54         | 19       | 26.0             | 5                | 6.8              |
| 060650422131014 | 93    | 38         | 55       | 59.1             | 39               | 41.9             |
| 060650422131011 | 150   | 96         | 54       | 36.0             | 42               | 28.0             |
| 060650422131010 | 104   | 50         | 54       | 51.9             | 36               | 34.6             |
| 060650422131006 | 78    | 42         | 36       | 46.2             | 14               | 17.9             |
| 060650422131013 | 104   | 68         | 36       | 34.6             | 17               | 16.3             |
| 060650422131012 | 118   | 79         | 39       | 33.1             | 19               | 16.1             |
| 060650422133005 | 120   | 70         | 50       | 41.7             | 24               | 20.0             |
| 060650422133009 | 103   | 62         | 41       | 39.8             | 18               | 17.5             |
| 060650422131016 | 90    | 46         | 44       | 48.9             | 19               | 21.1             |
| 060650422131003 | 108   | 51         | 57       | 52.8             | 29               | 26.9             |
| 060650422131005 | 67    | 42         | 25       | 37.3             | 13               | 19.4             |
| 060650422131004 | 81    | 63         | 18       | 22.2             | 9                | 11.1             |
| 060650422131015 | 82    | 49         | 33       | 40.2             | 20               | 24.4             |
| 060650422131002 | 54    | 35         | 19       | 35.2             | 4                | 7.4              |
| 060650422142048 | 619   | 417        | 202      | 32.6             | 96               | 15.5             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650422133008 | 63    | 45         | 18       | 28.6             | 14               | 22.2             |
| 060650422133004 | 104   | 74         | 30       | 28.8             | 11               | 10.6             |
| 060650422133003 | 46    | 37         | 9        | 19.6             | 7                | 15.2             |
| 060650422133002 | 45    | 39         | 6        | 13.3             | 6                | 13.3             |
| 060650422131000 | 95    | 64         | 31       | 32.6             | 16               | 16.8             |
| 060650422131001 | 25    | 8          | 17       | 68.0             | 1                | 4.0              |
| 060650422133015 | 18    | 15         | 3        | 16.7             | 2                | 11.1             |
| 060650422133016 | 31    | 22         | 9        | 29.0             | 3                | 9.7              |
| 060650422133001 | 22    | 17         | 5        | 22.7             | 3                | 13.6             |
| 060650422133000 | 201   | 128        | 73       | 36.3             | 50               | 24.9             |
| 060650422142052 | 15    | 12         | 3        | 20.0             | 3                | 20.0             |
| 060650422142050 | 48    | 37         | 11       | 22.9             | 9                | 18.8             |
| 060650422142051 | 44    | 25         | 19       | 43.2             | 10               | 22.7             |
| 060650422142045 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422142044 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422142040 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422142041 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423003046 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422142039 | 15    | 15         | 0        | 0.0              | 0                | 0.0              |
| 060650423003036 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422142042 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422142043 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422142038 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423003035 | 5     | 5          | 0        | 0.0              | 0                | 0.0              |
| 060650423003032 | 66    | 45         | 21       | 31.8             | 7                | 10.6             |
| 060650423003031 | 67    | 44         | 23       | 34.3             | 22               | 32.8             |
| 060650423003034 | 5     | 0          | 5        | 100.0            | 0                | 0.0              |
| 060650301009998 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301009999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009106 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009107 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009105 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301009011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650301009000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009108 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001024 | 19    | 4          | 15       | 78.9             | 1                | 5.3              |
| 060650423001023 | 11    | 0          | 11       | 100.0            | 11               | 100.0            |
| 060650423001022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009997 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009998 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710040009099 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009100 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009101 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009093 | 82    | 33         | 49       | 59.8             | 43               | 52.4             |
| 060710040009102 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009104 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009103 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009092 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009110 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009111 | 3     | 0          | 3        | 100.0            | 3                | 100.0            |
| 060710040009112 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001020 | 29    | 11         | 18       | 62.1             | 17               | 58.6             |
| 060650423001018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001021 | 5     | 1          | 4        | 80.0             | 4                | 80.0             |
| 060710040009109 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001007 | 33    | 19         | 14       | 42.4             | 14               | 42.4             |
| 060650423001006 | 76    | 28         | 48       | 63.2             | 40               | 52.6             |
| 060650423001004 | 56    | 20         | 36       | 64.3             | 32               | 57.1             |
| 060650423001010 | 99    | 39         | 60       | 60.6             | 59               | 59.6             |
| 060650423001005 | 22    | 6          | 16       | 72.7             | 16               | 72.7             |
| 060650423001003 | 9     | 4          | 5        | 55.6             | 5                | 55.6             |
| 060650423002048 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002047 | 21    | 8          | 13       | 61.9             | 13               | 61.9             |
| 060650423001001 | 137   | 65         | 72       | 52.6             | 56               | 40.9             |
| 060650423001002 | 19    | 8          | 11       | 57.9             | 11               | 57.9             |
| 060650423002014 | 23    | 4          | 19       | 82.6             | 17               | 73.9             |
| 060650423001012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002016 | 7     | 6          | 1        | 14.3             | 1                | 14.3             |
| 060650423002015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423001000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002012 | 56    | 19         | 37       | 66.1             | 27               | 48.2             |
| 060650423002013 | 63    | 10         | 53       | 84.1             | 39               | 61.9             |
| 060650423002011 | 205   | 46         | 159      | 77.6             | 148              | 72.2             |
| 060710040009082 | 6     | 6          | 0        | 0.0              | 0                | 0.0              |
| 060710040009034 | 1,275 | 407        | 868      | 68.1             | 712              | 55.8             |
| 060710040009090 | 8     | 4          | 4        | 50.0             | 4                | 50.0             |
| 060710040009091 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001038 | 16    | 2          | 14       | 87.5             | 14               | 87.5             |
| 060710040009085 | 3     | 2          | 1        | 33.3             | 1                | 33.3             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710040009086 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001003 | 8     | 2          | 6        | 75.0             | 4                | 50.0             |
| 060710040001004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001031 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036016009 | 1     | 0          | 1        | 100.0            | 0                | 0.0              |
| 060710040001036 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001032 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001034 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036016008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001033 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036016012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036016007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001002 | 6     | 6          | 0        | 0.0              | 0                | 0.0              |
| 060710040009089 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001001 | 20    | 8          | 12       | 60.0             | 12               | 60.0             |
| 060710040001037 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040001035 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036016013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009088 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036016014 | 7     | 0          | 7        | 100.0            | 7                | 100.0            |
| 060710036016005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036016006 | 9     | 7          | 2        | 22.2             | 2                | 22.2             |
| 060710036016000 | 12    | 4          | 8        | 66.7             | 8                | 66.7             |
| 060710036017038 | 228   | 129        | 99       | 43.4             | 44               | 19.3             |
| 060710040001000 | 25    | 6          | 19       | 76.0             | 16               | 64.0             |
| 060710040009087 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036017040 | 5     | 0          | 5        | 100.0            | 5                | 100.0            |
| 060710040009011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036017041 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036017039 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036017029 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036017028 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036017033 | 85    | 10         | 75       | 88.2             | 60               | 70.6             |
| 060710040009084 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060710040009083 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710040009081 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009079 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009080 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009077 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009078 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036018025 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036018026 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036018027 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036018028 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036018024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036018029 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036018030 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036018019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036017027 | 126   | 19         | 107      | 84.9             | 86               | 68.3             |
| 060710036018020 | 73    | 9          | 64       | 87.7             | 40               | 54.8             |
| 060710036018023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036018022 | 2     | 1          | 1        | 50.0             | 1                | 50.0             |
| 060710036018018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036018013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036018014 | 12    | 4          | 8        | 66.7             | 6                | 50.0             |
| 060710040009018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066005017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066005007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066005008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036018015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036018016 | 16    | 13         | 3        | 18.8             | 0                | 0.0              |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710066006011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066006009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066006010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066006007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066006008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066005006 | 34    | 5          | 29       | 85.3             | 10               | 29.4             |
| 060710066005005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066005004 | 104   | 34         | 70       | 67.3             | 43               | 41.3             |
| 060710066006006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066006005 | 48    | 20         | 28       | 58.3             | 27               | 56.3             |
| 060650423002017 | 285   | 18         | 267      | 93.7             | 247              | 86.7             |
| 060650423002008 | 2     | 2          | 0        | 0.0              | 0                | 0.0              |
| 060650423002009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002007 | 50    | 35         | 15       | 30.0             | 12               | 24.0             |
| 060650423002028 | 33    | 5          | 28       | 84.8             | 27               | 81.8             |
| 060650423002027 | 44    | 11         | 33       | 75.0             | 33               | 75.0             |
| 060650423002018 | 42    | 16         | 26       | 61.9             | 16               | 38.1             |
| 060650423002005 | 138   | 16         | 122      | 88.4             | 119              | 86.2             |
| 060710071073019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002026 | 240   | 47         | 193      | 80.4             | 165              | 68.8             |
| 060650423002019 | 64    | 18         | 46       | 71.9             | 46               | 71.9             |
| 060650423002025 | 15    | 10         | 5        | 33.3             | 4                | 26.7             |
| 060650423002024 | 48    | 13         | 35       | 72.9             | 32               | 66.7             |
| 060650423002020 | 7     | 0          | 7        | 100.0            | 7                | 100.0            |
| 060650423002021 | 37    | 7          | 30       | 81.1             | 23               | 62.2             |
| 060650423002023 | 17    | 6          | 11       | 64.7             | 4                | 23.5             |
| 060650423002034 | 5     | 0          | 5        | 100.0            | 5                | 100.0            |
| 060650423002022 | 38    | 5          | 33       | 86.8             | 32               | 84.2             |
| 060650423002003 | 28    | 2          | 26       | 92.9             | 21               | 75.0             |
| 060650423002004 | 43    | 1          | 42       | 97.7             | 41               | 95.3             |
| 060650423002002 | 53    | 1          | 52       | 98.1             | 50               | 94.3             |
| 060650423002001 | 15    | 1          | 14       | 93.3             | 10               | 66.7             |
| 060710071061004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009065 | 5     | 0          | 5        | 100.0            | 5                | 100.0            |
| 060710040009066 | 47    | 23         | 24       | 51.1             | 17               | 36.2             |
| 060710071073018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071061006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071073017 | 3     | 1          | 2        | 66.7             | 1                | 33.3             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710071061005 | 2     | 0          | 2        | 100.0            | 0                | 0.0              |
| 060710071073016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009063 | 39    | 18         | 21       | 53.8             | 20               | 51.3             |
| 060710040009067 | 21    | 8          | 13       | 61.9             | 11               | 52.4             |
| 060710071073015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009072 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071073014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009068 | 30    | 10         | 20       | 66.7             | 19               | 63.3             |
| 060710040009069 | 46    | 13         | 33       | 71.7             | 27               | 58.7             |
| 060710040009071 | 17    | 3          | 14       | 82.4             | 13               | 76.5             |
| 060710040009070 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423002036 | 28    | 0          | 28       | 100.0            | 28               | 100.0            |
| 060650423003017 | 34    | 15         | 19       | 55.9             | 19               | 55.9             |
| 060650423003016 | 31    | 8          | 23       | 74.2             | 23               | 74.2             |
| 060650423002035 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423003011 | 16    | 3          | 13       | 81.3             | 9                | 56.3             |
| 060650423003018 | 18    | 4          | 14       | 77.8             | 14               | 77.8             |
| 060650423003019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423003015 | 23    | 4          | 19       | 82.6             | 14               | 60.9             |
| 060650423003012 | 18    | 1          | 17       | 94.4             | 17               | 94.4             |
| 060650423003014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423003013 | 5     | 0          | 5        | 100.0            | 5                | 100.0            |
| 060650423002000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423003010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423003009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071061007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423003020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423003008 | 141   | 75         | 66       | 46.8             | 57               | 40.4             |
| 060650423003007 | 102   | 47         | 55       | 53.9             | 49               | 48.0             |
| 060710071061008 | 81    | 48         | 33       | 40.7             | 29               | 35.8             |
| 060710071061003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071061002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071061001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071073013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071073007 | 24    | 9          | 15       | 62.5             | 15               | 62.5             |
| 060710071073008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071073009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071061000 | 215   | 140        | 75       | 34.9             | 63               | 29.3             |
| 060710040009064 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009062 | 42    | 23         | 19       | 45.2             | 19               | 45.2             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710040009060 | 43    | 14         | 29       | 67.4             | 28               | 65.1             |
| 060710040009061 | 2     | 0          | 2        | 100.0            | 1                | 50.0             |
| 060710040009059 | 17    | 3          | 14       | 82.4             | 14               | 82.4             |
| 060710040009057 | 4     | 4          | 0        | 0.0              | 0                | 0.0              |
| 060710040009056 | 4     | 0          | 4        | 100.0            | 4                | 100.0            |
| 060710040009054 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009055 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009058 | 16    | 4          | 12       | 75.0             | 10               | 62.5             |
| 060710040009052 | 6     | 2          | 4        | 66.7             | 0                | 0.0              |
| 060710040009053 | 29    | 20         | 9        | 31.0             | 8                | 27.6             |
| 060710040009050 | 36    | 12         | 24       | 66.7             | 24               | 66.7             |
| 060710040009049 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009039 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009051 | 2     | 1          | 1        | 50.0             | 1                | 50.0             |
| 060710040009048 | 43    | 26         | 17       | 39.5             | 12               | 27.9             |
| 060710040009040 | 48    | 18         | 30       | 62.5             | 29               | 60.4             |
| 060710040009045 | 29    | 12         | 17       | 58.6             | 16               | 55.2             |
| 060710040009046 | 30    | 16         | 14       | 46.7             | 9                | 30.0             |
| 060710040009037 | 11    | 6          | 5        | 45.5             | 5                | 45.5             |
| 060710040009038 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009036 | 20    | 6          | 14       | 70.0             | 9                | 45.0             |
| 060710040009035 | 8     | 4          | 4        | 50.0             | 4                | 50.0             |
| 060710040009041 | 49    | 34         | 15       | 30.6             | 14               | 28.6             |
| 060710040009043 | 37    | 18         | 19       | 51.4             | 13               | 35.1             |
| 060710040009042 | 42    | 18         | 24       | 57.1             | 20               | 47.6             |
| 060710071073006 | 9     | 3          | 6        | 66.7             | 6                | 66.7             |
| 060710071073004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071073003 | 5     | 5          | 0        | 0.0              | 0                | 0.0              |
| 060710071072007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071073005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009047 | 45    | 24         | 21       | 46.7             | 10               | 22.2             |
| 060710071072006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071072008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071072009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071073010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071073002 | 1     | 0          | 1        | 100.0            | 0                | 0.0              |
| 060710071073011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071073000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071073001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071073012 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710071072010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071072013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071072014 | 57    | 42         | 15       | 26.3             | 14               | 24.6             |
| 060710040009044 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071072004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071072012 | 19    | 13         | 6        | 31.6             | 6                | 31.6             |
| 060710071072005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009073 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009075 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009076 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009074 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069005999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071072011 | 47    | 28         | 19       | 40.4             | 10               | 21.3             |
| 060710071072003 | 3     | 3          | 0        | 0.0              | 0                | 0.0              |
| 060710071072002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423003021 | 23    | 4          | 19       | 82.6             | 19               | 82.6             |
| 060650423003037 | 22    | 18         | 4        | 18.2             | 3                | 13.6             |
| 060650423003022 | 69    | 33         | 36       | 52.2             | 30               | 43.5             |
| 060650423003023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423003006 | 173   | 92         | 81       | 46.8             | 70               | 40.5             |
| 060650423003005 | 55    | 33         | 22       | 40.0             | 20               | 36.4             |
| 060710071065008 | 47    | 15         | 32       | 68.1             | 22               | 46.8             |
| 060710071065007 | 28    | 14         | 14       | 50.0             | 12               | 42.9             |
| 060650423003024 | 169   | 99         | 70       | 41.4             | 51               | 30.2             |
| 060650423003004 | 32    | 9          | 23       | 71.9             | 21               | 65.6             |
| 060710071065005 | 86    | 35         | 51       | 59.3             | 33               | 38.4             |
| 060650423003003 | 79    | 68         | 11       | 13.9             | 0                | 0.0              |
| 060710071065004 | 97    | 58         | 39       | 40.2             | 24               | 24.7             |
| 060710071061009 | 147   | 98         | 49       | 33.3             | 41               | 27.9             |
| 060710071065006 | 66    | 40         | 26       | 39.4             | 26               | 39.4             |
| 060710071063003 | 112   | 53         | 59       | 52.7             | 45               | 40.2             |
| 060710071064007 | 208   | 106        | 102      | 49.0             | 76               | 36.5             |
| 060710071065003 | 90    | 31         | 59       | 65.6             | 46               | 51.1             |
| 060710071064008 | 54    | 33         | 21       | 38.9             | 10               | 18.5             |
| 060710071064006 | 41    | 31         | 10       | 24.4             | 10               | 24.4             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710071063002 | 271   | 147        | 124      | 45.8             | 92               | 33.9             |
| 060710071064005 | 55    | 37         | 18       | 32.7             | 14               | 25.5             |
| 060710071064004 | 36    | 24         | 12       | 33.3             | 12               | 33.3             |
| 060710071063001 | 166   | 99         | 67       | 40.4             | 49               | 29.5             |
| 060650423003030 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423003025 | 38    | 20         | 18       | 47.4             | 15               | 39.5             |
| 060650423003029 | 38    | 10         | 28       | 73.7             | 23               | 60.5             |
| 060650423003028 | 56    | 25         | 31       | 55.4             | 22               | 39.3             |
| 060650423003026 | 65    | 38         | 27       | 41.5             | 11               | 16.9             |
| 060650423003002 | 21    | 14         | 7        | 33.3             | 5                | 23.8             |
| 060710071065002 | 179   | 102        | 77       | 43.0             | 55               | 30.7             |
| 060650423003027 | 29    | 15         | 14       | 48.3             | 9                | 31.0             |
| 060650423003001 | 13    | 5          | 8        | 61.5             | 4                | 30.8             |
| 060710071065009 | 72    | 44         | 28       | 38.9             | 18               | 25.0             |
| 060710071065000 | 80    | 32         | 48       | 60.0             | 36               | 45.0             |
| 060650423003033 | 6     | 0          | 6        | 100.0            | 6                | 100.0            |
| 060650423003000 | 104   | 67         | 37       | 35.6             | 28               | 26.9             |
| 060710071044012 | 96    | 57         | 39       | 40.6             | 29               | 30.2             |
| 060710071044010 | 86    | 62         | 24       | 27.9             | 21               | 24.4             |
| 060710071064003 | 65    | 50         | 15       | 23.1             | 7                | 10.8             |
| 060710071065010 | 168   | 104        | 64       | 38.1             | 38               | 22.6             |
| 060710071065001 | 78    | 40         | 38       | 48.7             | 35               | 44.9             |
| 060710071064000 | 45    | 19         | 26       | 57.8             | 26               | 57.8             |
| 060710071063004 | 29    | 25         | 4        | 13.8             | 1                | 3.4              |
| 060710071064002 | 120   | 79         | 41       | 34.2             | 27               | 22.5             |
| 060710071064001 | 46    | 30         | 16       | 34.8             | 8                | 17.4             |
| 060710071063000 | 652   | 302        | 350      | 53.7             | 192              | 29.4             |
| 060710071044011 | 44    | 25         | 19       | 43.2             | 17               | 38.6             |
| 060710071044006 | 30    | 13         | 17       | 56.7             | 12               | 40.0             |
| 060710071044008 | 124   | 72         | 52       | 41.9             | 27               | 21.8             |
| 060710071044009 | 57    | 43         | 14       | 24.6             | 9                | 15.8             |
| 060710071044007 | 54    | 26         | 28       | 51.9             | 25               | 46.3             |
| 060710071044001 | 146   | 83         | 63       | 43.2             | 31               | 21.2             |
| 060710071044005 | 39    | 31         | 8        | 20.5             | 5                | 12.8             |
| 060710071044002 | 69    | 47         | 22       | 31.9             | 14               | 20.3             |
| 060710071044004 | 46    | 27         | 19       | 41.3             | 17               | 37.0             |
| 060710071044000 | 72    | 43         | 29       | 40.3             | 17               | 23.6             |
| 060710071043004 | 63    | 40         | 23       | 36.5             | 15               | 23.8             |
| 060710071043002 | 88    | 68         | 20       | 22.7             | 17               | 19.3             |
| 060710071043001 | 130   | 65         | 65       | 50.0             | 49               | 37.7             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710071072017 | 12    | 3          | 9        | 75.0             | 9                | 75.0             |
| 060710071072015 | 128   | 54         | 74       | 57.8             | 66               | 51.6             |
| 060710071022014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071062003 | 21    | 9          | 12       | 57.1             | 8                | 38.1             |
| 060710071062002 | 64    | 49         | 15       | 23.4             | 8                | 12.5             |
| 060710071062001 | 252   | 182        | 70       | 27.8             | 37               | 14.7             |
| 060710071022009 | 82    | 47         | 35       | 42.7             | 34               | 41.5             |
| 060710071022015 | 49    | 28         | 21       | 42.9             | 19               | 38.8             |
| 060710071022013 | 92    | 53         | 39       | 42.4             | 31               | 33.7             |
| 060710071022012 | 35    | 21         | 14       | 40.0             | 7                | 20.0             |
| 060710071022010 | 11    | 11         | 0        | 0.0              | 0                | 0.0              |
| 060710071072001 | 9     | 9          | 0        | 0.0              | 0                | 0.0              |
| 060710071072016 | 491   | 283        | 208      | 42.4             | 157              | 32.0             |
| 060710071071014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071082005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071072000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071001 | 9     | 9          | 0        | 0.0              | 0                | 0.0              |
| 060710071071003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071062004 | 16    | 5          | 11       | 68.8             | 10               | 62.5             |
| 060710071062005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071062008 | 68    | 48         | 20       | 29.4             | 14               | 20.6             |
| 060710071062007 | 35    | 26         | 9        | 25.7             | 4                | 11.4             |
| 060710071062006 | 187   | 126        | 61       | 32.6             | 50               | 26.7             |
| 060710071062000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071022011 | 64    | 30         | 34       | 53.1             | 20               | 31.3             |
| 060710071042009 | 70    | 47         | 23       | 32.9             | 18               | 25.7             |
| 060710071042008 | 69    | 53         | 16       | 23.2             | 14               | 20.3             |
| 060710071042004 | 271   | 206        | 65       | 24.0             | 32               | 11.8             |
| 060710071021013 | 28    | 23         | 5        | 17.9             | 4                | 14.3             |
| 060710071021011 | 117   | 92         | 25       | 21.4             | 14               | 12.0             |
| 060710071021012 | 46    | 33         | 13       | 28.3             | 12               | 26.1             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710071022007 | 1,177 | 553        | 624      | 53.0             | 337              | 28.6             |
| 060710071022008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071071006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071021002 | 119   | 96         | 23       | 19.3             | 14               | 11.8             |
| 060710071021003 | 57    | 42         | 15       | 26.3             | 5                | 8.8              |
| 060710071022003 | 196   | 132        | 64       | 32.7             | 45               | 23.0             |
| 060710071021004 | 133   | 95         | 38       | 28.6             | 24               | 18.0             |
| 060710071021001 | 100   | 80         | 20       | 20.0             | 13               | 13.0             |
| 060710071022006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071022005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009033 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009032 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009029 | 19    | 11         | 8        | 42.1             | 6                | 31.6             |
| 060710040009028 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009030 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009026 | 3     | 0          | 3        | 100.0            | 3                | 100.0            |
| 060710040009027 | 21    | 11         | 10       | 47.6             | 9                | 42.9             |
| 060710040009025 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009021 | 2     | 0          | 2        | 100.0            | 2                | 100.0            |
| 060710069005018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009031 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069005017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069005016 | 34    | 7          | 27       | 79.4             | 26               | 76.5             |
| 060710069002999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069009998 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069002009 | 4     | 2          | 2        | 50.0             | 2                | 50.0             |
| 060710069002008 | 10    | 6          | 4        | 40.0             | 4                | 40.0             |
| 060710069002007 | 51    | 6          | 45       | 88.2             | 44               | 86.3             |
| 060710069005011 | 25    | 3          | 22       | 88.0             | 22               | 88.0             |
| 060710069005015 | 29    | 0          | 29       | 100.0            | 28               | 96.6             |
| 060710069005012 | 141   | 5          | 136      | 96.5             | 135              | 95.7             |
| 060710040009024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069005010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710040009023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069005008 | 16    | 6          | 10       | 62.5             | 10               | 62.5             |
| 060710069005009 | 2     | 0          | 2        | 100.0            | 2                | 100.0            |
| 060710040009022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069005004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069005003 | 68    | 4          | 64       | 94.1             | 63               | 92.6             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710069005007 | 28    | 1          | 27       | 96.4             | 27               | 96.4             |
| 060710069005002 | 57    | 3          | 54       | 94.7             | 53               | 93.0             |
| 060710069005005 | 2     | 0          | 2        | 100.0            | 2                | 100.0            |
| 060710069005006 | 19    | 0          | 19       | 100.0            | 18               | 94.7             |
| 060710069005014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069002004 | 45    | 2          | 43       | 95.6             | 43               | 95.6             |
| 060710069005013 | 61    | 0          | 61       | 100.0            | 61               | 100.0            |
| 060710069003014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069002005 | 40    | 1          | 39       | 97.5             | 38               | 95.0             |
| 060710069002006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069002003 | 11    | 0          | 11       | 100.0            | 11               | 100.0            |
| 060710069003013 | 79    | 1          | 78       | 98.7             | 78               | 98.7             |
| 060710069003009 | 50    | 4          | 46       | 92.0             | 41               | 82.0             |
| 060710069005000 | 30    | 3          | 27       | 90.0             | 27               | 90.0             |
| 060710069005001 | 8     | 0          | 8        | 100.0            | 8                | 100.0            |
| 060710069004013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069003010 | 37    | 1          | 36       | 97.3             | 36               | 97.3             |
| 060710069003008 | 30    | 0          | 30       | 100.0            | 29               | 96.7             |
| 060710069003007 | 27    | 0          | 27       | 100.0            | 27               | 100.0            |
| 060710069003012 | 8     | 3          | 5        | 62.5             | 5                | 62.5             |
| 060710069003011 | 37    | 0          | 37       | 100.0            | 37               | 100.0            |
| 060710069003006 | 13    | 0          | 13       | 100.0            | 13               | 100.0            |
| 060710066005009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066005016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066005015 | 95    | 51         | 44       | 46.3             | 34               | 35.8             |
| 060710040009000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066005010 | 10    | 1          | 9        | 90.0             | 2                | 20.0             |
| 060710069004016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069004001 | 108   | 16         | 92       | 85.2             | 92               | 85.2             |
| 060710066005018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066005019 | 95    | 13         | 82       | 86.3             | 76               | 80.0             |
| 060710066004012 | 50    | 8          | 42       | 84.0             | 41               | 82.0             |
| 060710066004011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066005014 | 121   | 17         | 104      | 86.0             | 96               | 79.3             |
| 060710066005013 | 188   | 32         | 156      | 83.0             | 151              | 80.3             |
| 060710066005003 | 81    | 18         | 63       | 77.8             | 59               | 72.8             |
| 060710066005002 | 157   | 54         | 103      | 65.6             | 90               | 57.3             |
| 060710066005012 | 85    | 15         | 70       | 82.4             | 68               | 80.0             |
| 060710066005011 | 38    | 5          | 33       | 86.8             | 32               | 84.2             |
| 060710066006004 | 131   | 38         | 93       | 71.0             | 82               | 62.6             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710066006003 | 102   | 41         | 61       | 59.8             | 56               | 54.9             |
| 060710066007041 | 70    | 15         | 55       | 78.6             | 54               | 77.1             |
| 060710066006002 | 262   | 66         | 196      | 74.8             | 186              | 71.0             |
| 060710066005020 | 114   | 31         | 83       | 72.8             | 72               | 63.2             |
| 060710066005000 | 27    | 1          | 26       | 96.3             | 26               | 96.3             |
| 060710066005001 | 60    | 8          | 52       | 86.7             | 40               | 66.7             |
| 060710066004003 | 98    | 8          | 90       | 91.8             | 87               | 88.8             |
| 060710066006001 | 192   | 44         | 148      | 77.1             | 143              | 74.5             |
| 060710066007042 | 5     | 2          | 3        | 60.0             | 3                | 60.0             |
| 060710066007045 | 9     | 2          | 7        | 77.8             | 7                | 77.8             |
| 060710066007043 | 132   | 33         | 99       | 75.0             | 92               | 69.7             |
| 060710066006014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066006012 | 17    | 9          | 8        | 47.1             | 8                | 47.1             |
| 060710066006013 | 55    | 10         | 45       | 81.8             | 45               | 81.8             |
| 060710066003017 | 61    | 21         | 40       | 65.6             | 32               | 52.5             |
| 060710066003016 | 127   | 49         | 78       | 61.4             | 78               | 61.4             |
| 060710066006000 | 4     | 2          | 2        | 50.0             | 2                | 50.0             |
| 060710066007044 | 13    | 7          | 6        | 46.2             | 6                | 46.2             |
| 060710069004015 | 12    | 0          | 12       | 100.0            | 12               | 100.0            |
| 060710069004014 | 52    | 2          | 50       | 96.2             | 50               | 96.2             |
| 060710069004008 | 51    | 3          | 48       | 94.1             | 48               | 94.1             |
| 060710069004007 | 53    | 0          | 53       | 100.0            | 53               | 100.0            |
| 060710069004012 | 40    | 0          | 40       | 100.0            | 39               | 97.5             |
| 060710069004009 | 53    | 3          | 50       | 94.3             | 50               | 94.3             |
| 060710069004002 | 23    | 3          | 20       | 87.0             | 18               | 78.3             |
| 060710069004000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069004006 | 42    | 1          | 41       | 97.6             | 38               | 90.5             |
| 060710069004003 | 15    | 4          | 11       | 73.3             | 9                | 60.0             |
| 060710066004015 | 18    | 1          | 17       | 94.4             | 12               | 66.7             |
| 060710066004013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066004010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066004014 | 29    | 6          | 23       | 79.3             | 23               | 79.3             |
| 060710066004016 | 52    | 19         | 33       | 63.5             | 32               | 61.5             |
| 060710066004017 | 80    | 11         | 69       | 86.3             | 68               | 85.0             |
| 060710069004011 | 17    | 0          | 17       | 100.0            | 17               | 100.0            |
| 060710069004010 | 45    | 0          | 45       | 100.0            | 45               | 100.0            |
| 060710069003002 | 20    | 0          | 20       | 100.0            | 19               | 95.0             |
| 060710069004005 | 13    | 0          | 13       | 100.0            | 13               | 100.0            |
| 060710069004004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069003004 | 55    | 1          | 54       | 98.2             | 50               | 90.9             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710069003003 | 58    | 1          | 57       | 98.3             | 53               | 91.4             |
| 060710069003005 | 48    | 3          | 45       | 93.8             | 45               | 93.8             |
| 060710069003001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069003000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066004020 | 43    | 7          | 36       | 83.7             | 36               | 83.7             |
| 060710066004019 | 54    | 3          | 51       | 94.4             | 50               | 92.6             |
| 060710068001034 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710068001018 | 3     | 0          | 3        | 100.0            | 3                | 100.0            |
| 060710066004018 | 78    | 19         | 59       | 75.6             | 54               | 69.2             |
| 060710066004008 | 79    | 10         | 69       | 87.3             | 66               | 83.5             |
| 060710068001017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710068001033 | 1     | 0          | 1        | 100.0            | 1                | 100.0            |
| 060710068001019 | 6     | 0          | 6        | 100.0            | 6                | 100.0            |
| 060710068001016 | 16    | 1          | 15       | 93.8             | 13               | 81.3             |
| 060710068001014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710068001020 | 9     | 3          | 6        | 66.7             | 4                | 44.4             |
| 060710068001021 | 69    | 19         | 50       | 72.5             | 47               | 68.1             |
| 060710066004004 | 161   | 21         | 140      | 87.0             | 137              | 85.1             |
| 060710066004002 | 89    | 9          | 80       | 89.9             | 78               | 87.6             |
| 060710066004009 | 72    | 16         | 56       | 77.8             | 55               | 76.4             |
| 060710066004005 | 100   | 23         | 77       | 77.0             | 74               | 74.0             |
| 060710066004001 | 142   | 43         | 99       | 69.7             | 98               | 69.0             |
| 060710066003015 | 120   | 29         | 91       | 75.8             | 82               | 68.3             |
| 060710066003003 | 42    | 7          | 35       | 83.3             | 34               | 81.0             |
| 060710066003004 | 43    | 29         | 14       | 32.6             | 14               | 32.6             |
| 060710066003011 | 227   | 46         | 181      | 79.7             | 167              | 73.6             |
| 060710066003005 | 63    | 20         | 43       | 68.3             | 43               | 68.3             |
| 060710066003006 | 85    | 26         | 59       | 69.4             | 58               | 68.2             |
| 060710066004006 | 56    | 8          | 48       | 85.7             | 48               | 85.7             |
| 060710066004007 | 70    | 12         | 58       | 82.9             | 58               | 82.9             |
| 060710066004000 | 66    | 11         | 55       | 83.3             | 53               | 80.3             |
| 060710068001015 | 9     | 1          | 8        | 88.9             | 8                | 88.9             |
| 060710068001005 | 29    | 3          | 26       | 89.7             | 24               | 82.8             |
| 060710068001006 | 62    | 10         | 52       | 83.9             | 52               | 83.9             |
| 060710068001004 | 6     | 0          | 6        | 100.0            | 6                | 100.0            |
| 060710066003012 | 48    | 24         | 24       | 50.0             | 24               | 50.0             |
| 060710066003007 | 69    | 20         | 49       | 71.0             | 49               | 71.0             |
| 060710066003010 | 64    | 8          | 56       | 87.5             | 56               | 87.5             |
| 060710066003008 | 69    | 16         | 53       | 76.8             | 46               | 66.7             |
| 060710066003013 | 77    | 23         | 54       | 70.1             | 50               | 64.9             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710066003014 | 37    | 9          | 28       | 75.7             | 25               | 67.6             |
| 060710067004015 | 19    | 19         | 0        | 0.0              | 0                | 0.0              |
| 060710067004006 | 10    | 3          | 7        | 70.0             | 6                | 60.0             |
| 060710066003009 | 77    | 20         | 57       | 74.0             | 56               | 72.7             |
| 060710067004005 | 26    | 4          | 22       | 84.6             | 22               | 84.6             |
| 060710067003004 | 40    | 1          | 39       | 97.5             | 39               | 97.5             |
| 060710071082999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069002002 | 58    | 0          | 58       | 100.0            | 58               | 100.0            |
| 060710069002001 | 39    | 0          | 39       | 100.0            | 39               | 100.0            |
| 060710069001011 | 57    | 1          | 56       | 98.2             | 56               | 98.2             |
| 060710069001004 | 81    | 3          | 78       | 96.3             | 78               | 96.3             |
| 060710069001010 | 57    | 0          | 57       | 100.0            | 57               | 100.0            |
| 060710069001008 | 65    | 0          | 65       | 100.0            | 65               | 100.0            |
| 060710069001006 | 72    | 16         | 56       | 77.8             | 54               | 75.0             |
| 060710069009014 | 177   | 7          | 170      | 96.0             | 154              | 87.0             |
| 060710069002010 | 42    | 0          | 42       | 100.0            | 25               | 59.5             |
| 060710069002000 | 67    | 3          | 64       | 95.5             | 39               | 58.2             |
| 060710069002011 | 43    | 2          | 41       | 95.3             | 18               | 41.9             |
| 060710069009015 | 254   | 12         | 242      | 95.3             | 120              | 47.2             |
| 060710069001009 | 58    | 2          | 56       | 96.6             | 52               | 89.7             |
| 060710069001007 | 54    | 2          | 52       | 96.3             | 52               | 96.3             |
| 060710071082002 | 1,634 | 537        | 1,097    | 67.1             | 453              | 27.7             |
| 060710071071005 | 1,792 | 473        | 1,319    | 73.6             | 736              | 41.1             |
| 060710071071000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071082003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071082004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071082001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071082000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069009013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069009010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071081006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069009012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069009011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069009004 | 2     | 2          | 0        | 0.0              | 0                | 0.0              |
| 060710069009999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069001003 | 25    | 1          | 24       | 96.0             | 20               | 80.0             |
| 060710069001002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069001000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069001005 | 70    | 1          | 69       | 98.6             | 69               | 98.6             |
| 060710069009007 | 32    | 6          | 26       | 81.3             | 26               | 81.3             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710069001001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710068001032 | 1     | 0          | 1        | 100.0            | 0                | 0.0              |
| 060710068001028 | 3     | 2          | 1        | 33.3             | 0                | 0.0              |
| 060710068001027 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710068001022 | 24    | 7          | 17       | 70.8             | 17               | 70.8             |
| 060710068001029 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710068001030 | 1     | 0          | 1        | 100.0            | 0                | 0.0              |
| 060710068001026 | 19    | 3          | 16       | 84.2             | 13               | 68.4             |
| 060710068001023 | 42    | 5          | 37       | 88.1             | 37               | 88.1             |
| 060710068001025 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069009006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069009008 | 9     | 0          | 9        | 100.0            | 9                | 100.0            |
| 060710070003025 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710068001031 | 27    | 3          | 24       | 88.9             | 20               | 74.1             |
| 060710070003019 | 7     | 5          | 2        | 28.6             | 2                | 28.6             |
| 060710068001024 | 99    | 16         | 83       | 83.8             | 75               | 75.8             |
| 060710068001010 | 31    | 13         | 18       | 58.1             | 17               | 54.8             |
| 060710070004013 | 2     | 0          | 2        | 100.0            | 2                | 100.0            |
| 060710070003020 | 22    | 3          | 19       | 86.4             | 19               | 86.4             |
| 060710070003018 | 82    | 15         | 67       | 81.7             | 63               | 76.8             |
| 060710070003008 | 34    | 14         | 20       | 58.8             | 19               | 55.9             |
| 060710070004012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070003007 | 21    | 0          | 21       | 100.0            | 21               | 100.0            |
| 060710070003009 | 64    | 0          | 64       | 100.0            | 63               | 98.4             |
| 060710070003006 | 18    | 6          | 12       | 66.7             | 12               | 66.7             |
| 060710068001013 | 51    | 21         | 30       | 58.8             | 30               | 58.8             |
| 060710068001012 | 17    | 8          | 9        | 52.9             | 7                | 41.2             |
| 060710068001007 | 37    | 9          | 28       | 75.7             | 28               | 75.7             |
| 060710068001003 | 48    | 2          | 46       | 95.8             | 36               | 75.0             |
| 060710067004014 | 62    | 12         | 50       | 80.6             | 46               | 74.2             |
| 060710068001002 | 38    | 10         | 28       | 73.7             | 14               | 36.8             |
| 060710068001011 | 117   | 45         | 72       | 61.5             | 55               | 47.0             |
| 060710068001008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710067004013 | 34    | 15         | 19       | 55.9             | 18               | 52.9             |
| 060710068001001 | 45    | 17         | 28       | 62.2             | 24               | 53.3             |
| 060710067004012 | 64    | 6          | 58       | 90.6             | 58               | 90.6             |
| 060710067004007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710067004003 | 16    | 4          | 12       | 75.0             | 12               | 75.0             |
| 060710067004004 | 19    | 0          | 19       | 100.0            | 19               | 100.0            |
| 060710067003005 | 14    | 2          | 12       | 85.7             | 12               | 85.7             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710067004008 | 46    | 24         | 22       | 47.8             | 20               | 43.5             |
| 060710067004002 | 86    | 21         | 65       | 75.6             | 64               | 74.4             |
| 060710067004009 | 65    | 10         | 55       | 84.6             | 52               | 80.0             |
| 060710067003006 | 155   | 5          | 150      | 96.8             | 147              | 94.8             |
| 060710068001009 | 36    | 19         | 17       | 47.2             | 13               | 36.1             |
| 060710068001000 | 43    | 12         | 31       | 72.1             | 31               | 72.1             |
| 060710067004011 | 53    | 5          | 48       | 90.6             | 48               | 90.6             |
| 060710070004010 | 14    | 1          | 13       | 92.9             | 8                | 57.1             |
| 060710070004009 | 89    | 6          | 83       | 93.3             | 74               | 83.1             |
| 060710070004011 | 9     | 0          | 9        | 100.0            | 9                | 100.0            |
| 060710070004001 | 102   | 7          | 95       | 93.1             | 91               | 89.2             |
| 060710067004001 | 87    | 16         | 71       | 81.6             | 63               | 72.4             |
| 060710067004010 | 43    | 10         | 33       | 76.7             | 31               | 72.1             |
| 060710067004000 | 99    | 10         | 89       | 89.9             | 83               | 83.8             |
| 060710067003007 | 159   | 35         | 124      | 78.0             | 124              | 78.0             |
| 060710067003008 | 162   | 36         | 126      | 77.8             | 117              | 72.2             |
| 060710070005009 | 56    | 9          | 47       | 83.9             | 47               | 83.9             |
| 060710069009005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069009001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069009009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070003022 | 31    | 4          | 27       | 87.1             | 24               | 77.4             |
| 060710070003021 | 23    | 8          | 15       | 65.2             | 15               | 65.2             |
| 060710070003017 | 70    | 2          | 68       | 97.1             | 66               | 94.3             |
| 060710070003010 | 95    | 9          | 86       | 90.5             | 85               | 89.5             |
| 060710070003011 | 72    | 16         | 56       | 77.8             | 55               | 76.4             |
| 060710070003016 | 134   | 8          | 126      | 94.0             | 126              | 94.0             |
| 060710070003013 | 130   | 13         | 117      | 90.0             | 113              | 86.9             |
| 060710070003012 | 62    | 12         | 50       | 80.6             | 49               | 79.0             |
| 060710070003024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070003023 | 37    | 4          | 33       | 89.2             | 32               | 86.5             |
| 060710069009002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069009000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710069009003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070003014 | 52    | 7          | 45       | 86.5             | 28               | 53.8             |
| 060710070003015 | 575   | 63         | 512      | 89.0             | 402              | 69.9             |
| 060710070004006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070004007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070004008 | 65    | 4          | 61       | 93.8             | 56               | 86.2             |
| 060710070003005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070004002 | 81    | 0          | 81       | 100.0            | 72               | 88.9             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710070004003 | 10    | 1          | 9        | 90.0             | 7                | 70.0             |
| 060710070003003 | 4     | 0          | 4        | 100.0            | 4                | 100.0            |
| 060710070003004 | 19    | 0          | 19       | 100.0            | 15               | 78.9             |
| 060710070004004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070004005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070003002 | 22    | 1          | 21       | 95.5             | 21               | 95.5             |
| 060710070004000 | 272   | 44         | 228      | 83.8             | 206              | 75.7             |
| 060710070005008 | 64    | 10         | 54       | 84.4             | 50               | 78.1             |
| 060710070005007 | 83    | 9          | 74       | 89.2             | 74               | 89.2             |
| 060710070005006 | 111   | 28         | 83       | 74.8             | 69               | 62.2             |
| 060710070003001 | 130   | 17         | 113      | 86.9             | 111              | 85.4             |
| 060710070002018 | 40    | 5          | 35       | 87.5             | 21               | 52.5             |
| 060710070002019 | 68    | 4          | 64       | 94.1             | 63               | 92.6             |
| 060710070003000 | 781   | 123        | 658      | 84.3             | 550              | 70.4             |
| 060710070002021 | 11    | 4          | 7        | 63.6             | 7                | 63.6             |
| 060710070002020 | 26    | 5          | 21       | 80.8             | 21               | 80.8             |
| 060710070002029 | 66    | 2          | 64       | 97.0             | 57               | 86.4             |
| 060710070002030 | 13    | 2          | 11       | 84.6             | 11               | 84.6             |
| 060710070002008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070002017 | 78    | 11         | 67       | 85.9             | 54               | 69.2             |
| 060710070002007 | 171   | 11         | 160      | 93.6             | 160              | 93.6             |
| 060710070001010 | 153   | 41         | 112      | 73.2             | 102              | 66.7             |
| 060710070002006 | 122   | 11         | 111      | 91.0             | 110              | 90.2             |
| 060710070002016 | 139   | 18         | 121      | 87.1             | 119              | 85.6             |
| 060710070002015 | 201   | 22         | 179      | 89.1             | 178              | 88.6             |
| 060710070002005 | 9     | 5          | 4        | 44.4             | 4                | 44.4             |
| 060650422053008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051035 | 219   | 111        | 108      | 49.3             | 48               | 21.9             |
| 060650422051053 | 104   | 53         | 51       | 49.0             | 21               | 20.2             |
| 060650422051054 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051055 | 76    | 54         | 22       | 28.9             | 19               | 25.0             |
| 060650422051052 | 30    | 18         | 12       | 40.0             | 6                | 20.0             |
| 060650422051050 | 28    | 15         | 13       | 46.4             | 9                | 32.1             |
| 060650422051051 | 26    | 10         | 16       | 61.5             | 6                | 23.1             |
| 060650422051049 | 7     | 2          | 5        | 71.4             | 0                | 0.0              |
| 060650422051038 | 223   | 102        | 121      | 54.3             | 58               | 26.0             |
| 060650422051048 | 35    | 17         | 18       | 51.4             | 3                | 8.6              |
| 060650422051036 | 76    | 50         | 26       | 34.2             | 20               | 26.3             |
| 060650422051057 | 30    | 15         | 15       | 50.0             | 5                | 16.7             |
| 060650422051037 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650422051047 | 82    | 48         | 34       | 41.5             | 12               | 14.6             |
| 060650422051056 | 3     | 0          | 3        | 100.0            | 0                | 0.0              |
| 060650422053007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422053004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422053003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422053002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422053006 | 196   | 85         | 111      | 56.6             | 26               | 13.3             |
| 060650422053001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422053000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422053011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650425051001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422121025 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650425051002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422121017 | 5     | 5          | 0        | 0.0              | 0                | 0.0              |
| 060650422121045 | 63    | 30         | 33       | 52.4             | 17               | 27.0             |
| 060650422121026 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422121016 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060650422121015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422121012 | 166   | 68         | 98       | 59.0             | 60               | 36.1             |
| 060650422051019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051039 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051018 | 37    | 17         | 20       | 54.1             | 4                | 10.8             |
| 060650422051014 | 460   | 203        | 257      | 55.9             | 104              | 22.6             |
| 060650422051046 | 6     | 2          | 4        | 66.7             | 4                | 66.7             |
| 060650422051040 | 24    | 14         | 10       | 41.7             | 9                | 37.5             |
| 060650422051041 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051015 | 22    | 17         | 5        | 22.7             | 2                | 9.1              |
| 060650422051011 | 58    | 44         | 14       | 24.1             | 8                | 13.8             |
| 060650422051017 | 19    | 11         | 8        | 42.1             | 2                | 10.5             |
| 060650422051009 | 54    | 45         | 9        | 16.7             | 0                | 0.0              |
| 060650422051016 | 13    | 9          | 4        | 30.8             | 3                | 23.1             |
| 060650422051008 | 31    | 23         | 8        | 25.8             | 5                | 16.1             |
| 060650422051006 | 37    | 28         | 9        | 24.3             | 1                | 2.7              |
| 060650422051007 | 28    | 13         | 15       | 53.6             | 9                | 32.1             |
| 060650422051042 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051043 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051044 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051045 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422121022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422051058 | 13    | 13         | 0        | 0.0              | 0                | 0.0              |

**TABLE 8.8A-1**

2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650422051000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422121020 | 3     | 2          | 1        | 33.3             | 1                | 33.3             |
| 060650422051005 | 2     | 1          | 1        | 50.0             | 1                | 50.0             |
| 060650422051001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422053005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422121023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422121024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422121019 | 40    | 29         | 11       | 27.5             | 8                | 20.0             |
| 060650422121018 | 217   | 64         | 153      | 70.5             | 92               | 42.4             |
| 060650422121035 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422121036 | 207   | 131        | 76       | 36.7             | 34               | 16.4             |
| 060650422141002 | 1     | 0          | 1        | 100.0            | 1                | 100.0            |
| 060650422121041 | 351   | 118        | 233      | 66.4             | 92               | 26.2             |
| 060650422121043 | 120   | 44         | 76       | 63.3             | 43               | 35.8             |
| 060650422121044 | 75    | 25         | 50       | 66.7             | 26               | 34.7             |
| 060650422121042 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422121040 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422121037 | 235   | 98         | 137      | 58.3             | 60               | 25.5             |
| 060650422121039 | 181   | 61         | 120      | 66.3             | 58               | 32.0             |
| 060650422121034 | 207   | 74         | 133      | 64.3             | 69               | 33.3             |
| 060650422121046 | 18    | 13         | 5        | 27.8             | 5                | 27.8             |
| 060650422121033 | 11    | 7          | 4        | 36.4             | 0                | 0.0              |
| 060650422121047 | 20    | 1          | 19       | 95.0             | 9                | 45.0             |
| 060650422121032 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422121028 | 28    | 16         | 12       | 42.9             | 0                | 0.0              |
| 060650422121013 | 581   | 272        | 309      | 53.2             | 140              | 24.1             |
| 060650422121030 | 80    | 27         | 53       | 66.3             | 13               | 16.3             |
| 060650422121029 | 89    | 44         | 45       | 50.6             | 17               | 19.1             |
| 060650422121031 | 4     | 1          | 3        | 75.0             | 3                | 75.0             |
| 060650422121038 | 135   | 66         | 69       | 51.1             | 41               | 30.4             |
| 060650422141001 | 43    | 34         | 9        | 20.9             | 5                | 11.6             |
| 060650422121014 | 102   | 55         | 47       | 46.1             | 34               | 33.3             |
| 060650422141003 | 569   | 281        | 288      | 50.6             | 144              | 25.3             |
| 060650422121010 | 85    | 44         | 41       | 48.2             | 24               | 28.2             |
| 060650422142001 | 190   | 124        | 66       | 34.7             | 52               | 27.4             |
| 060650422142049 | 2     | 2          | 0        | 0.0              | 0                | 0.0              |
| 060650422142037 | 19    | 19         | 0        | 0.0              | 0                | 0.0              |
| 060650423009001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422142036 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650423009002 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650424122002 | 4     | 1          | 3        | 75.0             | 0                | 0.0              |
| 060650423009000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422141000 | 240   | 136        | 104      | 43.3             | 40               | 16.7             |
| 060650422141004 | 6     | 0          | 6        | 100.0            | 6                | 100.0            |
| 060650422141005 | 12    | 12         | 0        | 0.0              | 0                | 0.0              |
| 060650424091001 | 62    | 45         | 17       | 27.4             | 7                | 11.3             |
| 060650422142002 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060650422142007 | 151   | 80         | 71       | 47.0             | 23               | 15.2             |
| 060650422142006 | 133   | 57         | 76       | 57.1             | 17               | 12.8             |
| 060650422142024 | 24    | 9          | 15       | 62.5             | 10               | 41.7             |
| 060650422142023 | 98    | 42         | 56       | 57.1             | 16               | 16.3             |
| 060650422142025 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422142021 | 46    | 19         | 27       | 58.7             | 16               | 34.8             |
| 060650422142022 | 106   | 50         | 56       | 52.8             | 31               | 29.2             |
| 060650422142009 | 167   | 42         | 125      | 74.9             | 22               | 13.2             |
| 060650422142004 | 64    | 30         | 34       | 53.1             | 12               | 18.8             |
| 060650422142005 | 338   | 132        | 206      | 60.9             | 88               | 26.0             |
| 060650422142003 | 56    | 29         | 27       | 48.2             | 12               | 21.4             |
| 060650422142035 | 67    | 15         | 52       | 77.6             | 25               | 37.3             |
| 060650422142027 | 72    | 28         | 44       | 61.1             | 25               | 34.7             |
| 060650422142033 | 100   | 42         | 58       | 58.0             | 22               | 22.0             |
| 060650422142034 | 55    | 10         | 45       | 81.8             | 28               | 50.9             |
| 060650422142032 | 58    | 17         | 41       | 70.7             | 28               | 48.3             |
| 060650422142031 | 64    | 24         | 40       | 62.5             | 21               | 32.8             |
| 060650422142028 | 77    | 34         | 43       | 55.8             | 31               | 40.3             |
| 060650422142029 | 57    | 39         | 18       | 31.6             | 8                | 14.0             |
| 060650422142030 | 42    | 20         | 22       | 52.4             | 13               | 31.0             |
| 060650424101034 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422142026 | 32    | 16         | 16       | 50.0             | 5                | 15.6             |
| 060650422142010 | 473   | 268        | 205      | 43.3             | 118              | 24.9             |
| 060650422142020 | 94    | 41         | 53       | 56.4             | 36               | 38.3             |
| 060650422142019 | 22    | 2          | 20       | 90.9             | 11               | 50.0             |
| 060650422142018 | 85    | 45         | 40       | 47.1             | 16               | 18.8             |
| 060650422142017 | 153   | 74         | 79       | 51.6             | 59               | 38.6             |
| 060650422142016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650422142012 | 81    | 39         | 42       | 51.9             | 20               | 24.7             |
| 060650422142013 | 112   | 51         | 61       | 54.5             | 33               | 29.5             |
| 060650422142014 | 79    | 24         | 55       | 69.6             | 23               | 29.1             |
| 060650422142015 | 301   | 104        | 197      | 65.4             | 92               | 30.6             |
| 060650422142011 | 369   | 185        | 184      | 49.9             | 94               | 25.5             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060650424091002 | 94    | 51         | 43       | 45.7             | 21               | 22.3             |
| 060650424091000 | 464   | 199        | 265      | 57.1             | 151              | 32.5             |
| 060650424101033 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650424101014 | 181   | 85         | 96       | 53.0             | 51               | 28.2             |
| 060650424101012 | 207   | 68         | 139      | 67.1             | 60               | 29.0             |
| 060650424101016 | 49    | 13         | 36       | 73.5             | 29               | 59.2             |
| 060650424101013 | 166   | 55         | 111      | 66.9             | 46               | 27.7             |
| 060650424122008 | 7     | 7          | 0        | 0.0              | 0                | 0.0              |
| 060650424101015 | 79    | 32         | 47       | 59.5             | 35               | 44.3             |
| 060650424122009 | 43    | 31         | 12       | 27.9             | 3                | 7.0              |
| 060650424101004 | 42    | 28         | 14       | 33.3             | 5                | 11.9             |
| 060650424101999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650424101000 | 497   | 230        | 267      | 53.7             | 91               | 18.3             |
| 060650424101003 | 75    | 22         | 53       | 70.7             | 4                | 5.3              |
| 060650424101001 | 47    | 12         | 35       | 74.5             | 3                | 6.4              |
| 060650424101002 | 75    | 26         | 49       | 65.3             | 10               | 13.3             |
| 060650424122010 | 171   | 81         | 90       | 52.6             | 41               | 24.0             |
| 060650424122007 | 566   | 238        | 328      | 58.0             | 131              | 23.1             |
| 060650422142008 | 231   | 89         | 142      | 61.5             | 87               | 37.7             |
| 060650422142000 | 13    | 8          | 5        | 38.5             | 0                | 0.0              |
| 060650424122003 | 124   | 82         | 42       | 33.9             | 37               | 29.8             |
| 060650424122000 | 140   | 86         | 54       | 38.6             | 23               | 16.4             |
| 060710071045002 | 76    | 38         | 38       | 50.0             | 14               | 18.4             |
| 060710071044003 | 21    | 13         | 8        | 38.1             | 6                | 28.6             |
| 060710071045004 | 45    | 34         | 11       | 24.4             | 4                | 8.9              |
| 060710071043005 | 103   | 66         | 37       | 35.9             | 18               | 17.5             |
| 060710071043003 | 105   | 68         | 37       | 35.2             | 14               | 13.3             |
| 060710071045003 | 123   | 68         | 55       | 44.7             | 30               | 24.4             |
| 060710071043006 | 87    | 50         | 37       | 42.5             | 17               | 19.5             |
| 060710071043007 | 68    | 48         | 20       | 29.4             | 17               | 25.0             |
| 060710071045005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071045001 | 628   | 390        | 238      | 37.9             | 119              | 18.9             |
| 060710071052013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071042007 | 91    | 59         | 32       | 35.2             | 23               | 25.3             |
| 060710071042005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071042006 | 62    | 44         | 18       | 29.0             | 12               | 19.4             |
| 060710071043000 | 65    | 40         | 25       | 38.5             | 20               | 30.8             |
| 060710071042003 | 36    | 23         | 13       | 36.1             | 13               | 36.1             |
| 060710071021009 | 99    | 80         | 19       | 19.2             | 18               | 18.2             |
| 060710071021010 | 68    | 54         | 14       | 20.6             | 14               | 20.6             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710071021008 | 76    | 47         | 29       | 38.2             | 27               | 35.5             |
| 060710071041008 | 127   | 71         | 56       | 44.1             | 41               | 32.3             |
| 060710071042001 | 34    | 28         | 6        | 17.6             | 4                | 11.8             |
| 060710071042002 | 26    | 23         | 3        | 11.5             | 2                | 7.7              |
| 060710071042000 | 81    | 70         | 11       | 13.6             | 10               | 12.3             |
| 060710071041007 | 91    | 56         | 35       | 38.5             | 7                | 7.7              |
| 060710071022004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071041006 | 196   | 111        | 85       | 43.4             | 29               | 14.8             |
| 060710071021005 | 99    | 87         | 12       | 12.1             | 7                | 7.1              |
| 060710071021007 | 31    | 24         | 7        | 22.6             | 7                | 22.6             |
| 060710071021006 | 28    | 17         | 11       | 39.3             | 0                | 0.0              |
| 060710071021000 | 68    | 49         | 19       | 27.9             | 16               | 23.5             |
| 060710071022002 | 78    | 65         | 13       | 16.7             | 7                | 9.0              |
| 060710071023004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071041005 | 55    | 53         | 2        | 3.6              | 2                | 3.6              |
| 060710071045000 | 43    | 19         | 24       | 55.8             | 12               | 27.9             |
| 060710071022001 | 46    | 26         | 20       | 43.5             | 3                | 6.5              |
| 060710071022000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071041003 | 138   | 119        | 19       | 13.8             | 9                | 6.5              |
| 060710071041002 | 230   | 131        | 99       | 43.0             | 38               | 16.5             |
| 060710071052012 | 224   | 119        | 105      | 46.9             | 40               | 17.9             |
| 060710071052037 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052036 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052018 | 11    | 7          | 4        | 36.4             | 4                | 36.4             |
| 060710071052017 | 50    | 20         | 30       | 60.0             | 6                | 12.0             |
| 060710071052031 | 4     | 0          | 4        | 100.0            | 0                | 0.0              |
| 060710071052032 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052033 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052030 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052028 | 14    | 10         | 4        | 28.6             | 0                | 0.0              |
| 060710071052029 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052022 | 4     | 3          | 1        | 25.0             | 0                | 0.0              |
| 060710073022025 | 5     | 4          | 1        | 20.0             | 1                | 20.0             |
| 060710071052019 | 7     | 7          | 0        | 0.0              | 0                | 0.0              |
| 060710073022024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073022023 | 18    | 10         | 8        | 44.4             | 3                | 16.7             |
| 060710073022022 | 6     | 1          | 5        | 83.3             | 5                | 83.3             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710071052014 | 92    | 34         | 58       | 63.0             | 0                | 0.0              |
| 060710071041004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052015 | 42    | 37         | 5        | 11.9             | 5                | 11.9             |
| 060710071052011 | 30    | 13         | 17       | 56.7             | 0                | 0.0              |
| 060710071052001 | 214   | 131        | 83       | 38.8             | 35               | 16.4             |
| 060710071052002 | 3     | 3          | 0        | 0.0              | 0                | 0.0              |
| 060710071052005 | 14    | 9          | 5        | 35.7             | 3                | 21.4             |
| 060710071052000 | 16    | 13         | 3        | 18.8             | 0                | 0.0              |
| 060710071051003 | 552   | 237        | 315      | 57.1             | 136              | 24.6             |
| 060710071051006 | 70    | 33         | 37       | 52.9             | 2                | 2.9              |
| 060710071051005 | 241   | 108        | 133      | 55.2             | 43               | 17.8             |
| 060710071051004 | 27    | 16         | 11       | 40.7             | 11               | 40.7             |
| 060710071052010 | 24    | 5          | 19       | 79.2             | 11               | 45.8             |
| 060710071052009 | 44    | 34         | 10       | 22.7             | 8                | 18.2             |
| 060710071052007 | 56    | 36         | 20       | 35.7             | 7                | 12.5             |
| 060710071052008 | 125   | 61         | 64       | 51.2             | 32               | 25.6             |
| 060710071052016 | 25    | 6          | 19       | 76.0             | 10               | 40.0             |
| 060710071052003 | 15    | 6          | 9        | 60.0             | 9                | 60.0             |
| 060710071052004 | 2     | 1          | 1        | 50.0             | 0                | 0.0              |
| 060710071052006 | 7     | 5          | 2        | 28.6             | 0                | 0.0              |
| 060710073022010 | 27    | 17         | 10       | 37.0             | 1                | 3.7              |
| 060710073022011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073022004 | 15    | 6          | 9        | 60.0             | 8                | 53.3             |
| 060710073022012 | 4     | 4          | 0        | 0.0              | 0                | 0.0              |
| 060710073022013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073022008 | 22    | 19         | 3        | 13.6             | 2                | 9.1              |
| 060710073022006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073022005 | 99    | 68         | 31       | 31.3             | 12               | 12.1             |
| 060710071023007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071081011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071023006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071023005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071081010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071081009 | 430   | 157        | 273      | 63.5             | 136              | 31.6             |
| 060710071023003 | 655   | 150        | 505      | 77.1             | 227              | 34.7             |
| 060710071024009 | 736   | 224        | 512      | 69.6             | 179              | 24.3             |
| 060710071081005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071081998 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071081003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071081002 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710071081001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071023002 | 665   | 152        | 513      | 77.1             | 238              | 35.8             |
| 060710071023001 | 37    | 15         | 22       | 59.5             | 16               | 43.2             |
| 060710071024017 | 44    | 15         | 29       | 65.9             | 19               | 43.2             |
| 060710071041001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071024010 | 986   | 358        | 628      | 63.7             | 232              | 23.5             |
| 060710071023000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071024016 | 237   | 99         | 138      | 58.2             | 81               | 34.2             |
| 060710071024015 | 212   | 131        | 81       | 38.2             | 50               | 23.6             |
| 060710071024018 | 36    | 12         | 24       | 66.7             | 12               | 33.3             |
| 060710071024011 | 121   | 53         | 68       | 56.2             | 43               | 35.5             |
| 060710071081004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071024013 | 71    | 30         | 41       | 57.7             | 27               | 38.0             |
| 060710071025003 | 171   | 50         | 121      | 70.8             | 81               | 47.4             |
| 060710071025007 | 35    | 15         | 20       | 57.1             | 7                | 20.0             |
| 060710071024012 | 74    | 37         | 37       | 50.0             | 26               | 35.1             |
| 060710071025004 | 95    | 21         | 74       | 77.9             | 50               | 52.6             |
| 060710071025005 | 316   | 134        | 182      | 57.6             | 103              | 32.6             |
| 060710071024014 | 74    | 36         | 38       | 51.4             | 23               | 31.1             |
| 060710071025008 | 71    | 37         | 34       | 47.9             | 18               | 25.4             |
| 060710071025006 | 88    | 21         | 67       | 76.1             | 48               | 54.5             |
| 060710071081007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071081008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009050 | 5     | 0          | 5        | 100.0            | 5                | 100.0            |
| 060710060009049 | 40    | 3          | 37       | 92.5             | 37               | 92.5             |
| 060710071081999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009051 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009045 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009046 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009044 | 49    | 21         | 28       | 57.1             | 18               | 36.7             |
| 060710070002022 | 118   | 13         | 105      | 89.0             | 104              | 88.1             |
| 060710070002024 | 29    | 1          | 28       | 96.6             | 28               | 96.6             |
| 060710060009047 | 669   | 31         | 638      | 95.4             | 583              | 87.1             |
| 060710060009048 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070002023 | 132   | 14         | 118      | 89.4             | 110              | 83.3             |
| 060710070002009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070002014 | 59    | 6          | 53       | 89.8             | 49               | 83.1             |
| 060710070002013 | 65    | 10         | 55       | 84.6             | 53               | 81.5             |
| 060710070002002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070002010 | 80    | 1          | 79       | 98.8             | 79               | 98.8             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710070002001 | 30    | 1          | 29       | 96.7             | 23               | 76.7             |
| 060710070002025 | 113   | 26         | 87       | 77.0             | 85               | 75.2             |
| 060710070002026 | 134   | 20         | 114      | 85.1             | 112              | 83.6             |
| 060710070002011 | 54    | 3          | 51       | 94.4             | 51               | 94.4             |
| 060710070002012 | 31    | 4          | 27       | 87.1             | 27               | 87.1             |
| 060710070002027 | 151   | 27         | 124      | 82.1             | 112              | 74.2             |
| 060710070002028 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009032 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009031 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009030 | 24    | 7          | 17       | 70.8             | 11               | 45.8             |
| 060710071081000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009995 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071025000 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060710060009022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009996 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009025 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009039 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009997 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009052 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009043 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009041 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009040 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009029 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009026 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009042 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009038 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009027 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071041000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071024008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071051002 | 139   | 66         | 73       | 52.5             | 28               | 20.1             |
| 060710071051001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073022001 | 33    | 29         | 4        | 12.1             | 0                | 0.0              |
| 060710073022002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071024003 | 141   | 38         | 103      | 73.0             | 42               | 29.8             |
| 060710071024005 | 77    | 28         | 49       | 63.6             | 22               | 28.6             |
| 060710071024004 | 128   | 41         | 87       | 68.0             | 28               | 21.9             |
| 060710071051000 | 402   | 102        | 300      | 74.6             | 148              | 36.8             |
| 060710071024007 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710073022003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071024006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071024000 | 96    | 35         | 61       | 63.5             | 23               | 24.0             |
| 060710071026027 | 77    | 24         | 53       | 68.8             | 15               | 19.5             |
| 060710071026018 | 29    | 15         | 14       | 48.3             | 11               | 37.9             |
| 060710071025009 | 73    | 19         | 54       | 74.0             | 24               | 32.9             |
| 060710071024002 | 89    | 22         | 67       | 75.3             | 23               | 25.8             |
| 060710071025011 | 78    | 31         | 47       | 60.3             | 24               | 30.8             |
| 060710071025012 | 117   | 63         | 54       | 46.2             | 8                | 6.8              |
| 060710071024001 | 83    | 5          | 78       | 94.0             | 29               | 34.9             |
| 060710071025010 | 73    | 41         | 32       | 43.8             | 15               | 20.5             |
| 060710071025016 | 91    | 28         | 63       | 69.2             | 37               | 40.7             |
| 060710071025002 | 278   | 83         | 195      | 70.1             | 92               | 33.1             |
| 060710071025001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071025015 | 50    | 13         | 37       | 74.0             | 27               | 54.0             |
| 060710071025013 | 79    | 23         | 56       | 70.9             | 30               | 38.0             |
| 060710071025014 | 33    | 12         | 21       | 63.6             | 11               | 33.3             |
| 060710071026015 | 194   | 67         | 127      | 65.5             | 37               | 19.1             |
| 060710071026017 | 134   | 46         | 88       | 65.7             | 40               | 29.9             |
| 060710071026014 | 36    | 7          | 29       | 80.6             | 28               | 77.8             |
| 060710071026011 | 49    | 21         | 28       | 57.1             | 22               | 44.9             |
| 060710071026010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071026009 | 3     | 1          | 2        | 66.7             | 0                | 0.0              |
| 060710071026005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071026004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071026002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073022000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071026026 | 179   | 73         | 106      | 59.2             | 38               | 21.2             |
| 060710071026024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071026025 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071026019 | 231   | 85         | 146      | 63.2             | 35               | 15.2             |
| 060710071026023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071026022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073021014 | 4     | 0          | 4        | 100.0            | 0                | 0.0              |
| 060710073012015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071026016 | 180   | 69         | 111      | 61.7             | 57               | 31.7             |
| 060710071026012 | 172   | 59         | 113      | 65.7             | 49               | 28.5             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710071026013 | 63    | 25         | 38       | 60.3             | 8                | 12.7             |
| 060710071026020 | 107   | 42         | 65       | 60.7             | 22               | 20.6             |
| 060710071026008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071026007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071026006 | 2     | 1          | 1        | 50.0             | 0                | 0.0              |
| 060710071026021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012014 | 151   | 23         | 128      | 84.8             | 54               | 35.8             |
| 060710073012011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073011005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073011010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009053 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009059 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009060 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071026003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009054 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009055 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009998 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071026001 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060710060009058 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071026000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009056 | 2     | 0          | 2        | 100.0            | 0                | 0.0              |
| 060710060009018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009057 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009014 | 10    | 5          | 5        | 50.0             | 4                | 40.0             |
| 060710060009013 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710060009012 | 43    | 1          | 42       | 97.7             | 29               | 67.4             |
| 060710060001014 | 20    | 0          | 20       | 100.0            | 7                | 35.0             |
| 060650424122001 | 75    | 41         | 34       | 45.3             | 28               | 37.3             |
| 060710071052046 | 4     | 0          | 4        | 100.0            | 0                | 0.0              |
| 060710071052035 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052038 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052045 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052044 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052040 | 8     | 2          | 6        | 75.0             | 5                | 62.5             |
| 060710071052039 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052043 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052041 | 8     | 6          | 2        | 25.0             | 0                | 0.0              |
| 060710071052042 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073023010 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060710071052027 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052034 | 5     | 2          | 3        | 60.0             | 3                | 60.0             |
| 060710071052024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052025 | 359   | 265        | 94       | 26.2             | 58               | 16.2             |
| 060710073022026 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073022027 | 13    | 13         | 0        | 0.0              | 0                | 0.0              |
| 060710073022028 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710071052026 | 3     | 1          | 2        | 66.7             | 0                | 0.0              |
| 060710073022019 | 4     | 1          | 3        | 75.0             | 1                | 25.0             |
| 060710073022020 | 8     | 6          | 2        | 25.0             | 0                | 0.0              |
| 060710073022018 | 36    | 26         | 10       | 27.8             | 2                | 5.6              |
| 060710073022021 | 4     | 4          | 0        | 0.0              | 0                | 0.0              |
| 060710073022017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060650424123019 | 33    | 22         | 11       | 33.3             | 5                | 15.2             |
| 060710073023009 | 19    | 19         | 0        | 0.0              | 0                | 0.0              |
| 060710073022009 | 212   | 109        | 103      | 48.6             | 25               | 11.8             |
| 060710073022030 | 69    | 32         | 37       | 53.6             | 15               | 21.7             |
| 060710073022029 | 5     | 0          | 5        | 100.0            | 5                | 100.0            |
| 060710073022016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073022015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073022007 | 233   | 90         | 143      | 61.4             | 50               | 21.5             |
| 060710073022014 | 164   | 53         | 111      | 67.7             | 31               | 18.9             |
| 060710073021010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073021007 | 32    | 23         | 9        | 28.1             | 2                | 6.3              |
| 060710073021001 | 13    | 8          | 5        | 38.5             | 0                | 0.0              |
| 060710073021009 | 44    | 18         | 26       | 59.1             | 8                | 18.2             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710073021002 | 21    | 11         | 10       | 47.6             | 1                | 4.8              |
| 060710073021003 | 37    | 25         | 12       | 32.4             | 1                | 2.7              |
| 060710073024018 | 28    | 17         | 11       | 39.3             | 0                | 0.0              |
| 060710073023008 | 61    | 45         | 16       | 26.2             | 12               | 19.7             |
| 060710073021000 | 512   | 305        | 207      | 40.4             | 36               | 7.0              |
| 060710073024019 | 22    | 8          | 14       | 63.6             | 10               | 45.5             |
| 060710073024017 | 30    | 26         | 4        | 13.3             | 1                | 3.3              |
| 060710073024020 | 18    | 14         | 4        | 22.2             | 0                | 0.0              |
| 060710073024016 | 26    | 21         | 5        | 19.2             | 0                | 0.0              |
| 060710073024022 | 54    | 42         | 12       | 22.2             | 2                | 3.7              |
| 060710073024021 | 35    | 33         | 2        | 5.7              | 0                | 0.0              |
| 060710073024015 | 29    | 19         | 10       | 34.5             | 0                | 0.0              |
| 060710073024027 | 42    | 24         | 18       | 42.9             | 3                | 7.1              |
| 060710073024025 | 29    | 22         | 7        | 24.1             | 7                | 24.1             |
| 060710073024023 | 64    | 24         | 40       | 62.5             | 7                | 10.9             |
| 060710073024024 | 43    | 29         | 14       | 32.6             | 1                | 2.3              |
| 060710073024013 | 59    | 41         | 18       | 30.5             | 0                | 0.0              |
| 060710073024012 | 24    | 13         | 11       | 45.8             | 0                | 0.0              |
| 060710073024026 | 64    | 26         | 38       | 59.4             | 4                | 6.3              |
| 060710073024010 | 84    | 50         | 34       | 40.5             | 7                | 8.3              |
| 060710073024011 | 21    | 20         | 1        | 4.8              | 0                | 0.0              |
| 060710073024028 | 68    | 37         | 31       | 45.6             | 1                | 1.5              |
| 060710073024009 | 23    | 8          | 15       | 65.2             | 5                | 21.7             |
| 060710073024008 | 68    | 26         | 42       | 61.8             | 2                | 2.9              |
| 060710073024029 | 93    | 28         | 65       | 69.9             | 7                | 7.5              |
| 060710073024030 | 43    | 17         | 26       | 60.5             | 0                | 0.0              |
| 060710073024007 | 32    | 13         | 19       | 59.4             | 6                | 18.8             |
| 060710073024033 | 70    | 30         | 40       | 57.1             | 2                | 2.9              |
| 060710073024031 | 237   | 96         | 141      | 59.5             | 25               | 10.5             |
| 060710073024032 | 134   | 105        | 29       | 21.6             | 14               | 10.4             |
| 060710073021013 | 10    | 8          | 2        | 20.0             | 0                | 0.0              |
| 060710073012006 | 283   | 207        | 76       | 26.9             | 35               | 12.4             |
| 060710073021012 | 509   | 355        | 154      | 30.3             | 37               | 7.3              |
| 060710073021011 | 11    | 6          | 5        | 45.5             | 5                | 45.5             |
| 060710073013009 | 97    | 58         | 39       | 40.2             | 22               | 22.7             |
| 060710073013008 | 29    | 20         | 9        | 31.0             | 4                | 13.8             |
| 060710073013007 | 29    | 19         | 10       | 34.5             | 4                | 13.8             |
| 060710073013006 | 17    | 7          | 10       | 58.8             | 0                | 0.0              |
| 060710073012024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012019 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710073012023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073013005 | 68    | 45         | 23       | 33.8             | 14               | 20.6             |
| 060710073013011 | 92    | 49         | 43       | 46.7             | 9                | 9.8              |
| 060710073013004 | 18    | 16         | 2        | 11.1             | 0                | 0.0              |
| 060710073012008 | 1     | 0          | 1        | 100.0            | 0                | 0.0              |
| 060710073012007 | 1,068 | 208        | 860      | 80.5             | 421              | 39.4             |
| 060710073011006 | 96    | 30         | 66       | 68.8             | 6                | 6.3              |
| 060710073011007 | 77    | 43         | 34       | 44.2             | 20               | 26.0             |
| 060710073012004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073011003 | 45    | 25         | 20       | 44.4             | 9                | 20.0             |
| 060710073012030 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012031 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073011008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073021006 | 16    | 7          | 9        | 56.3             | 4                | 25.0             |
| 060710073021005 | 53    | 35         | 18       | 34.0             | 8                | 15.1             |
| 060710073013002 | 33    | 22         | 11       | 33.3             | 3                | 9.1              |
| 060710073021008 | 76    | 55         | 21       | 27.6             | 8                | 10.5             |
| 060710073013010 | 79    | 58         | 21       | 26.6             | 5                | 6.3              |
| 060710073013003 | 47    | 33         | 14       | 29.8             | 6                | 12.8             |
| 060710073012025 | 52    | 38         | 14       | 26.9             | 5                | 9.6              |
| 060710073012026 | 104   | 44         | 60       | 57.7             | 13               | 12.5             |
| 060710073021004 | 62    | 38         | 24       | 38.7             | 13               | 21.0             |
| 060710073013000 | 6     | 4          | 2        | 33.3             | 1                | 16.7             |
| 060710073012027 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073013001 | 8     | 6          | 2        | 25.0             | 0                | 0.0              |
| 060710073014017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073014018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073014015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073014016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012029 | 33    | 20         | 13       | 39.4             | 6                | 18.2             |
| 060710073012028 | 87    | 42         | 45       | 51.7             | 12               | 13.8             |
| 060710073012001 | 830   | 237        | 593      | 71.4             | 155              | 18.7             |
| 060710073011009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073012000 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710073014009 | 211   | 59         | 152      | 72.0             | 75               | 35.5             |
| 060710073011004 | 64    | 21         | 43       | 67.2             | 32               | 50.0             |
| 060710072007019 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073011002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007020 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073011001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007003 | 13    | 4          | 9        | 69.2             | 9                | 69.2             |
| 060710072007002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072002018 | 6     | 0          | 6        | 100.0            | 6                | 100.0            |
| 060710072007001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072002017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073011000 | 8     | 7          | 1        | 12.5             | 0                | 0.0              |
| 060710072007022 | 3     | 3          | 0        | 0.0              | 0                | 0.0              |
| 060710072007026 | 18    | 7          | 11       | 61.1             | 11               | 61.1             |
| 060710072007012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007011 | 92    | 5          | 87       | 94.6             | 75               | 81.5             |
| 060710072007025 | 196   | 14         | 182      | 92.9             | 130              | 66.3             |
| 060710072007023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072002012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072002013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072002011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072002010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072002014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072002009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072007000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072002015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072002016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072002008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073024003 | 93    | 63         | 30       | 32.3             | 9                | 9.7              |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710073014029 | 64    | 26         | 38       | 59.4             | 9                | 14.1             |
| 060710073014023 | 102   | 47         | 55       | 53.9             | 11               | 10.8             |
| 060710073014028 | 51    | 27         | 24       | 47.1             | 7                | 13.7             |
| 060710073024004 | 56    | 45         | 11       | 19.6             | 1                | 1.8              |
| 060710073014022 | 149   | 84         | 65       | 43.6             | 28               | 18.8             |
| 060710073014019 | 10    | 10         | 0        | 0.0              | 0                | 0.0              |
| 060710073014020 | 28    | 20         | 8        | 28.6             | 1                | 3.6              |
| 060710073014008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073024014 | 42    | 25         | 17       | 40.5             | 0                | 0.0              |
| 060710073024002 | 28    | 22         | 6        | 21.4             | 2                | 7.1              |
| 060710073014024 | 262   | 146        | 116      | 44.3             | 50               | 19.1             |
| 060710073024005 | 267   | 204        | 63       | 23.6             | 16               | 6.0              |
| 060710073014025 | 98    | 66         | 32       | 32.7             | 2                | 2.0              |
| 060710073014005 | 101   | 43         | 58       | 57.4             | 21               | 20.8             |
| 060710073014021 | 94    | 55         | 39       | 41.5             | 16               | 17.0             |
| 060710073014007 | 133   | 72         | 61       | 45.9             | 12               | 9.0              |
| 060710073014006 | 87    | 31         | 56       | 64.4             | 25               | 28.7             |
| 060710073014026 | 117   | 35         | 82       | 70.1             | 18               | 15.4             |
| 060710073014027 | 104   | 45         | 59       | 56.7             | 17               | 16.3             |
| 060710073014010 | 180   | 51         | 129      | 71.7             | 53               | 29.4             |
| 060710073014011 | 94    | 10         | 84       | 89.4             | 38               | 40.4             |
| 060710073014014 | 77    | 21         | 56       | 72.7             | 23               | 29.9             |
| 060710073015020 | 144   | 39         | 105      | 72.9             | 68               | 47.2             |
| 060710073015021 | 19    | 7          | 12       | 63.2             | 7                | 36.8             |
| 060710073014013 | 216   | 98         | 118      | 54.6             | 63               | 29.2             |
| 060710073015009 | 170   | 34         | 136      | 80.0             | 82               | 48.2             |
| 060710073015008 | 11    | 9          | 2        | 18.2             | 2                | 18.2             |
| 060710073015002 | 145   | 54         | 91       | 62.8             | 46               | 31.7             |
| 060710073015007 | 23    | 15         | 8        | 34.8             | 6                | 26.1             |
| 060710073015006 | 34    | 12         | 22       | 64.7             | 15               | 44.1             |
| 060710073015004 | 15    | 5          | 10       | 66.7             | 4                | 26.7             |
| 060710073015005 | 248   | 119        | 129      | 52.0             | 74               | 29.8             |
| 060710073024006 | 100   | 83         | 17       | 17.0             | 7                | 7.0              |
| 060710073024001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073014003 | 1,558 | 780        | 778      | 49.9             | 211              | 13.5             |
| 060710073024000 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060710073014004 | 56    | 9          | 47       | 83.9             | 2                | 3.6              |
| 060710073015018 | 170   | 64         | 106      | 62.4             | 42               | 24.7             |
| 060710073014001 | 6     | 1          | 5        | 83.3             | 4                | 66.7             |
| 060710073015019 | 93    | 37         | 56       | 60.2             | 19               | 20.4             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710073015010 | 53    | 17         | 36       | 67.9             | 11               | 20.8             |
| 060710073015017 | 83    | 36         | 47       | 56.6             | 13               | 15.7             |
| 060710073015001 | 222   | 37         | 185      | 83.3             | 75               | 33.8             |
| 060710073015016 | 60    | 9          | 51       | 85.0             | 10               | 16.7             |
| 060710073015011 | 57    | 15         | 42       | 73.7             | 10               | 17.5             |
| 060710073015015 | 50    | 13         | 37       | 74.0             | 0                | 0.0              |
| 060710073014000 | 180   | 137        | 43       | 23.9             | 19               | 10.6             |
| 060710073015022 | 160   | 46         | 114      | 71.3             | 40               | 25.0             |
| 060710073015014 | 256   | 99         | 157      | 61.3             | 38               | 14.8             |
| 060710073015012 | 54    | 25         | 29       | 53.7             | 5                | 9.3              |
| 060710073015000 | 671   | 235        | 436      | 65.0             | 163              | 24.3             |
| 060710073015013 | 84    | 36         | 48       | 57.1             | 31               | 36.9             |
| 060710073014012 | 123   | 33         | 90       | 73.2             | 49               | 39.8             |
| 060710072006014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072006013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072006012 | 145   | 34         | 111      | 76.6             | 70               | 48.3             |
| 060710072006010 | 258   | 61         | 197      | 76.4             | 97               | 37.6             |
| 060710072006011 | 141   | 17         | 124      | 87.9             | 75               | 53.2             |
| 060710072006005 | 44    | 7          | 37       | 84.1             | 10               | 22.7             |
| 060710072006007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072006015 | 2     | 0          | 2        | 100.0            | 2                | 100.0            |
| 060710073015003 | 65    | 52         | 13       | 20.0             | 8                | 12.3             |
| 060710072006009 | 263   | 60         | 203      | 77.2             | 25               | 9.5              |
| 060710072006008 | 33    | 11         | 22       | 66.7             | 7                | 21.2             |
| 060710072006004 | 166   | 28         | 138      | 83.1             | 20               | 12.0             |
| 060710072006006 | 246   | 76         | 170      | 69.1             | 67               | 27.2             |
| 060710072004016 | 13    | 6          | 7        | 53.8             | 0                | 0.0              |
| 060710072005005 | 150   | 20         | 130      | 86.7             | 48               | 32.0             |
| 060710072005004 | 266   | 26         | 240      | 90.2             | 122              | 45.9             |
| 060710072005001 | 9     | 0          | 9        | 100.0            | 0                | 0.0              |
| 060710072005002 | 181   | 36         | 145      | 80.1             | 68               | 37.6             |
| 060710072003010 | 11    | 11         | 0        | 0.0              | 0                | 0.0              |
| 060710072005006 | 216   | 52         | 164      | 75.9             | 121              | 56.0             |
| 060710072005003 | 182   | 29         | 153      | 84.1             | 96               | 52.7             |
| 060710072005000 | 14    | 0          | 14       | 100.0            | 7                | 50.0             |
| 060710072003009 | 11    | 3          | 8        | 72.7             | 5                | 45.5             |
| 060710072004002 | 5     | 4          | 1        | 20.0             | 1                | 20.0             |
| 060710072006002 | 434   | 225        | 209      | 48.2             | 85               | 19.6             |
| 060710072004017 | 58    | 6          | 52       | 89.7             | 14               | 24.1             |
| 060710072004009 | 80    | 19         | 61       | 76.3             | 38               | 47.5             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710072004015 | 164   | 28         | 136      | 82.9             | 97               | 59.1             |
| 060710072004010 | 30    | 4          | 26       | 86.7             | 16               | 53.3             |
| 060710072004011 | 17    | 10         | 7        | 41.2             | 3                | 17.6             |
| 060710072006003 | 55    | 13         | 42       | 76.4             | 20               | 36.4             |
| 060710072004014 | 444   | 163        | 281      | 63.3             | 90               | 20.3             |
| 060710072004012 | 111   | 13         | 98       | 88.3             | 22               | 19.8             |
| 060710072004013 | 108   | 2          | 106      | 98.1             | 28               | 25.9             |
| 060710072006001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072006000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710072004008 | 167   | 45         | 122      | 73.1             | 62               | 37.1             |
| 060710072004005 | 108   | 26         | 82       | 75.9             | 23               | 21.3             |
| 060710072003007 | 106   | 30         | 76       | 71.7             | 47               | 44.3             |
| 060710072004001 | 6     | 6          | 0        | 0.0              | 0                | 0.0              |
| 060710072003008 | 327   | 132        | 195      | 59.6             | 151              | 46.2             |
| 060710072004007 | 75    | 21         | 54       | 72.0             | 19               | 25.3             |
| 060710072004004 | 118   | 46         | 72       | 61.0             | 44               | 37.3             |
| 060710072004006 | 105   | 29         | 76       | 72.4             | 43               | 41.0             |
| 060710072004000 | 133   | 51         | 82       | 61.7             | 55               | 41.4             |
| 060650424123018 | 270   | 205        | 65       | 24.1             | 49               | 18.1             |
| 060650424123002 | 107   | 79         | 28       | 26.2             | 19               | 17.8             |
| 060710073023005 | 8     | 8          | 0        | 0.0              | 0                | 0.0              |
| 060710073023007 | 5     | 5          | 0        | 0.0              | 0                | 0.0              |
| 060710073026007 | 55    | 29         | 26       | 47.3             | 8                | 14.5             |
| 060710073026008 | 50    | 22         | 28       | 56.0             | 2                | 4.0              |
| 060710073026006 | 220   | 81         | 139      | 63.2             | 10               | 4.5              |
| 060710073025030 | 80    | 31         | 49       | 61.3             | 6                | 7.5              |
| 060710073025028 | 71    | 31         | 40       | 56.3             | 2                | 2.8              |
| 060710073025029 | 97    | 78         | 19       | 19.6             | 4                | 4.1              |
| 060710073026011 | 30    | 9          | 21       | 70.0             | 4                | 13.3             |
| 060710073026005 | 196   | 59         | 137      | 69.9             | 23               | 11.7             |
| 060710073026009 | 46    | 2          | 44       | 95.7             | 5                | 10.9             |
| 060710073026010 | 41    | 9          | 32       | 78.0             | 4                | 9.8              |
| 060710073026012 | 45    | 35         | 10       | 22.2             | 4                | 8.9              |
| 060710073026013 | 41    | 27         | 14       | 34.1             | 5                | 12.2             |
| 060710073026002 | 56    | 34         | 22       | 39.3             | 10               | 17.9             |
| 060710073025023 | 98    | 32         | 66       | 67.3             | 6                | 6.1              |
| 060710073026004 | 62    | 36         | 26       | 41.9             | 6                | 9.7              |
| 060710073026003 | 70    | 33         | 37       | 52.9             | 9                | 12.9             |
| 060710073025024 | 52    | 22         | 30       | 57.7             | 3                | 5.8              |
| 060710073025022 | 36    | 13         | 23       | 63.9             | 6                | 16.7             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710073025021 | 44    | 27         | 17       | 38.6             | 13               | 29.5             |
| 060710073023006 | 3     | 1          | 2        | 66.7             | 0                | 0.0              |
| 060710073025027 | 33    | 5          | 28       | 84.8             | 5                | 15.2             |
| 060710073026016 | 74    | 27         | 47       | 63.5             | 9                | 12.2             |
| 060710073026017 | 11    | 0          | 11       | 100.0            | 8                | 72.7             |
| 060710073026015 | 21    | 7          | 14       | 66.7             | 0                | 0.0              |
| 060710073026001 | 84    | 39         | 45       | 53.6             | 9                | 10.7             |
| 060710073026014 | 32    | 2          | 30       | 93.8             | 12               | 37.5             |
| 060710073025020 | 19    | 10         | 9        | 47.4             | 3                | 15.8             |
| 060710073025013 | 22    | 4          | 18       | 81.8             | 2                | 9.1              |
| 060710073025025 | 30    | 10         | 20       | 66.7             | 2                | 6.7              |
| 060710073025026 | 41    | 10         | 31       | 75.6             | 1                | 2.4              |
| 060710073025019 | 184   | 89         | 95       | 51.6             | 13               | 7.1              |
| 060710073025015 | 33    | 16         | 17       | 51.5             | 5                | 15.2             |
| 060710073025014 | 71    | 24         | 47       | 66.2             | 15               | 21.1             |
| 060710073025016 | 35    | 15         | 20       | 57.1             | 8                | 22.9             |
| 060710073025017 | 34    | 7          | 27       | 79.4             | 5                | 14.7             |
| 060710073026000 | 31    | 5          | 26       | 83.9             | 3                | 9.7              |
| 060710073027005 | 79    | 39         | 40       | 50.6             | 14               | 17.7             |
| 060710073027004 | 32    | 7          | 25       | 78.1             | 10               | 31.3             |
| 060710073025018 | 30    | 6          | 24       | 80.0             | 5                | 16.7             |
| 060710073027000 | 100   | 37         | 63       | 63.0             | 23               | 23.0             |
| 060710073023012 | 10    | 8          | 2        | 20.0             | 2                | 20.0             |
| 060710073027003 | 108   | 53         | 55       | 50.9             | 7                | 6.5              |
| 060710073025007 | 231   | 129        | 102      | 44.2             | 14               | 6.1              |
| 060710073017002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073017001 | 2     | 0          | 2        | 100.0            | 0                | 0.0              |
| 060710073025008 | 49    | 10         | 39       | 79.6             | 0                | 0.0              |
| 060710073025009 | 48    | 1          | 47       | 97.9             | 0                | 0.0              |
| 060710073025010 | 42    | 11         | 31       | 73.8             | 3                | 7.1              |
| 060710073017003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073025002 | 139   | 76         | 63       | 45.3             | 22               | 15.8             |
| 060710073017005 | 11    | 1          | 10       | 90.9             | 10               | 90.9             |
| 060710073017004 | 90    | 1          | 89       | 98.9             | 89               | 98.9             |
| 060710073017006 | 46    | 1          | 45       | 97.8             | 42               | 91.3             |
| 060710073014002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073016008 | 156   | 69         | 87       | 55.8             | 33               | 21.2             |
| 060710073016009 | 98    | 61         | 37       | 37.8             | 11               | 11.2             |
| 060710073016003 | 61    | 23         | 38       | 62.3             | 18               | 29.5             |
| 060710073016002 | 55    | 31         | 24       | 43.6             | 10               | 18.2             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710073016007 | 55    | 29         | 26       | 47.3             | 9                | 16.4             |
| 060710073016005 | 40    | 23         | 17       | 42.5             | 11               | 27.5             |
| 060710073016006 | 30    | 9          | 21       | 70.0             | 1                | 3.3              |
| 060710073016004 | 81    | 66         | 15       | 18.5             | 12               | 14.8             |
| 060710073016001 | 75    | 43         | 32       | 42.7             | 14               | 18.7             |
| 060710073025011 | 48    | 11         | 37       | 77.1             | 1                | 2.1              |
| 060710073025012 | 18    | 11         | 7        | 38.9             | 1                | 5.6              |
| 060710073025006 | 51    | 21         | 30       | 58.8             | 10               | 19.6             |
| 060710073025005 | 107   | 28         | 79       | 73.8             | 15               | 14.0             |
| 060710073028008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073017007 | 7     | 1          | 6        | 85.7             | 6                | 85.7             |
| 060710073025001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073025004 | 43    | 33         | 10       | 23.3             | 5                | 11.6             |
| 060710073017008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073028007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073017000 | 392   | 207        | 185      | 47.2             | 51               | 13.0             |
| 060710073025003 | 7     | 0          | 7        | 100.0            | 6                | 85.7             |
| 060710073025000 | 6     | 1          | 5        | 83.3             | 0                | 0.0              |
| 060710073028005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710073016000 | 551   | 230        | 321      | 58.3             | 120              | 21.8             |
| 060710078002017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710078002018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710078002016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710078002012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710078002013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710078002011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710078002015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710034032016 | 69    | 38         | 31       | 44.9             | 27               | 39.1             |
| 060710034032017 | 253   | 78         | 175      | 69.2             | 141              | 55.7             |
| 060710034032012 | 283   | 93         | 190      | 67.1             | 150              | 53.0             |
| 060710034032011 | 41    | 18         | 23       | 56.1             | 21               | 51.2             |
| 060710034032010 | 63    | 14         | 49       | 77.8             | 41               | 65.1             |
| 060710034032009 | 44    | 11         | 33       | 75.0             | 30               | 68.2             |
| 060710034032008 | 53    | 19         | 34       | 64.2             | 31               | 58.5             |
| 060710036021019 | 168   | 28         | 140      | 83.3             | 102              | 60.7             |
| 060710034032007 | 45    | 4          | 41       | 91.1             | 40               | 88.9             |
| 060710034032004 | 251   | 60         | 191      | 76.1             | 157              | 62.5             |
| 060710034032005 | 60    | 16         | 44       | 73.3             | 40               | 66.7             |
| 060710034032006 | 73    | 10         | 63       | 86.3             | 63               | 86.3             |
| 060710036021009 | 78    | 10         | 68       | 87.2             | 59               | 75.6             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710036021021 | 335   | 114        | 221      | 66.0             | 194              | 57.9             |
| 060710036021020 | 86    | 16         | 70       | 81.4             | 54               | 62.8             |
| 060710036021018 | 343   | 73         | 270      | 78.7             | 244              | 71.1             |
| 060710036021016 | 139   | 39         | 100      | 71.9             | 77               | 55.4             |
| 060710036021017 | 25    | 9          | 16       | 64.0             | 10               | 40.0             |
| 060710036021007 | 36    | 3          | 33       | 91.7             | 23               | 63.9             |
| 060710036021026 | 96    | 31         | 65       | 67.7             | 31               | 32.3             |
| 060710036021027 | 105   | 18         | 87       | 82.9             | 82               | 78.1             |
| 060710036021025 | 70    | 23         | 47       | 67.1             | 44               | 62.9             |
| 060710036021022 | 351   | 92         | 259      | 73.8             | 193              | 55.0             |
| 060710036021006 | 112   | 34         | 78       | 69.6             | 62               | 55.4             |
| 060710036021005 | 37    | 8          | 29       | 78.4             | 25               | 67.6             |
| 060710036021024 | 100   | 21         | 79       | 79.0             | 67               | 67.0             |
| 060710036021004 | 45    | 6          | 39       | 86.7             | 18               | 40.0             |
| 060710036021023 | 86    | 19         | 67       | 77.9             | 60               | 69.8             |
| 060710036021003 | 56    | 6          | 50       | 89.3             | 30               | 53.6             |
| 060710036022040 | 48    | 19         | 29       | 60.4             | 19               | 39.6             |
| 060710036021015 | 121   | 28         | 93       | 76.9             | 62               | 51.2             |
| 060710036021008 | 199   | 54         | 145      | 72.9             | 115              | 57.8             |
| 060710036021014 | 66    | 15         | 51       | 77.3             | 33               | 50.0             |
| 060710036021013 | 79    | 25         | 54       | 68.4             | 31               | 39.2             |
| 060710036021031 | 47    | 9          | 38       | 80.9             | 36               | 76.6             |
| 060710036021012 | 50    | 15         | 35       | 70.0             | 32               | 64.0             |
| 060710036021032 | 118   | 24         | 94       | 79.7             | 70               | 59.3             |
| 060710036021010 | 66    | 19         | 47       | 71.2             | 34               | 51.5             |
| 060710036021011 | 134   | 28         | 106      | 79.1             | 81               | 60.4             |
| 060710036021000 | 549   | 144        | 405      | 73.8             | 236              | 43.0             |
| 060710036022011 | 126   | 12         | 114      | 90.5             | 85               | 67.5             |
| 060710036021002 | 42    | 16         | 26       | 61.9             | 21               | 50.0             |
| 060710036021001 | 41    | 14         | 27       | 65.9             | 12               | 29.3             |
| 060710036022010 | 69    | 10         | 59       | 85.5             | 41               | 59.4             |
| 060710036022006 | 23    | 2          | 21       | 91.3             | 21               | 91.3             |
| 060710036022004 | 106   | 10         | 96       | 90.6             | 67               | 63.2             |
| 060710036022032 | 86    | 26         | 60       | 69.8             | 45               | 52.3             |
| 060710036022031 | 89    | 23         | 66       | 74.2             | 49               | 55.1             |
| 060710036022029 | 198   | 36         | 162      | 81.8             | 132              | 66.7             |
| 060710036022030 | 26    | 10         | 16       | 61.5             | 13               | 50.0             |
| 060710036022035 | 222   | 40         | 182      | 82.0             | 108              | 48.6             |
| 060710036022026 | 19    | 4          | 15       | 78.9             | 11               | 57.9             |
| 060710036022028 | 128   | 10         | 118      | 92.2             | 87               | 68.0             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710036022027 | 153   | 25         | 128      | 83.7             | 75               | 49.0             |
| 060710036022039 | 39    | 0          | 39       | 100.0            | 28               | 71.8             |
| 060710036022012 | 303   | 47         | 256      | 84.5             | 140              | 46.2             |
| 060710036022017 | 60    | 17         | 43       | 71.7             | 12               | 20.0             |
| 060710036022036 | 78    | 11         | 67       | 85.9             | 46               | 59.0             |
| 060710036022025 | 34    | 8          | 26       | 76.5             | 24               | 70.6             |
| 060710036022021 | 402   | 65         | 337      | 83.8             | 216              | 53.7             |
| 060710036022037 | 81    | 36         | 45       | 55.6             | 30               | 37.0             |
| 060710036022024 | 117   | 41         | 76       | 65.0             | 58               | 49.6             |
| 060710036022020 | 29    | 10         | 19       | 65.5             | 10               | 34.5             |
| 060710036022018 | 71    | 23         | 48       | 67.6             | 34               | 47.9             |
| 060710036022023 | 26    | 2          | 24       | 92.3             | 9                | 34.6             |
| 060710036022022 | 39    | 2          | 37       | 94.9             | 12               | 30.8             |
| 060710036022019 | 202   | 30         | 172      | 85.1             | 120              | 59.4             |
| 060710036022009 | 65    | 7          | 58       | 89.2             | 38               | 58.5             |
| 060710036022008 | 275   | 21         | 254      | 92.4             | 174              | 63.3             |
| 060710036022013 | 79    | 3          | 76       | 96.2             | 68               | 86.1             |
| 060710036022014 | 66    | 12         | 54       | 81.8             | 43               | 65.2             |
| 060710036022007 | 19    | 0          | 19       | 100.0            | 8                | 42.1             |
| 060710036022005 | 86    | 6          | 80       | 93.0             | 59               | 68.6             |
| 060710035017014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036022016 | 124   | 14         | 110      | 88.7             | 86               | 69.4             |
| 060710036011008 | 27    | 2          | 25       | 92.6             | 24               | 88.9             |
| 060710036022015 | 251   | 70         | 181      | 72.1             | 131              | 52.2             |
| 060710036022003 | 81    | 6          | 75       | 92.6             | 52               | 64.2             |
| 060710036022002 | 37    | 7          | 30       | 81.1             | 21               | 56.8             |
| 060710036022001 | 56    | 5          | 51       | 91.1             | 51               | 91.1             |
| 060710036022000 | 33    | 0          | 33       | 100.0            | 32               | 97.0             |
| 060710036014012 | 88    | 2          | 86       | 97.7             | 42               | 47.7             |
| 060710036014011 | 179   | 44         | 135      | 75.4             | 60               | 33.5             |
| 060710036014017 | 28    | 4          | 24       | 85.7             | 17               | 60.7             |
| 060710036014008 | 152   | 33         | 119      | 78.3             | 94               | 61.8             |
| 060710036014010 | 412   | 40         | 372      | 90.3             | 334              | 81.1             |
| 060710036014009 | 31    | 15         | 16       | 51.6             | 12               | 38.7             |
| 060710036014016 | 296   | 112        | 184      | 62.2             | 159              | 53.7             |
| 060710036014007 | 60    | 23         | 37       | 61.7             | 32               | 53.3             |
| 060710036014018 | 89    | 30         | 59       | 66.3             | 52               | 58.4             |
| 060710036014006 | 136   | 17         | 119      | 87.5             | 111              | 81.6             |
| 060710036014003 | 213   | 44         | 169      | 79.3             | 138              | 64.8             |
| 060710036014004 | 56    | 11         | 45       | 80.4             | 37               | 66.1             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710036014002 | 42    | 4          | 38       | 90.5             | 28               | 66.7             |
| 060710036014005 | 81    | 14         | 67       | 82.7             | 56               | 69.1             |
| 060710036014001 | 50    | 7          | 43       | 86.0             | 37               | 74.0             |
| 060710036011018 | 55    | 24         | 31       | 56.4             | 21               | 38.2             |
| 060710036011005 | 148   | 17         | 131      | 88.5             | 100              | 67.6             |
| 060710036011007 | 124   | 19         | 105      | 84.7             | 87               | 70.2             |
| 060710036011004 | 210   | 38         | 172      | 81.9             | 140              | 66.7             |
| 060710036011006 | 71    | 23         | 48       | 67.6             | 29               | 40.8             |
| 060710035017013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036011003 | 75    | 17         | 58       | 77.3             | 43               | 57.3             |
| 060710035017012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036011009 | 114   | 28         | 86       | 75.4             | 66               | 57.9             |
| 060710036011010 | 203   | 41         | 162      | 79.8             | 100              | 49.3             |
| 060710036011011 | 50    | 24         | 26       | 52.0             | 20               | 40.0             |
| 060710036011012 | 81    | 8          | 73       | 90.1             | 55               | 67.9             |
| 060710036011002 | 350   | 105        | 245      | 70.0             | 152              | 43.4             |
| 060710035017011 | 677   | 228        | 449      | 66.3             | 394              | 58.2             |
| 060710035017006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710035017007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710035017009 | 10    | 8          | 2        | 20.0             | 2                | 20.0             |
| 060710035017008 | 10    | 10         | 0        | 0.0              | 0                | 0.0              |
| 060710035017010 | 7     | 1          | 6        | 85.7             | 3                | 42.9             |
| 060710035017000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710035016031 | 27    | 12         | 15       | 55.6             | 10               | 37.0             |
| 060710036014000 | 1,400 | 417        | 983      | 70.2             | 726              | 51.9             |
| 060710036011017 | 219   | 46         | 173      | 79.0             | 131              | 59.8             |
| 060710036013002 | 1,301 | 428        | 873      | 67.1             | 605              | 46.5             |
| 060710036012022 | 147   | 43         | 104      | 70.7             | 91               | 61.9             |
| 060710036012023 | 93    | 23         | 70       | 75.3             | 57               | 61.3             |
| 060710036012015 | 169   | 44         | 125      | 74.0             | 89               | 52.7             |
| 060710036011014 | 47    | 15         | 32       | 68.1             | 31               | 66.0             |
| 060710036011013 | 43    | 11         | 32       | 74.4             | 27               | 62.8             |
| 060710036011015 | 34    | 4          | 30       | 88.2             | 29               | 85.3             |
| 060710036011016 | 42    | 16         | 26       | 61.9             | 26               | 61.9             |
| 060710036011000 | 307   | 54         | 253      | 82.4             | 230              | 74.9             |
| 060710036011001 | 232   | 45         | 187      | 80.6             | 97               | 41.8             |
| 060710037002016 | 218   | 38         | 180      | 82.6             | 156              | 71.6             |
| 060710037002017 | 216   | 48         | 168      | 77.8             | 105              | 48.6             |
| 060710037002015 | 118   | 26         | 92       | 78.0             | 78               | 66.1             |
| 060710036012016 | 72    | 17         | 55       | 76.4             | 51               | 70.8             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710036012017 | 102   | 15         | 87       | 85.3             | 54               | 52.9             |
| 060710036012018 | 105   | 18         | 87       | 82.9             | 85               | 81.0             |
| 060710036012006 | 339   | 28         | 311      | 91.7             | 261              | 77.0             |
| 060710037002018 | 414   | 30         | 384      | 92.8             | 316              | 76.3             |
| 060710037002020 | 178   | 28         | 150      | 84.3             | 144              | 80.9             |
| 060710037002019 | 71    | 23         | 48       | 67.6             | 48               | 67.6             |
| 060710036017037 | 33    | 5          | 28       | 84.8             | 28               | 84.8             |
| 060710036017036 | 62    | 14         | 48       | 77.4             | 36               | 58.1             |
| 060710036017030 | 1,741 | 163        | 1,578    | 90.6             | 840              | 48.2             |
| 060710036017035 | 46    | 15         | 31       | 67.4             | 22               | 47.8             |
| 060710036017034 | 45    | 6          | 39       | 86.7             | 31               | 68.9             |
| 060710036017007 | 8     | 0          | 8        | 100.0            | 5                | 62.5             |
| 060710036013001 | 54    | 13         | 41       | 75.9             | 34               | 63.0             |
| 060710036012021 | 74    | 10         | 64       | 86.5             | 56               | 75.7             |
| 060710036012014 | 57    | 14         | 43       | 75.4             | 27               | 47.4             |
| 060710036017008 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060710036017006 | 205   | 30         | 175      | 85.4             | 124              | 60.5             |
| 060710036017009 | 16    | 3          | 13       | 81.3             | 12               | 75.0             |
| 060710036013000 | 228   | 38         | 190      | 83.3             | 167              | 73.2             |
| 060710036017032 | 84    | 13         | 71       | 84.5             | 60               | 71.4             |
| 060710036017031 | 96    | 4          | 92       | 95.8             | 74               | 77.1             |
| 060710036017011 | 66    | 16         | 50       | 75.8             | 44               | 66.7             |
| 060710036017013 | 42    | 2          | 40       | 95.2             | 24               | 57.1             |
| 060710036017014 | 188   | 13         | 175      | 93.1             | 143              | 76.1             |
| 060710036017023 | 464   | 42         | 422      | 90.9             | 288              | 62.1             |
| 060710036017024 | 71    | 6          | 65       | 91.5             | 48               | 67.6             |
| 060710036017022 | 64    | 8          | 56       | 87.5             | 38               | 59.4             |
| 060710036017025 | 67    | 7          | 60       | 89.6             | 52               | 77.6             |
| 060710036017021 | 64    | 21         | 43       | 67.2             | 25               | 39.1             |
| 060710036017018 | 170   | 29         | 141      | 82.9             | 93               | 54.7             |
| 060710036017010 | 12    | 0          | 12       | 100.0            | 9                | 75.0             |
| 060710036017012 | 19    | 0          | 19       | 100.0            | 13               | 68.4             |
| 060710036017005 | 2     | 2          | 0        | 0.0              | 0                | 0.0              |
| 060710036017004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710036017001 | 96    | 6          | 90       | 93.8             | 45               | 46.9             |
| 060710036017003 | 59    | 9          | 50       | 84.7             | 39               | 66.1             |
| 060710036017015 | 47    | 2          | 45       | 95.7             | 10               | 21.3             |
| 060710036017002 | 60    | 3          | 57       | 95.0             | 33               | 55.0             |
| 060710036017017 | 4     | 0          | 4        | 100.0            | 4                | 100.0            |
| 060710036012019 | 111   | 26         | 85       | 76.6             | 78               | 70.3             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710036012020 | 70    | 10         | 60       | 85.7             | 51               | 72.9             |
| 060710036012008 | 59    | 0          | 59       | 100.0            | 57               | 96.6             |
| 060710036012009 | 507   | 104        | 403      | 79.5             | 311              | 61.3             |
| 060710036012007 | 38    | 11         | 27       | 71.1             | 27               | 71.1             |
| 060710036012005 | 56    | 6          | 50       | 89.3             | 41               | 73.2             |
| 060710036012004 | 79    | 13         | 66       | 83.5             | 66               | 83.5             |
| 060710039003006 | 186   | 47         | 139      | 74.7             | 123              | 66.1             |
| 060710039003007 | 237   | 41         | 196      | 82.7             | 163              | 68.8             |
| 060710036012010 | 59    | 4          | 55       | 93.2             | 55               | 93.2             |
| 060710036012013 | 97    | 18         | 79       | 81.4             | 49               | 50.5             |
| 060710044013012 | 65    | 11         | 54       | 83.1             | 36               | 55.4             |
| 060710036012011 | 81    | 19         | 62       | 76.5             | 51               | 63.0             |
| 060710036012003 | 28    | 14         | 14       | 50.0             | 13               | 46.4             |
| 060710036012002 | 65    | 13         | 52       | 80.0             | 43               | 66.2             |
| 060710039003005 | 58    | 7          | 51       | 87.9             | 45               | 77.6             |
| 060710036012001 | 67    | 27         | 40       | 59.7             | 38               | 56.7             |
| 060710039003008 | 277   | 81         | 196      | 70.8             | 172              | 62.1             |
| 060710039003004 | 28    | 9          | 19       | 67.9             | 5                | 17.9             |
| 060710037002007 | 5     | 1          | 4        | 80.0             | 0                | 0.0              |
| 060710037002014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710037002008 | 36    | 2          | 34       | 94.4             | 33               | 91.7             |
| 060710037002009 | 5     | 3          | 2        | 40.0             | 0                | 0.0              |
| 060710037002006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710037001019 | 28    | 2          | 26       | 92.9             | 23               | 82.1             |
| 060710037001018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710037002005 | 34    | 17         | 17       | 50.0             | 17               | 50.0             |
| 060710037001020 | 51    | 21         | 30       | 58.8             | 26               | 51.0             |
| 060710037002004 | 37    | 19         | 18       | 48.6             | 14               | 37.8             |
| 060710037001021 | 40    | 2          | 38       | 95.0             | 29               | 72.5             |
| 060710037001017 | 46    | 6          | 40       | 87.0             | 32               | 69.6             |
| 060710037001016 | 28    | 9          | 19       | 67.9             | 8                | 28.6             |
| 060710037002012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710037002010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710037002013 | 154   | 35         | 119      | 77.3             | 80               | 51.9             |
| 060710037002011 | 49    | 8          | 41       | 83.7             | 33               | 67.3             |
| 060710037002003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710037002002 | 10    | 5          | 5        | 50.0             | 2                | 20.0             |
| 060710037001022 | 10    | 1          | 9        | 90.0             | 9                | 90.0             |
| 060710037001015 | 51    | 11         | 40       | 78.4             | 40               | 78.4             |
| 060710037002001 | 56    | 17         | 39       | 69.6             | 32               | 57.1             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710037001023 | 15    | 3          | 12       | 80.0             | 8                | 53.3             |
| 060710037002000 | 339   | 92         | 247      | 72.9             | 74               | 21.8             |
| 060710037001024 | 24    | 4          | 20       | 83.3             | 10               | 41.7             |
| 060710037001014 | 127   | 12         | 115      | 90.6             | 105              | 82.7             |
| 060710037001010 | 84    | 19         | 65       | 77.4             | 65               | 77.4             |
| 060710037001013 | 45    | 5          | 40       | 88.9             | 40               | 88.9             |
| 060710037001011 | 73    | 19         | 54       | 74.0             | 40               | 54.8             |
| 060710037001006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710037001007 | 128   | 34         | 94       | 73.4             | 75               | 58.6             |
| 060710037001008 | 31    | 14         | 17       | 54.8             | 8                | 25.8             |
| 060710037001009 | 77    | 9          | 68       | 88.3             | 46               | 59.7             |
| 060710037001001 | 88    | 19         | 69       | 78.4             | 54               | 61.4             |
| 060710039002012 | 55    | 26         | 29       | 52.7             | 25               | 45.5             |
| 060710039003001 | 249   | 42         | 207      | 83.1             | 163              | 65.5             |
| 060710039002013 | 78    | 24         | 54       | 69.2             | 35               | 44.9             |
| 060710039002011 | 53    | 26         | 27       | 50.9             | 26               | 49.1             |
| 060710039002010 | 67    | 28         | 39       | 58.2             | 39               | 58.2             |
| 060710037001025 | 17    | 5          | 12       | 70.6             | 12               | 70.6             |
| 060710039002007 | 149   | 29         | 120      | 80.5             | 101              | 67.8             |
| 060710039002008 | 136   | 30         | 106      | 77.9             | 104              | 76.5             |
| 060710039002009 | 74    | 24         | 50       | 67.6             | 50               | 67.6             |
| 060710039001008 | 121   | 21         | 100      | 82.6             | 98               | 81.0             |
| 060710039001007 | 84    | 18         | 66       | 78.6             | 50               | 59.5             |
| 060710039001006 | 181   | 55         | 126      | 69.6             | 106              | 58.6             |
| 060710039002006 | 71    | 26         | 45       | 63.4             | 41               | 57.7             |
| 060710039002004 | 87    | 8          | 79       | 90.8             | 79               | 90.8             |
| 060710039003002 | 182   | 18         | 164      | 90.1             | 150              | 82.4             |
| 060710039003000 | 79    | 20         | 59       | 74.7             | 56               | 70.9             |
| 060710039002003 | 361   | 134        | 227      | 62.9             | 196              | 54.3             |
| 060710039002005 | 46    | 9          | 37       | 80.4             | 37               | 80.4             |
| 060710039002001 | 207   | 28         | 179      | 86.5             | 157              | 75.8             |
| 060710039001009 | 112   | 2          | 110      | 98.2             | 92               | 82.1             |
| 060710039001010 | 82    | 10         | 72       | 87.8             | 72               | 87.8             |
| 060710039001005 | 161   | 38         | 123      | 76.4             | 101              | 62.7             |
| 060710037001012 | 84    | 18         | 66       | 78.6             | 64               | 76.2             |
| 060710037001000 | 67    | 21         | 46       | 68.7             | 30               | 44.8             |
| 060710039001003 | 146   | 28         | 118      | 80.8             | 105              | 71.9             |
| 060710039001002 | 147   | 24         | 123      | 83.7             | 115              | 78.2             |
| 060710039001004 | 132   | 35         | 97       | 73.5             | 65               | 49.2             |
| 060710039001001 | 167   | 24         | 143      | 85.6             | 120              | 71.9             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710038001035 | 370   | 58         | 312      | 84.3             | 182              | 49.2             |
| 060710036017026 | 90    | 0          | 90       | 100.0            | 70               | 77.8             |
| 060710036017020 | 73    | 9          | 64       | 87.7             | 44               | 60.3             |
| 060710036017019 | 58    | 6          | 52       | 89.7             | 33               | 56.9             |
| 060710036017016 | 241   | 19         | 222      | 92.1             | 124              | 51.5             |
| 060710036018021 | 83    | 10         | 73       | 88.0             | 54               | 65.1             |
| 060710036018007 | 57    | 8          | 49       | 86.0             | 32               | 56.1             |
| 060710036018008 | 291   | 28         | 263      | 90.4             | 163              | 56.0             |
| 060710036018006 | 64    | 8          | 56       | 87.5             | 28               | 43.8             |
| 060710036018005 | 286   | 47         | 239      | 83.6             | 155              | 54.2             |
| 060710036017000 | 69    | 12         | 57       | 82.6             | 44               | 63.8             |
| 060710036018003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044013008 | 30    | 6          | 24       | 80.0             | 18               | 60.0             |
| 060710036018002 | 191   | 27         | 164      | 85.9             | 81               | 42.4             |
| 060710044013010 | 2     | 2          | 0        | 0.0              | 0                | 0.0              |
| 060710044013007 | 262   | 18         | 244      | 93.1             | 181              | 69.1             |
| 060710036018010 | 212   | 32         | 180      | 84.9             | 120              | 56.6             |
| 060710036018009 | 32    | 2          | 30       | 93.8             | 23               | 71.9             |
| 060710036018012 | 32    | 15         | 17       | 53.1             | 13               | 40.6             |
| 060710036018011 | 20    | 1          | 19       | 95.0             | 17               | 85.0             |
| 060710036018004 | 154   | 13         | 141      | 91.6             | 118              | 76.6             |
| 060710036018001 | 85    | 20         | 65       | 76.5             | 43               | 50.6             |
| 060710044013011 | 44    | 1          | 43       | 97.7             | 36               | 81.8             |
| 060710044013009 | 159   | 9          | 150      | 94.3             | 97               | 61.0             |
| 060710044013013 | 127   | 25         | 102      | 80.3             | 65               | 51.2             |
| 060710044013015 | 6     | 3          | 3        | 50.0             | 1                | 16.7             |
| 060710044013014 | 20    | 5          | 15       | 75.0             | 13               | 65.0             |
| 060710036012012 | 5     | 0          | 5        | 100.0            | 5                | 100.0            |
| 060710044013002 | 139   | 22         | 117      | 84.2             | 91               | 65.5             |
| 060710036012000 | 103   | 50         | 53       | 51.5             | 42               | 40.8             |
| 060710039003009 | 44    | 13         | 31       | 70.5             | 25               | 56.8             |
| 060710039003010 | 56    | 13         | 43       | 76.8             | 30               | 53.6             |
| 060710039003003 | 26    | 6          | 20       | 76.9             | 15               | 57.7             |
| 060710044012013 | 84    | 18         | 66       | 78.6             | 40               | 47.6             |
| 060710044013003 | 35    | 5          | 30       | 85.7             | 23               | 65.7             |
| 060710044013000 | 263   | 27         | 236      | 89.7             | 206              | 78.3             |
| 060710044013001 | 48    | 4          | 44       | 91.7             | 42               | 87.5             |
| 060710044012014 | 174   | 33         | 141      | 81.0             | 105              | 60.3             |
| 060710044012015 | 25    | 6          | 19       | 76.0             | 15               | 60.0             |
| 060710044012016 | 149   | 11         | 138      | 92.6             | 120              | 80.5             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710036018017 | 117   | 22         | 95       | 81.2             | 68               | 58.1             |
| 060710036018000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066007024 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044023011 | 29    | 0          | 29       | 100.0            | 20               | 69.0             |
| 060710044023007 | 69    | 2          | 67       | 97.1             | 61               | 88.4             |
| 060710066007022 | 444   | 28         | 416      | 93.7             | 299              | 67.3             |
| 060710066007039 | 87    | 18         | 69       | 79.3             | 63               | 72.4             |
| 060710066007036 | 42    | 24         | 18       | 42.9             | 16               | 38.1             |
| 060710066007037 | 26    | 3          | 23       | 88.5             | 23               | 88.5             |
| 060710066007025 | 106   | 25         | 81       | 76.4             | 64               | 60.4             |
| 060710066007023 | 242   | 34         | 208      | 86.0             | 158              | 65.3             |
| 060710044023008 | 163   | 15         | 148      | 90.8             | 107              | 65.6             |
| 060710066007021 | 35    | 4          | 31       | 88.6             | 29               | 82.9             |
| 060710066007020 | 17    | 3          | 14       | 82.4             | 11               | 64.7             |
| 060710066007018 | 24    | 0          | 24       | 100.0            | 19               | 79.2             |
| 060710066007019 | 34    | 9          | 25       | 73.5             | 8                | 23.5             |
| 060710044013006 | 141   | 1          | 140      | 99.3             | 125              | 88.7             |
| 060710044013004 | 37    | 8          | 29       | 78.4             | 24               | 64.9             |
| 060710044013005 | 38    | 7          | 31       | 81.6             | 21               | 55.3             |
| 060710044023009 | 180   | 29         | 151      | 83.9             | 115              | 63.9             |
| 060710044023006 | 469   | 66         | 403      | 85.9             | 333              | 71.0             |
| 060710044023010 | 136   | 30         | 106      | 77.9             | 79               | 58.1             |
| 060710044022013 | 126   | 32         | 94       | 74.6             | 82               | 65.1             |
| 060710044012012 | 60    | 4          | 56       | 93.3             | 47               | 78.3             |
| 060710044012004 | 59    | 25         | 34       | 57.6             | 29               | 49.2             |
| 060710044012011 | 131   | 15         | 116      | 88.5             | 91               | 69.5             |
| 060710044012010 | 101   | 13         | 88       | 87.1             | 68               | 67.3             |
| 060710044012005 | 75    | 11         | 64       | 85.3             | 58               | 77.3             |
| 060710044012001 | 115   | 5          | 110      | 95.7             | 103              | 89.6             |
| 060710044012003 | 60    | 14         | 46       | 76.7             | 25               | 41.7             |
| 060710039002002 | 28    | 6          | 22       | 78.6             | 9                | 32.1             |
| 060710039002000 | 129   | 90         | 39       | 30.2             | 33               | 25.6             |
| 060710044012009 | 28    | 2          | 26       | 92.9             | 18               | 64.3             |
| 060710044012008 | 50    | 2          | 48       | 96.0             | 26               | 52.0             |
| 060710044012002 | 72    | 4          | 68       | 94.4             | 35               | 48.6             |
| 060710044012007 | 38    | 10         | 28       | 73.7             | 20               | 52.6             |
| 060710044012006 | 94    | 55         | 39       | 41.5             | 33               | 35.1             |
| 060710044012000 | 311   | 167        | 144      | 46.3             | 130              | 41.8             |
| 060710044011003 | 156   | 101        | 55       | 35.3             | 46               | 29.5             |
| 060710044011002 | 198   | 137        | 61       | 30.8             | 34               | 17.2             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710044011001 | 218   | 118        | 100      | 45.9             | 77               | 35.3             |
| 060710039001000 | 384   | 153        | 231      | 60.2             | 179              | 46.6             |
| 060710038001037 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044011000 | 86    | 19         | 67       | 77.9             | 36               | 41.9             |
| 060710043006015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710043006014 | 161   | 5          | 156      | 96.9             | 91               | 56.5             |
| 060710044022010 | 15    | 8          | 7        | 46.7             | 6                | 40.0             |
| 060710044022011 | 25    | 7          | 18       | 72.0             | 14               | 56.0             |
| 060710044022009 | 37    | 14         | 23       | 62.2             | 19               | 51.4             |
| 060710044022005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021019 | 152   | 67         | 85       | 55.9             | 66               | 43.4             |
| 060710044021018 | 757   | 18         | 739      | 97.6             | 282              | 37.3             |
| 060710044022012 | 99    | 5          | 94       | 94.9             | 83               | 83.8             |
| 060710044022008 | 57    | 6          | 51       | 89.5             | 24               | 42.1             |
| 060710044022006 | 17    | 4          | 13       | 76.5             | 8                | 47.1             |
| 060710044022007 | 75    | 16         | 59       | 78.7             | 49               | 65.3             |
| 060710044022004 | 599   | 164        | 435      | 72.6             | 356              | 59.4             |
| 060710044021020 | 12    | 2          | 10       | 83.3             | 9                | 75.0             |
| 060710044021008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021007 | 439   | 227        | 212      | 48.3             | 164              | 37.4             |
| 060710044021009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021030 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710043005003 | 267   | 21         | 246      | 92.1             | 81               | 30.3             |
| 060710043005007 | 66    | 6          | 60       | 90.9             | 36               | 54.5             |
| 060710044021029 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021004 | 739   | 166        | 573      | 77.5             | 435              | 58.9             |
| 060710044021017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710043005002 | 109   | 7          | 102      | 93.6             | 49               | 45.0             |
| 060710043005006 | 144   | 5          | 139      | 96.5             | 118              | 81.9             |
| 060710066007038 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066007040 | 84    | 17         | 67       | 79.8             | 67               | 79.8             |
| 060710066007035 | 50    | 10         | 40       | 80.0             | 32               | 64.0             |
| 060710066007026 | 48    | 7          | 41       | 85.4             | 41               | 85.4             |
| 060710066007016 | 63    | 10         | 53       | 84.1             | 53               | 84.1             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710066007017 | 94    | 13         | 81       | 86.2             | 59               | 62.8             |
| 060710066007027 | 79    | 6          | 73       | 92.4             | 66               | 83.5             |
| 060710066007015 | 159   | 24         | 135      | 84.9             | 122              | 76.7             |
| 060710066007014 | 7     | 7          | 0        | 0.0              | 0                | 0.0              |
| 060710066007012 | 49    | 5          | 44       | 89.8             | 29               | 59.2             |
| 060710066007046 | 15    | 4          | 11       | 73.3             | 11               | 73.3             |
| 060710066007047 | 10    | 0          | 10       | 100.0            | 10               | 100.0            |
| 060710066007034 | 79    | 15         | 64       | 81.0             | 64               | 81.0             |
| 060710066007031 | 87    | 9          | 78       | 89.7             | 74               | 85.1             |
| 060710066007033 | 136   | 31         | 105      | 77.2             | 101              | 74.3             |
| 060710066003002 | 144   | 26         | 118      | 81.9             | 113              | 78.5             |
| 060710066007032 | 51    | 2          | 49       | 96.1             | 46               | 90.2             |
| 060710066007028 | 91    | 18         | 73       | 80.2             | 73               | 80.2             |
| 060710066007013 | 175   | 30         | 145      | 82.9             | 123              | 70.3             |
| 060710066007029 | 100   | 11         | 89       | 89.0             | 87               | 87.0             |
| 060710066007030 | 90    | 7          | 83       | 92.2             | 77               | 85.6             |
| 060710066007009 | 144   | 22         | 122      | 84.7             | 120              | 83.3             |
| 060710066007008 | 141   | 39         | 102      | 72.3             | 99               | 70.2             |
| 060710044023005 | 62    | 7          | 55       | 88.7             | 45               | 72.6             |
| 060710044023004 | 35    | 3          | 32       | 91.4             | 22               | 62.9             |
| 060710044023001 | 215   | 43         | 172      | 80.0             | 130              | 60.5             |
| 060710044023003 | 142   | 21         | 121      | 85.2             | 91               | 64.1             |
| 060710066007003 | 10    | 0          | 10       | 100.0            | 10               | 100.0            |
| 060710044023002 | 278   | 40         | 238      | 85.6             | 189              | 68.0             |
| 060710066007004 | 273   | 21         | 252      | 92.3             | 218              | 79.9             |
| 060710066007011 | 6     | 0          | 6        | 100.0            | 0                | 0.0              |
| 060710066007010 | 174   | 15         | 159      | 91.4             | 135              | 77.6             |
| 060710066007002 | 20    | 2          | 18       | 90.0             | 10               | 50.0             |
| 060710044023000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066007001 | 184   | 45         | 139      | 75.5             | 128              | 69.6             |
| 060710044022017 | 160   | 41         | 119      | 74.4             | 103              | 64.4             |
| 060710066007005 | 118   | 16         | 102      | 86.4             | 99               | 83.9             |
| 060710066007006 | 68    | 3          | 65       | 95.6             | 60               | 88.2             |
| 060710066007007 | 68    | 4          | 64       | 94.1             | 59               | 86.8             |
| 060710066007000 | 654   | 38         | 616      | 94.2             | 565              | 86.4             |
| 060710044022018 | 151   | 16         | 135      | 89.4             | 128              | 84.8             |
| 060710044022020 | 694   | 32         | 662      | 95.4             | 470              | 67.7             |
| 060710044022022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044022021 | 14    | 7          | 7        | 50.0             | 4                | 28.6             |
| 060710066002006 | 93    | 14         | 79       | 84.9             | 78               | 83.9             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710066003001 | 28    | 2          | 26       | 92.9             | 26               | 92.9             |
| 060710066002005 | 143   | 35         | 108      | 75.5             | 95               | 66.4             |
| 060710066002002 | 162   | 21         | 141      | 87.0             | 136              | 84.0             |
| 060710066002003 | 405   | 66         | 339      | 83.7             | 316              | 78.0             |
| 060710066003000 | 52    | 21         | 31       | 59.6             | 31               | 59.6             |
| 060710066002004 | 124   | 17         | 107      | 86.3             | 107              | 86.3             |
| 060710066002001 | 172   | 35         | 137      | 79.7             | 135              | 78.5             |
| 060710066001008 | 77    | 4          | 73       | 94.8             | 69               | 89.6             |
| 060710066001007 | 422   | 55         | 367      | 87.0             | 317              | 75.1             |
| 060710044022019 | 124   | 10         | 114      | 91.9             | 106              | 85.5             |
| 060710066001006 | 290   | 3          | 287      | 99.0             | 66               | 22.8             |
| 060710066001005 | 239   | 15         | 224      | 93.7             | 155              | 64.9             |
| 060710066002000 | 218   | 34         | 184      | 84.4             | 168              | 77.1             |
| 060710066001009 | 122   | 10         | 112      | 91.8             | 110              | 90.2             |
| 060710066001011 | 65    | 11         | 54       | 83.1             | 53               | 81.5             |
| 060710067002008 | 103   | 4          | 99       | 96.1             | 99               | 96.1             |
| 060710066001010 | 122   | 14         | 108      | 88.5             | 104              | 85.2             |
| 060710066001004 | 104   | 7          | 97       | 93.3             | 95               | 91.3             |
| 060710049006014 | 7     | 0          | 7        | 100.0            | 7                | 100.0            |
| 060710049006013 | 1     | 0          | 1        | 100.0            | 1                | 100.0            |
| 060710066001002 | 192   | 17         | 175      | 91.1             | 164              | 85.4             |
| 060710067002007 | 91    | 0          | 91       | 100.0            | 91               | 100.0            |
| 060710066001003 | 61    | 4          | 57       | 93.4             | 55               | 90.2             |
| 060710066001000 | 98    | 6          | 92       | 93.9             | 84               | 85.7             |
| 060710044022014 | 649   | 232        | 417      | 64.3             | 289              | 44.5             |
| 060710044022015 | 64    | 7          | 57       | 89.1             | 42               | 65.6             |
| 060710044022016 | 52    | 9          | 43       | 82.7             | 39               | 75.0             |
| 060710044022003 | 53    | 9          | 44       | 83.0             | 24               | 45.3             |
| 060710044022002 | 109   | 8          | 101      | 92.7             | 78               | 71.6             |
| 060710044022001 | 190   | 16         | 174      | 91.6             | 132              | 69.5             |
| 060710044021028 | 5     | 4          | 1        | 20.0             | 0                | 0.0              |
| 060710044021025 | 21    | 1          | 20       | 95.2             | 20               | 95.2             |
| 060710044022000 | 1,222 | 405        | 817      | 66.9             | 639              | 52.3             |
| 060710044021027 | 531   | 144        | 387      | 72.9             | 331              | 62.3             |
| 060710044021026 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021021 | 88    | 0          | 88       | 100.0            | 79               | 89.8             |
| 060710044021022 | 61    | 1          | 60       | 98.4             | 60               | 98.4             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710044021003 | 31    | 0          | 31       | 100.0            | 22               | 71.0             |
| 060710044021002 | 82    | 2          | 80       | 97.6             | 66               | 80.5             |
| 060710043005005 | 214   | 39         | 175      | 81.8             | 138              | 64.5             |
| 060710043005000 | 26    | 1          | 25       | 96.2             | 21               | 80.8             |
| 060710044021024 | 101   | 2          | 99       | 98.0             | 93               | 92.1             |
| 060710044021023 | 88    | 2          | 86       | 97.7             | 75               | 85.2             |
| 060710044021001 | 187   | 26         | 161      | 86.1             | 151              | 80.7             |
| 060710043005001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049006008 | 104   | 4          | 100      | 96.2             | 91               | 87.5             |
| 060710049006007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049006011 | 59    | 0          | 59       | 100.0            | 46               | 78.0             |
| 060710049006010 | 59    | 1          | 58       | 98.3             | 57               | 96.6             |
| 060710049006009 | 68    | 6          | 62       | 91.2             | 58               | 85.3             |
| 060710049006004 | 7     | 0          | 7        | 100.0            | 7                | 100.0            |
| 060710049005020 | 4     | 1          | 3        | 75.0             | 3                | 75.0             |
| 060710049005019 | 18    | 0          | 18       | 100.0            | 17               | 94.4             |
| 060710049006006 | 768   | 134        | 634      | 82.6             | 534              | 69.5             |
| 060710049006016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049006012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710066001001 | 34    | 7          | 27       | 79.4             | 27               | 79.4             |
| 060710049006015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049006005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049006003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049006002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049005021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049005018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710044021000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049005022 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049005998 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049005017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710043003998 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710043003017 | 56    | 0          | 56       | 100.0            | 53               | 94.6             |
| 060710067003003 | 67    | 8          | 59       | 88.1             | 55               | 82.1             |
| 060710067003002 | 91    | 6          | 85       | 93.4             | 84               | 92.3             |
| 060710067002018 | 56    | 6          | 50       | 89.3             | 49               | 87.5             |
| 060710067002017 | 177   | 16         | 161      | 91.0             | 144              | 81.4             |
| 060710067003001 | 36    | 9          | 27       | 75.0             | 26               | 72.2             |
| 060710067003000 | 153   | 24         | 129      | 84.3             | 128              | 83.7             |
| 060710070005010 | 89    | 5          | 84       | 94.4             | 84               | 94.4             |
| 060710067001009 | 86    | 26         | 60       | 69.8             | 56               | 65.1             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710067001007 | 113   | 21         | 92       | 81.4             | 92               | 81.4             |
| 060710067001008 | 122   | 19         | 103      | 84.4             | 98               | 80.3             |
| 060710067001004 | 199   | 11         | 188      | 94.5             | 188              | 94.5             |
| 060710067002016 | 218   | 15         | 203      | 93.1             | 203              | 93.1             |
| 060710067002009 | 207   | 5          | 202      | 97.6             | 192              | 92.8             |
| 060710067002012 | 85    | 5          | 80       | 94.1             | 71               | 83.5             |
| 060710067002006 | 78    | 4          | 74       | 94.9             | 70               | 89.7             |
| 060710067002005 | 4     | 0          | 4        | 100.0            | 0                | 0.0              |
| 060710067002010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049006018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710067002004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049006017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710067002011 | 5     | 0          | 5        | 100.0            | 5                | 100.0            |
| 060710067002003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710067002002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710067002013 | 17    | 5          | 12       | 70.6             | 11               | 64.7             |
| 060710067002014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710067001005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710067002001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710067002000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710067002015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710067001006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050002004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049004012 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070005003 | 96    | 1          | 95       | 99.0             | 95               | 99.0             |
| 060710070005004 | 85    | 5          | 80       | 94.1             | 78               | 91.8             |
| 060710067001010 | 81    | 7          | 74       | 91.4             | 62               | 76.5             |
| 060710070005002 | 199   | 27         | 172      | 86.4             | 157              | 78.9             |
| 060710070005005 | 53    | 14         | 39       | 73.6             | 36               | 67.9             |
| 060710070005001 | 11    | 2          | 9        | 81.8             | 7                | 63.6             |
| 060710067001012 | 49    | 3          | 46       | 93.9             | 46               | 93.9             |
| 060710067001003 | 207   | 10         | 197      | 95.2             | 196              | 94.7             |
| 060710067001002 | 209   | 24         | 185      | 88.5             | 182              | 87.1             |
| 060710067001011 | 1     | 0          | 1        | 100.0            | 0                | 0.0              |
| 060710070005000 | 9     | 0          | 9        | 100.0            | 8                | 88.9             |
| 060710067001001 | 225   | 9          | 216      | 96.0             | 214              | 95.1             |
| 060710067001000 | 126   | 6          | 120      | 95.2             | 107              | 84.9             |
| 060710070001011 | 117   | 21         | 96       | 82.1             | 86               | 73.5             |
| 060710070001009 | 101   | 19         | 82       | 81.2             | 82               | 81.2             |
| 060710070001008 | 169   | 31         | 138      | 81.7             | 124              | 73.4             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710070001012 | 97    | 10         | 87       | 89.7             | 87               | 89.7             |
| 060710070001013 | 23    | 9          | 14       | 60.9             | 13               | 56.5             |
| 060710070001007 | 106   | 14         | 92       | 86.8             | 83               | 78.3             |
| 060710070001005 | 120   | 28         | 92       | 76.7             | 92               | 76.7             |
| 060710070001004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070001003 | 42    | 7          | 35       | 83.3             | 31               | 73.8             |
| 060710070001002 | 59    | 11         | 48       | 81.4             | 46               | 78.0             |
| 060710050002016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070001001 | 51    | 12         | 39       | 76.5             | 35               | 68.6             |
| 060710070001000 | 29    | 12         | 17       | 58.6             | 17               | 58.6             |
| 060710050002015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050002017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050002003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049004011 | 147   | 7          | 140      | 95.2             | 125              | 85.0             |
| 060710049004015 | 41    | 7          | 34       | 82.9             | 34               | 82.9             |
| 060710049004013 | 51    | 5          | 46       | 90.2             | 46               | 90.2             |
| 060710049004014 | 56    | 14         | 42       | 75.0             | 37               | 66.1             |
| 060710050002008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050002005 | 142   | 3          | 139      | 97.9             | 136              | 95.8             |
| 060710050002009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050002002 | 114   | 12         | 102      | 89.5             | 98               | 86.0             |
| 060710049003018 | 599   | 46         | 553      | 92.3             | 468              | 78.1             |
| 060710049003017 | 18    | 0          | 18       | 100.0            | 14               | 77.8             |
| 060710049006001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049006000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049005016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049004003 | 16    | 8          | 8        | 50.0             | 7                | 43.8             |
| 060710049004002 | 264   | 36         | 228      | 86.4             | 200              | 75.8             |
| 060710049005997 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049005015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049005014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049005009 | 56    | 12         | 44       | 78.6             | 44               | 78.6             |
| 060710049005999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049005002 | 59    | 0          | 59       | 100.0            | 59               | 100.0            |
| 060710043003016 | 14    | 0          | 14       | 100.0            | 14               | 100.0            |
| 060710043002004 | 34    | 0          | 34       | 100.0            | 34               | 100.0            |
| 060710049005003 | 38    | 0          | 38       | 100.0            | 32               | 84.2             |
| 060710049005005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049005001 | 55    | 2          | 53       | 96.4             | 53               | 96.4             |
| 060710043002005 | 74    | 0          | 74       | 100.0            | 71               | 95.9             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710043002006 | 71    | 4          | 67       | 94.4             | 64               | 90.1             |
| 060710043002007 | 74    | 5          | 69       | 93.2             | 59               | 79.7             |
| 060710043002009 | 83    | 1          | 82       | 98.8             | 80               | 96.4             |
| 060710049004004 | 67    | 1          | 66       | 98.5             | 64               | 95.5             |
| 060710049004005 | 25    | 0          | 25       | 100.0            | 23               | 92.0             |
| 060710049004010 | 51    | 2          | 49       | 96.1             | 49               | 96.1             |
| 060710049004009 | 48    | 6          | 42       | 87.5             | 38               | 79.2             |
| 060710049004006 | 27    | 0          | 27       | 100.0            | 24               | 88.9             |
| 060710049004007 | 56    | 4          | 52       | 92.9             | 52               | 92.9             |
| 060710049004001 | 15    | 0          | 15       | 100.0            | 15               | 100.0            |
| 060710049005013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049005010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049004008 | 86    | 24         | 62       | 72.1             | 54               | 62.8             |
| 060710049004000 | 31    | 3          | 28       | 90.3             | 28               | 90.3             |
| 060710049005012 | 42    | 3          | 39       | 92.9             | 33               | 78.6             |
| 060710049005011 | 64    | 0          | 64       | 100.0            | 64               | 100.0            |
| 060710049005008 | 51    | 0          | 51       | 100.0            | 51               | 100.0            |
| 060710049003015 | 36    | 0          | 36       | 100.0            | 36               | 100.0            |
| 060710049003014 | 56    | 3          | 53       | 94.6             | 48               | 85.7             |
| 060710049003011 | 33    | 2          | 31       | 93.9             | 25               | 75.8             |
| 060710049003016 | 82    | 8          | 74       | 90.2             | 73               | 89.0             |
| 060710049003013 | 59    | 4          | 55       | 93.2             | 51               | 86.4             |
| 060710049003010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049003009 | 119   | 14         | 105      | 88.2             | 89               | 74.8             |
| 060710049003004 | 177   | 3          | 174      | 98.3             | 165              | 93.2             |
| 060710049003012 | 26    | 10         | 16       | 61.5             | 16               | 61.5             |
| 060710049003008 | 151   | 41         | 110      | 72.8             | 106              | 70.2             |
| 060710049003005 | 85    | 4          | 81       | 95.3             | 77               | 90.6             |
| 060710049003003 | 108   | 4          | 104      | 96.3             | 104              | 96.3             |
| 060710049003002 | 86    | 2          | 84       | 97.7             | 84               | 97.7             |
| 060710049001033 | 52    | 4          | 48       | 92.3             | 48               | 92.3             |
| 060710049001014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049001015 | 45    | 1          | 44       | 97.8             | 42               | 93.3             |
| 060710049003001 | 154   | 10         | 144      | 93.5             | 122              | 79.2             |
| 060710049001032 | 96    | 7          | 89       | 92.7             | 83               | 86.5             |
| 060710049001016 | 83    | 0          | 83       | 100.0            | 83               | 100.0            |
| 060710049005006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049005004 | 90    | 0          | 90       | 100.0            | 90               | 100.0            |
| 060710049005007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049005000 | 159   | 1          | 158      | 99.4             | 145              | 91.2             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710043002010 | 41    | 0          | 41       | 100.0            | 36               | 87.8             |
| 060710043002015 | 28    | 0          | 28       | 100.0            | 28               | 100.0            |
| 060710049001013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049001012 | 27    | 6          | 21       | 77.8             | 17               | 63.0             |
| 060710049001003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710043003004 | 7     | 0          | 7        | 100.0            | 0                | 0.0              |
| 060710043003003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710043003001 | 260   | 14         | 246      | 94.6             | 110              | 42.3             |
| 060710070002004 | 28    | 10         | 18       | 64.3             | 15               | 53.6             |
| 060710070001014 | 49    | 24         | 25       | 51.0             | 21               | 42.9             |
| 060710070002003 | 47    | 4          | 43       | 91.5             | 40               | 85.1             |
| 060710070001015 | 34    | 3          | 31       | 91.2             | 30               | 88.2             |
| 060710070001006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070001016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710070002000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001034 | 13    | 2          | 11       | 84.6             | 11               | 84.6             |
| 060710050001033 | 76    | 15         | 61       | 80.3             | 60               | 78.9             |
| 060710050002014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050002013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050002012 | 115   | 8          | 107      | 93.0             | 102              | 88.7             |
| 060710050001031 | 91    | 7          | 84       | 92.3             | 82               | 90.1             |
| 060710050002011 | 116   | 28         | 88       | 75.9             | 86               | 74.1             |
| 060710050001022 | 113   | 13         | 100      | 88.5             | 94               | 83.2             |
| 060710050001028 | 16    | 2          | 14       | 87.5             | 14               | 87.5             |
| 060710050001029 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009033 | 96    | 27         | 69       | 71.9             | 60               | 62.5             |
| 060710060009034 | 165   | 60         | 105      | 63.6             | 97               | 58.8             |
| 060710060009035 | 85    | 9          | 76       | 89.4             | 72               | 84.7             |
| 060710050001030 | 119   | 9          | 110      | 92.4             | 103              | 86.6             |
| 060710050001032 | 74    | 3          | 71       | 95.9             | 67               | 90.5             |
| 060710050001023 | 29    | 6          | 23       | 79.3             | 23               | 79.3             |
| 060710050001024 | 4     | 2          | 2        | 50.0             | 1                | 25.0             |
| 060710050001027 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001025 | 1     | 0          | 1        | 100.0            | 0                | 0.0              |
| 060710050002007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050002006 | 188   | 21         | 167      | 88.8             | 160              | 85.1             |
| 060710050002010 | 132   | 12         | 120      | 90.9             | 120              | 90.9             |
| 060710050001009 | 94    | 13         | 81       | 86.2             | 81               | 86.2             |
| 060710050002000 | 108   | 7          | 101      | 93.5             | 101              | 93.5             |
| 060710050001008 | 81    | 8          | 73       | 90.1             | 72               | 88.9             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710050002001 | 120   | 13         | 107      | 89.2             | 86               | 71.7             |
| 060710049003020 | 179   | 25         | 154      | 86.0             | 131              | 73.2             |
| 060710049003019 | 120   | 15         | 105      | 87.5             | 90               | 75.0             |
| 060710049002007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001010 | 18    | 1          | 17       | 94.4             | 9                | 50.0             |
| 060710050001007 | 40    | 2          | 38       | 95.0             | 22               | 55.0             |
| 060710050001020 | 5     | 0          | 5        | 100.0            | 5                | 100.0            |
| 060710050001019 | 4     | 1          | 3        | 75.0             | 0                | 0.0              |
| 060710050001011 | 2     | 0          | 2        | 100.0            | 2                | 100.0            |
| 060710050001012 | 3     | 2          | 1        | 33.3             | 0                | 0.0              |
| 060710049002012 | 7     | 0          | 7        | 100.0            | 7                | 100.0            |
| 060710050001006 | 13    | 1          | 12       | 92.3             | 12               | 92.3             |
| 060710049002011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049002009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009036 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001026 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009037 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001017 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009028 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001018 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710050001000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002019 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710059002016 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002017 | 5     | 0          | 5        | 100.0            | 5                | 100.0            |
| 060710049003007 | 56    | 3          | 53       | 94.6             | 43               | 76.8             |
| 060710049003006 | 63    | 5          | 58       | 92.1             | 51               | 81.0             |
| 060710049002006 | 33    | 7          | 26       | 78.8             | 26               | 78.8             |
| 060710049003000 | 195   | 17         | 178      | 91.3             | 162              | 83.1             |
| 060710049001031 | 215   | 7          | 208      | 96.7             | 196              | 91.2             |
| 060710049001017 | 66    | 0          | 66       | 100.0            | 60               | 90.9             |
| 060710049002003 | 99    | 17         | 82       | 82.8             | 81               | 81.8             |
| 060710049002002 | 149   | 8          | 141      | 94.6             | 126              | 84.6             |
| 060710049001018 | 13    | 0          | 13       | 100.0            | 12               | 92.3             |
| 060710049001030 | 62    | 8          | 54       | 87.1             | 37               | 59.7             |
| 060710049001019 | 32    | 5          | 27       | 84.4             | 25               | 78.1             |
| 060710049002008 | 4     | 3          | 1        | 25.0             | 0                | 0.0              |
| 060710049002005 | 40    | 1          | 39       | 97.5             | 39               | 97.5             |
| 060710049002010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049002004 | 98    | 6          | 92       | 93.9             | 80               | 81.6             |
| 060710049002001 | 111   | 11         | 100      | 90.1             | 98               | 88.3             |
| 060710049001029 | 59    | 3          | 56       | 94.9             | 48               | 81.4             |
| 060710049001020 | 27    | 0          | 27       | 100.0            | 13               | 48.1             |
| 060710049001027 | 27    | 3          | 24       | 88.9             | 20               | 74.1             |
| 060710049001028 | 3     | 3          | 0        | 0.0              | 0                | 0.0              |
| 060710049001021 | 22    | 0          | 22       | 100.0            | 9                | 40.9             |
| 060710049002000 | 14    | 0          | 14       | 100.0            | 14               | 100.0            |
| 060710049001026 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049001025 | 30    | 12         | 18       | 60.0             | 13               | 43.3             |
| 060710049001024 | 32    | 18         | 14       | 43.8             | 9                | 28.1             |
| 060710049001023 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049001022 | 19    | 0          | 19       | 100.0            | 17               | 89.5             |
| 060710059002004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002003 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049001002 | 37    | 2          | 35       | 94.6             | 35               | 94.6             |
| 060710049001011 | 110   | 6          | 104      | 94.5             | 90               | 81.8             |
| 060710049001010 | 43    | 1          | 42       | 97.7             | 28               | 65.1             |
| 060710049001004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049001005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049001009 | 9     | 0          | 9        | 100.0            | 6                | 66.7             |
| 060710049001008 | 19    | 4          | 15       | 78.9             | 9                | 47.4             |
| 060710049001006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710049001007 | 0     | 0          | 0        | 0.0              | 0                | 0                |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710049001000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710057002004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002013 | 9     | 3          | 6        | 66.7             | 6                | 66.7             |
| 060710059002005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002012 | 20    | 1          | 19       | 95.0             | 19               | 95.0             |
| 060710059002018 | 24    | 0          | 24       | 100.0            | 23               | 95.8             |
| 060710059002011 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059002010 | 1     | 1          | 0        | 0.0              | 0                | 0.0              |
| 060710057002005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710057002003 | 5     | 0          | 5        | 100.0            | 5                | 100.0            |
| 060710057002002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060009011 | 24    | 5          | 19       | 79.2             | 4                | 16.7             |
| 060710059001030 | 9     | 2          | 7        | 77.8             | 7                | 77.8             |
| 060710059001029 | 4     | 0          | 4        | 100.0            | 4                | 100.0            |
| 060710059001015 | 76    | 27         | 49       | 64.5             | 49               | 64.5             |
| 060710059001028 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059001016 | 20    | 0          | 20       | 100.0            | 20               | 100.0            |
| 060710059001017 | 93    | 48         | 45       | 48.4             | 28               | 30.1             |
| 060710060001004 | 2     | 2          | 0        | 0.0              | 0                | 0.0              |
| 060710060001999 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060001002 | 22    | 20         | 2        | 9.1              | 2                | 9.1              |
| 060710060001003 | 17    | 1          | 16       | 94.1             | 16               | 94.1             |
| 060710059001018 | 87    | 11         | 76       | 87.4             | 63               | 72.4             |
| 060710059001019 | 49    | 38         | 11       | 22.4             | 2                | 4.1              |
| 060710060001013 | 15    | 0          | 15       | 100.0            | 4                | 26.7             |
| 060710060001012 | 27    | 2          | 25       | 92.6             | 3                | 11.1             |
| 060710060001011 | 4     | 0          | 4        | 100.0            | 4                | 100.0            |
| 060710060001006 | 71    | 13         | 58       | 81.7             | 10               | 14.1             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White | Population | Minority | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|-------|------------|----------|------------------|------------------|------------------|
| 060710060001007 | 39    | 5          | 34       | 87.2             | 11               | 28.2             |
| 060710060001010 | 26    | 0          | 26       | 100.0            | 14               | 53.8             |
| 060710060001015 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060001009 | 68    | 4          | 64       | 94.1             | 3                | 4.4              |
| 060710072002003 | 34    | 2          | 32       | 94.1             | 3                | 8.8              |
| 060710060001005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060001000 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059001020 | 14    | 3          | 11       | 78.6             | 11               | 78.6             |
| 060710059001021 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710060001001 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059001027 | 3     | 0          | 3        | 100.0            | 3                | 100.0            |
| 060710060001008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059001026 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059001025 | 50    | 10         | 40       | 80.0             | 27               | 54.0             |
| 060710059001013 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059001014 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059001007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059001012 | 3     | 0          | 3        | 100.0            | 0                | 0.0              |
| 060710059001008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059001011 | 2     | 2          | 0        | 0.0              | 0                | 0.0              |
| 060710059001010 | 26    | 5          | 21       | 80.8             | 21               | 80.8             |
| 060710059001006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059001005 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059001004 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710057002010 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059001003 | 8     | 4          | 4        | 50.0             | 2                | 25.0             |
| 060710057002009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710058003008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059001009 | 5     | 2          | 3        | 60.0             | 3                | 60.0             |
| 060710059001002 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710058003009 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710058003007 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710058003010 | 447   | 51         | 396      | 88.6             | 111              | 24.8             |
| 060710057002006 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710057002008 | 0     | 0          | 0        | 0.0              | 0                | 0                |
| 060710059001022 | 319   | 15         | 304      | 95.3             | 286              | 89.7             |
| 060710059001024 | 11    | 4          | 7        | 63.6             | 6                | 54.5             |
| 060710059001023 | 50    | 8          | 42       | 84.0             | 32               | 64.0             |
| 060710059001001 | 134   | 9          | 125      | 93.3             | 122              | 91.0             |
| 060710059001000 | 167   | 16         | 151      | 90.4             | 134              | 80.2             |

**TABLE 8.8A-1**  
 2000 Census Racial/Ethnic Data by Census Block  
 AES Highgrove 6-mile Radius

| Census Block    | White         | Population     | Minority       | Percent Minority | Hispanic Origin* | Percent Hispanic |
|-----------------|---------------|----------------|----------------|------------------|------------------|------------------|
| 060710065004019 | 0             | 0              | 0              | 0.0              | 0                | 0                |
| 060710072002004 | 111           | 14             | 97             | 87.4             | 65               | 58.6             |
| 060710072002002 | 188           | 15             | 173            | 92.0             | 103              | 54.8             |
| 060710072001004 | 288           | 42             | 246            | 85.4             | 106              | 36.8             |
| 060710065004018 | 2             | 0              | 2              | 100.0            | 0                | 0.0              |
| 060710072001006 | 62            | 7              | 55             | 88.7             | 23               | 37.1             |
| 060710072001005 | 54            | 3              | 51             | 94.4             | 25               | 46.3             |
| 060710072001003 | 7             | 6              | 1              | 14.3             | 0                | 0.0              |
| 060710072001002 | 1             | 1              | 0              | 0.0              | 0                | 0.0              |
| 060710072001001 | 7             | 4              | 3              | 42.9             | 3                | 42.9             |
| 060710072002005 | 37            | 12             | 25             | 67.6             | 14               | 37.8             |
| 060710072002006 | 63            | 14             | 49             | 77.8             | 28               | 44.4             |
| 060710072002007 | 60            | 2              | 58             | 96.7             | 55               | 91.7             |
| 060710072002001 | 51            | 6              | 45             | 88.2             | 45               | 88.2             |
| 060710072002000 | 104           | 2              | 102            | 98.1             | 79               | 76.0             |
| 060710072001000 | 103           | 28             | 75             | 72.8             | 63               | 61.2             |
| 060710065004016 | 346           | 21             | 325            | 93.9             | 112              | 32.4             |
| 060710065004017 | 0             | 0              | 0              | 0.0              | 0                | 0                |
| 060710065005006 | 223           | 16             | 207            | 92.8             | 84               | 37.7             |
| 060710072003006 | 0             | 0              | 0              | 0.0              | 0                | 0                |
| 060710072003002 | 6             | 0              | 6              | 100.0            | 6                | 100.0            |
| 060710072003001 | 0             | 0              | 0              | 0.0              | 0                | 0                |
| 060710072003005 | 264           | 86             | 178            | 67.4             | 117              | 44.3             |
| <b>TOTAL</b>    | <b>98,234</b> | <b>294,882</b> | <b>196,648</b> | <b>66.7</b>      | <b>139,590</b>   | <b>47.3</b>      |

Source: 2000 Census.

\* Hispanics or Latinos are those people who classified themselves in one of the specific Spanish, Hispanic, or Latino categories listed on the Census 2000 questionnaire—"Mexican, Mexican Am., Chicano," "Puerto Rican," or "Cuban"—as well as those who indicate that they are "other Spanish/Hispanic/Latino." People who identify their origin as "other Spanish/Hispanic/Latino" may be of any race. Thus, the percent Hispanic should not be added to percentages for racial (i.e., minority) categories.

**TABLE 8.8A-2**  
 2000 Census Low Income Data by Census Block Group  
 AES Highgrove 6-mile Radius

| Census Block Group | Total Population* | Income below Poverty Level | Percent Low-Income |
|--------------------|-------------------|----------------------------|--------------------|
| 060650403031       | 2,545             | 455                        | 17.9               |
| 060710026035       | 4,985             | 394                        | 7.9                |
| 060650312005       | 1,997             | 330                        | 16.5               |
| 060650312003       | 1,096             | 132                        | 12.0               |
| 060650306023       | 618               | 7                          | 1.1                |
| 060650312002       | 679               | 38                         | 5.6                |
| 060650306011       | 2,065             | 46                         | 2.2                |
| 060650422082       | 1,259             | 56                         | 4.4                |
| 060650422081       | 1,143             | 0                          | 0.0                |
| 060650422071       | 1,563             | 21                         | 1.3                |
| 060650422072       | 909               | 48                         | 5.3                |
| 060650422052       | 4,557             | 115                        | 2.5                |
| 060650308004       | 2,494             | 311                        | 12.5               |
| 060650308009       | 897               | 60                         | 6.7                |
| 060650402021       | 1,150             | 168                        | 14.6               |
| 060650403011       | 1,511             | 132                        | 8.7                |
| 060650403021       | 3,252             | 284                        | 8.7                |
| 060650403012       | 1,740             | 234                        | 13.4               |
| 060650402011       | 2,822             | 622                        | 22.0               |
| 060650402031       | 1,703             | 725                        | 42.6               |
| 060650403014       | 1,183             | 291                        | 24.6               |
| 060650403013       | 2,169             | 805                        | 37.1               |
| 060650401002       | 1,078             | 207                        | 19.2               |
| 060650308003       | 1,726             | 322                        | 18.7               |
| 060650311003       | 799               | 61                         | 7.6                |
| 060650311005       | 1,077             | 104                        | 9.7                |
| 060650308002       | 791               | 72                         | 9.1                |
| 060650308001       | 484               | 0                          | 0.0                |
| 060650302009       | 400               | 28                         | 7.0                |
| 060650307004       | 762               | 86                         | 11.3               |
| 060650307005       | 948               | 129                        | 13.6               |
| 060650311002       | 622               | 25                         | 4.0                |
| 060650307003       | 935               | 73                         | 7.8                |
| 060650311001       | 1,674             | 186                        | 11.1               |
| 060650307001       | 1,227             | 250                        | 20.4               |
| 060650307002       | 1,539             | 568                        | 36.9               |
| 060650303003       | 540               | 89                         | 16.5               |
| 060650303002       | 434               | 211                        | 48.6               |
| 060650402032       | 2,042             | 564                        | 27.6               |

**TABLE 8.8A-2**

2000 Census Low Income Data by Census Block Group  
 AES Highgrove 6-mile Radius

| <b>Census Block Group</b> | <b>Total Population*</b> | <b>Income below Poverty Level</b> | <b>Percent Low-Income</b> |
|---------------------------|--------------------------|-----------------------------------|---------------------------|
| 060650402042              | 2,173                    | 671                               | 30.9                      |
| 060650402041              | 1,281                    | 563                               | 44.0                      |
| 060650302004              | 932                      | 101                               | 10.8                      |
| 060650302003              | 1,130                    | 286                               | 25.3                      |
| 060650303004              | 892                      | 449                               | 50.3                      |
| 060650302002              | 852                      | 134                               | 15.7                      |
| 060650302001              | 1,350                    | 271                               | 20.1                      |
| 060650401003              | 1,836                    | 449                               | 24.5                      |
| 060650401009              | 3,403                    | 473                               | 13.9                      |
| 060710026015              | 1,853                    | 329                               | 17.8                      |
| 060710033008              | 2,511                    | 791                               | 31.5                      |
| 060710033007              | 1,323                    | 383                               | 28.9                      |
| 060650401001              | 1,496                    | 379                               | 25.3                      |
| 060710040003              | 1,518                    | 488                               | 32.1                      |
| 060710040004              | 2,477                    | 913                               | 36.9                      |
| 060710040002              | 4,398                    | 849                               | 19.3                      |
| 060710036025              | 2,643                    | 743                               | 28.1                      |
| 060710036024              | 849                      | 183                               | 21.6                      |
| 060710040001              | 1,960                    | 462                               | 23.6                      |
| 060710036023              | 1,170                    | 232                               | 19.8                      |
| 060710036015              | 817                      | 193                               | 23.6                      |
| 060650312001              | 747                      | 23                                | 3.1                       |
| 060650306031              | 1,457                    | 14                                | 1.0                       |
| 060650306021              | 1,237                    | 122                               | 9.9                       |
| 060650304004              | 801                      | 195                               | 24.3                      |
| 060650304003              | 1,034                    | 303                               | 29.3                      |
| 060650304005              | 1,532                    | 629                               | 41.1                      |
| 060650304002              | 1,480                    | 241                               | 16.3                      |
| 060650305013              | 1,060                    | 427                               | 40.3                      |
| 060650304001              | 1,097                    | 376                               | 34.3                      |
| 060650305022              | 974                      | 241                               | 24.7                      |
| 060650306033              | 503                      | 10                                | 2.0                       |
| 060650306032              | 1,023                    | 153                               | 15.0                      |
| 060650305014              | 805                      | 215                               | 26.7                      |
| 060650305011              | 1,162                    | 433                               | 37.3                      |
| 060650305031              | 934                      | 316                               | 33.8                      |
| 060650305012              | 1,405                    | 491                               | 34.9                      |
| 060650305033              | 1,575                    | 836                               | 53.1                      |
| 060650303005              | 717                      | 233                               | 32.5                      |
| 060650303001              | 1,087                    | 296                               | 27.2                      |

**TABLE 8.8A-2**  
 2000 Census Low Income Data by Census Block Group  
 AES Highgrove 6-mile Radius

| Census Block Group | Total Population* | Income below Poverty Level | Percent Low-Income |
|--------------------|-------------------|----------------------------|--------------------|
| 060650301003       | 564               | 122                        | 21.6               |
| 060650301002       | 1,211             | 156                        | 12.9               |
| 060650301009       | 1,329             | 196                        | 14.7               |
| 060650301004       | 888               | 218                        | 24.5               |
| 060650301005       | 3,001             | 578                        | 19.3               |
| 060650305021       | 1,054             | 438                        | 41.6               |
| 060650305032       | 1,816             | 608                        | 33.5               |
| 060650422092       | 1,635             | 443                        | 27.1               |
| 060650301001       | 866               | 233                        | 26.9               |
| 060650423001       | 2,109             | 439                        | 20.8               |
| 060650422062       | 1,259             | 156                        | 12.4               |
| 060650422063       | 1,609             | 317                        | 19.7               |
| 060650422112       | 1,528             | 1,184                      | 77.5               |
| 060650422022       | 0                 | 0                          | 0.0                |
| 060650422061       | 2,318             | 596                        | 25.7               |
| 060650422051       | 3,429             | 195                        | 5.7                |
| 060650422132       | 1,047             | 159                        | 15.2               |
| 060650422133       | 1,352             | 131                        | 9.7                |
| 060650422111       | 2,043             | 1,216                      | 59.5               |
| 060650422102       | 1,629             | 480                        | 29.5               |
| 060650422021       | 653               | 198                        | 30.3               |
| 060650422101       | 2,416             | 929                        | 38.5               |
| 060650422091       | 1,358             | 509                        | 37.5               |
| 060650422131       | 1,623             | 280                        | 17.3               |
| 060710040009       | 2,300             | 513                        | 22.3               |
| 060710036016       | 41                | 6                          | 14.6               |
| 060710036017       | 4,638             | 847                        | 18.3               |
| 060710036018       | 1,669             | 215                        | 12.9               |
| 060650423002       | 2,117             | 853                        | 40.3               |
| 060710071073       | 47                | 37                         | 78.7               |
| 060710071061       | 418               | 9                          | 2.2                |
| 060710071072       | 665               | 165                        | 24.8               |
| 060650423003       | 1,803             | 164                        | 9.1                |
| 060710071065       | 973               | 15                         | 1.5                |
| 060710071064       | 653               | 20                         | 3.1                |
| 060710071063       | 1,193             | 90                         | 7.5                |
| 060710071044       | 831               | 15                         | 1.8                |
| 060710071062       | 704               | 71                         | 10.1               |
| 060710071071       | 1,799             | 284                        | 15.8               |
| 060710071021       | 1,132             | 130                        | 11.5               |

**TABLE 8.8A-2**

2000 Census Low Income Data by Census Block Group  
AES Highgrove 6-mile Radius

| <b>Census Block Group</b> | <b>Total Population*</b> | <b>Income below Poverty Level</b> | <b>Percent Low-Income</b> |
|---------------------------|--------------------------|-----------------------------------|---------------------------|
| 060710069002              | 420                      | 199                               | 47.4                      |
| 060710069005              | 562                      | 84                                | 14.9                      |
| 060710069003              | 459                      | 176                               | 38.3                      |
| 060710066005              | 1,101                    | 182                               | 16.5                      |
| 060710066006              | 655                      | 37                                | 5.6                       |
| 060710069004              | 556                      | 208                               | 37.4                      |
| 060710066004              | 1,201                    | 377                               | 31.4                      |
| 060710066003              | 1,421                    | 101                               | 7.1                       |
| 060710069001              | 503                      | 82                                | 16.3                      |
| 060710071082              | 1,745                    | 247                               | 14.2                      |
| 060710069009              | 437                      | 156                               | 35.7                      |
| 060710068001              | 856                      | 262                               | 30.6                      |
| 060710067004              | 785                      | 103                               | 13.1                      |
| 060710070003              | 2,510                    | 946                               | 37.7                      |
| 060710070004              | 662                      | 146                               | 22.1                      |
| 060650422053              | 175                      | 65                                | 37.1                      |
| 060650425051              | 1,558                    | 538                               | 34.5                      |
| 060650422121              | 4,079                    | 334                               | 8.2                       |
| 060650422141              | 1,078                    | 60                                | 5.6                       |
| 060650422142              | 4,728                    | 265                               | 5.6                       |
| 060650423009              | 0                        | 0                                 | 0.0                       |
| 060650424091              | 1,367                    | 136                               | 9.9                       |
| 060650424101              | 4,543                    | 133                               | 2.9                       |
| 060650424122              | 1,188                    | 15                                | 1.3                       |
| 060710071043              | 670                      | 111                               | 16.6                      |
| 060710071045              | 988                      | 23                                | 2.3                       |
| 060710071042              | 709                      | 0                                 | 0.0                       |
| 060710071022              | 1,817                    | 188                               | 10.3                      |
| 060710071041              | 837                      | 14                                | 1.7                       |
| 060710071052              | 1,390                    | 106                               | 7.6                       |
| 060710071051              | 1,472                    | 104                               | 7.1                       |
| 060710073022              | 1,013                    | 33                                | 3.3                       |
| 060710071023              | 1,130                    | 353                               | 31.2                      |
| 060710071081              | 382                      | 69                                | 18.1                      |
| 060710071024              | 3,301                    | 401                               | 12.1                      |
| 060710070002              | 2,122                    | 503                               | 23.7                      |
| 060710060009              | 1,299                    | 257                               | 19.8                      |
| 060710071025              | 1,514                    | 34                                | 2.2                       |
| 060710071026              | 1,432                    | 391                               | 27.3                      |
| 060710073021              | 1,349                    | 199                               | 14.8                      |

**TABLE 8.8A-2**

2000 Census Low Income Data by Census Block Group  
 AES Highgrove 6-mile Radius

| <b>Census Block Group</b> | <b>Total Population*</b> | <b>Income below Poverty Level</b> | <b>Percent Low-Income</b> |
|---------------------------|--------------------------|-----------------------------------|---------------------------|
| 060710073024              | 1,785                    | 126                               | 7.1                       |
| 060710073012              | 2,608                    | 1,031                             | 39.5                      |
| 060710073011              | 258                      | 60                                | 23.3                      |
| 060710073013              | 549                      | 85                                | 15.5                      |
| 060710072007              | 378                      | 99                                | 26.2                      |
| 060710073014              | 3,909                    | 702                               | 18.0                      |
| 060710073015              | 2,850                    | 618                               | 21.7                      |
| 060710072006              | 1,803                    | 395                               | 21.9                      |
| 060710072005              | 988                      | 257                               | 26.0                      |
| 060710072004              | 1,652                    | 457                               | 27.7                      |
| 060650424123              | 866                      | 35                                | 4.0                       |
| 060710073026              | 1,110                    | 11                                | 1.0                       |
| 060710073025              | 1,827                    | 39                                | 2.1                       |
| 060710073023              | 161                      | 0                                 | 0.0                       |
| 060710073027              | 371                      | 0                                 | 0.0                       |
| 060710073028              | 82                       | 8                                 | 9.8                       |
| 060710073017              | 550                      | 92                                | 16.7                      |
| 060710073016              | 1,192                    | 75                                | 6.3                       |
| 060710078002              | 1,387                    | 189                               | 13.6                      |
| 060710034032              | 1,758                    | 186                               | 10.6                      |
| 060710036021              | 3,888                    | 222                               | 5.7                       |
| 060710036022              | 4,006                    | 383                               | 9.6                       |
| 060710036014              | 3,529                    | 760                               | 21.5                      |
| 060710036011              | 2,548                    | 651                               | 25.5                      |
| 060710035017              | 753                      | 190                               | 25.2                      |
| 060710035016              | 5,176                    | 1,328                             | 25.7                      |
| 060710036013              | 1,506                    | 231                               | 15.3                      |
| 060710036012              | 2,478                    | 538                               | 21.7                      |
| 060710039003              | 1,473                    | 122                               | 8.3                       |
| 060710037002              | 1,835                    | 587                               | 32.0                      |
| 060710037001              | 1,418                    | 260                               | 18.3                      |
| 060710039002              | 1,376                    | 214                               | 15.6                      |
| 060710039001              | 1,802                    | 234                               | 13.0                      |
| 060710044013              | 1,561                    | 167                               | 10.7                      |
| 060710044023              | 1,823                    | 100                               | 5.5                       |
| 060710044012              | 1,593                    | 337                               | 21.2                      |
| 060710044011              | 546                      | 212                               | 38.8                      |
| 060710043005              | 850                      | 330                               | 38.8                      |
| 060710038001              | 3,971                    | 713                               | 18.0                      |
| 060710043006              | 1,597                    | 183                               | 11.5                      |

**TABLE 8.8A-2**

2000 Census Low Income Data by Census Block Group  
AES Highgrove 6-mile Radius

| <b>Census Block Group</b> | <b>Total Population*</b> | <b>Income below Poverty Level</b> | <b>Percent Low-Income</b> |
|---------------------------|--------------------------|-----------------------------------|---------------------------|
| 060710066007              | 4,736                    | 985                               | 20.8                      |
| 060710066002              | 1,313                    | 44                                | 3.4                       |
| 060710066001              | 2,051                    | 582                               | 28.4                      |
| 060710044022              | 4,469                    | 899                               | 20.1                      |
| 060710044021              | 3,205                    | 931                               | 29.0                      |
| 060710049006              | 1,073                    | 234                               | 21.8                      |
| 060710067003              | 855                      | 159                               | 18.6                      |
| 060710067001              | 1,329                    | 170                               | 12.8                      |
| 060710067002              | 1,071                    | 191                               | 17.8                      |
| 060710070005              | 813                      | 326                               | 40.1                      |
| 060710070001              | 1,016                    | 289                               | 28.4                      |
| 060710050002              | 1,008                    | 283                               | 28.1                      |
| 060710049004              | 1,082                    | 376                               | 34.8                      |
| 060710049005              | 681                      | 245                               | 36.0                      |
| 060710043002              | 1,196                    | 479                               | 40.1                      |
| 060710049003              | 2,269                    | 1,036                             | 45.7                      |
| 060710043003              | 1,176                    | 219                               | 18.6                      |
| 060710050001              | 774                      | 198                               | 25.6                      |
| 060710049002              | 610                      | 100                               | 16.4                      |
| 060710049001              | 1,059                    | 581                               | 54.9                      |
| 060710059002              | 22                       | 0                                 | 0.0                       |
| 060710057002              | 0                        | 0                                 | 0.0                       |
| 060710060001              | 288                      | 91                                | 31.6                      |
| 060710059001              | 1,120                    | 488                               | 43.6                      |
| 060710058003              | 748                      | 485                               | 64.8                      |
| 060710072002              | 498                      | 240                               | 48.2                      |
| 060710072001              | 407                      | 168                               | 41.3                      |
| 060710065004              | 1,352                    | 598                               | 44.2                      |
| 060710065005              | 1,111                    | 357                               | 32.1                      |
| 060710072003              | 957                      | 104                               | 10.9                      |
| <b>TOTAL</b>              | <b>336,745</b>           | <b>67,083</b>                     | <b>19.9</b>               |

Source: 2000 Census.

\* Population numbers are only those for whom poverty was determined and exclude full-time college students.

APPENDIX 8.8B

## **Records of Conversations with Public Service Providers**

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AES Highgrove Project Law Enforcement services\_Email from FY to Guerra.txt

From: Yusuf, Fatuma/SAC  
Sent: Friday, March 04, 2005 3:42 PM  
To: 'hguerra@sbcscd.org'  
Subject: AES Highgrove Project: Law Enforcement services

Attachments: Law Enforcement\_Questions.doc

Hi,

I was given your email address by Cathy Gray. I contacted Cathy for information regarding the Sheriff's Department existing resources and how those resources might be impacted by the proposed AES Highgrove power plant project. She suggested that I contact you via email.

I'm working on the socioeconomic analysis section of the California Energy Commission's (CEC) Application for Certification (AFC) for the proposed AES Highgrove power plant project. The CEC requires that all AFCs report and analyze the public services including fire, police, utilities, etc. The proposed site for this project is 12700 Taylor Street in City of Grand Terrace.

I would appreciate it very much if you could answer the questions in the attached document. I need this information as soon as possible so if you'd rather I called you and the information verbally, I'd be more than happy to do that.

Thank you for your help,

Fatuma Yusuf, Ph.D.  
Economist  
CH2M HILL  
2485 Natomas Park Dr. Suite 600  
Sacramento, CA 95833-2937  
Phone: 916.286.0479  
Email: fyusuf@CH2M.com  
Facys: 916.614.3484

AES Highgrove Project\_Email from Guerra to FY.txt

From: Guerra, Hector [hguerra@sbcscd.org]  
Sent: Wednesday, March 09, 2005 2:10 PM  
To: Yusuf, Fatuma/SAC  
Subject: AES Highgrove Project

Attachments: GT Law Enforcement\_Questions1.doc

Hope this answers all the questions, if not please call me at (909) 387-3505.

Thank you,

Hector Guerra, Lieutenant

# CH2MHILL TELEPHONE CONVERSATION RECORD

**Call To:** Mike Huddleston  
Fire Prevention Supervisor  
San Bernardino County Fire

Department  
620 South "E" Street  
San Bernardino, CA 92415

**Phone No.:** 909-386-8411

**Date:** April 11, 2006

**Call From:** Fatuma Yusuf

**Time:** 11:10 AM

**Message**

**Taken By:** Fatuma Yusuf

**Subject:** Potential impact to Fire Dept. services during construction & operation

Mike Huddleston informed me that there would be no impacts to the Fire Departments services due to the AES Highgrove project construction or operation.

# CH2MHILL TELEPHONE CONVERSATION RECORD

**Call To:** Kevin Sewel  
Firefighter  
Station #23

San Bernardino County Fire  
Department

**Phone No.:** 909-825-0221

**Date:** February 17, 2006

**Call From:** Fatuma Yusuf

**Time:** 4:35 PM

**Message**

**Taken By:** Fatuma Yusuf

**Subject:** Response time to an emergency from project site

I had previously confirmed that Station No. 23 located at 22592 City Center Ct., Grand Terrace, was the nearest the fire station serving the City of Grand Terrace. Firefighter Kevin Sewel gave me the following resources at Station No. 23:

1 fire engine,

1 brush engine,

1 heavy rescue truck and

1 squad truck (a pickup truck used for basic life support equipment).

The station is manned by three shifts comprised of a captain and 2 firefighters.

The nearest station that would come to the aid of Station No. 23 would be that from City of Colton Fire Department.

Station No. 23 will respond to a call from the site in approximately 2 to 3 minutes

# CH2MHILL TELEPHONE CONVERSATION RECORD

**Call To:** Joe Ashbaker  
Supervisor, Emergency  
Response Unit  
San Bernardino County Fire

Department  
620 South "E" Street  
San Bernardino, CA 92415

**Phone No.:** 909-386-8401

**Date:** March 9, 2005

**Call From:** Fatuma Yusuf

**Time:** 6:26 PM

## **Message**

**Taken By:** Fatuma Yusuf

**Subject:** Haz Mat response

I called the Emergency Response Unit to find out about the Fire Department's existing Haz Mat team's resources and how those resources might be affected by the proposed AES Highgrove power plant project. I was told by Christine Riegel (sp?) that I should address my questions to Joe Ashbaker.

I sent Joe Ashbaker a list of questions via email. Joe emailed his responses to me the following day.

The questions and answers are shown below:

## **Questions:**

Who handles Hazardous Materials?

How many personnel are there?

Where are they located?

What is the training of the Haz Mat team?

What type of haz mat can the team handle?

Are they able to deal with incidences involving aqueous ammonia (proposed project is expected to have 19% aqueous ammonia):

What would be the response time to an emergency from the proposed site (12700 Taylor Street in City of Grand Terrace)?

## **Answers from Joe Ashbaker:**

1. Who handles..... In San Bernardino County the County Fire Department is the Certified Unified Program Agency (CUPA). As such, we regulate and permit all facilities that handle hazardous materials or waste in amounts that exceed statutory quantities (the only exception to this in SB County is the City of Victorville which is it's own CUPA. The response to emergency releases of hazardous material or waste is a combined County-wide effort between this Department and 20 other City and District departments who have all agreed to participate in what we call the San Bernardino County Inter-Agency Hazardous Materials Response Team.

2. How many personnel... The entire interagency team consists of roughly 110 members (10 REHS and the rest firefighters).

3. Where are they located.... They are located in the Department by whom they are employed and available for response on the days they happen to be on shift for normal firefighting duty. Their dispatch, if needed would be requested through our County Communication Center. This is an agreement entered into by the County Fire Chiefs Association and is operated using "Automatic Aid".

4. What is the training.... Before being admitted to the response team, training is a minimum of "Hazardous Materials Technician" with the understanding that "Hazardous Materials Specialist " will be attained.

5. What type of Haz-Mat can the team handle.... This is a full Level A response team, capable of handling all types of CBRN responses. The team is also very well trained as to which State and Federal Agencies to contact if an incident exceeds our capabilities.

6. Aqueous Ammonia..... Yes, not a problem.

7. Response time to Grand Terrace.... Roughly 1/2 HR during business HRS; After HRS, 1 HR.

# CH2MHILL TELEPHONE CONVERSATION RECORD

**Call To:** Philip Eckert  
Business Manager and  
Executive Secretary  
San Bernardino, Riverside Building

Trades Council  
1074 East La Cadena Dr., #8  
Riverside, CA 92501

**Phone No.:** 951-684-1040

**Date:** February 17, 2006

**Call From:**

**Time:** 9:40 AM

**Message**

**Taken By:** Fatuma Yusuf

**Subject:** Workforce Availability

Philip Eckert confirmed that there is enough construction labor force (manpower) to meet the workforce requirements of the AES Highgrove power plant project.

# CH2MHILL TELEPHONE CONVERSATION RECORD

**Call To:** Chella Huntimer  
Administrative Assistant I,  
Facilities Planning and Construction  
**Phone No.:** 909-580-5000 x 6642  
**Department:** Colton Joint Unified School District  
**Date:** January 18, 2006  
**Call From:** Fatuma Yusuf  
**Time:** 3:00 PM

## Message

**Taken By:** Fatuma Yusuf

**Subject:** School Enrollment, School Impact Fees

I called and spoke to Alice with the Facilities Planning and Construction Dept. Alice told me to contact Chella Huntimer for the information I sought by sending her an email ([chella\\_huntimer@colton.k12.ca.us](mailto:chella_huntimer@colton.k12.ca.us)). I sent the email requesting the school enrollment numbers for the 2005-06 school year.

I called the following day (1/19/06 PM) to confirm that Chella had received my email from the previous day. Chella told me that she hadn't received the email but that she would be willing to provide me with the numbers over the phone. She gave the following total enrollment numbers for the schools in the school district:

|                  |      |
|------------------|------|
| Grand Terrace ES | 694  |
| Terrace View ES  | 772  |
| Terrace Mills MS | 1049 |
| Colton HS        | 3306 |

Chella said that she could not provide me with a breakdown of enrollment by grade for the individual schools but that she would send me the breakdown for the district. She did this the following day via email.

Chella also informed that the schools were currently beyond capacity and that all schools were impacted by this.

School impacts fees: Colton Joint Unified School District charged a fee of \$0.36/sq. ft for industrial/commercial development

I called the individual school districts and received the enrollment by grade breakdown.

# CH2MHILL TELEPHONE CONVERSATION RECORD

**Call To:** Lt. Hector Guerra 655 E. 3rd Street  
San Bernardino County San Bernardino, CA 92415  
Sheriff's Dept.

**Phone No.:** 909-387-3545

**Date:** March 4, 2005

**Call From:** Fatuma Yusuf

**Time:** 03:40 PM

## Message

**Taken By:** Fatuma Yusuf

**Subject:** Law Enforcement Services

I contacted Lt. Guerra after talking to Cathy Gray (Sheriff's Dept) about the Department's existing resources and how those resources might be impacted by the proposed AES Highgrove power plant project. Cathy Gray suggested I send an email to Lt. Guerra.

I sent Lt. Guerra a list of questions. He emailed his responses back to me on 3/9/05. The questions and responses are as shown below:

### Existing Resources

What is the address of the Sheriff's Department headquarters?

655 E. 3<sup>rd</sup> St. San Bernardino Ca 92415

What is the Sheriff's Department area of service?

Patrol for all of the unincorporated areas within San Bernardino, as well as 14 contract cities including Grand Terrace.

How many sworn full-time officers does the Sheriff's Department have?

The City of Grand Terrace contracts for 6.76 Deputy Sheriffs, 1.11 Detective, 1.12 Sergeant, 1 Sheriff's Service Specialist, 1.57 Station Clerks, 0.26 Lieutenant

How many patrol cars?

3.50 Marked patrol cars, 1 unmarked detective car, 1 marked Citizen Patrol Mini van,  
1 marked Citizen Patrol car, 1 marked Community Service Officer Blazer (SUV)

How many patrol officers/deputies are there per patrol car?

One

What other crime fighting resources does the Sheriff's Department have?

Specialized Investigations (Narcotics, Homicide, Sex crimes, High-Tech), Aviation, Boating, Motorcycles, Bike Patrols,

Do you serve the City of Grand Terrace?

Yes

If so, do you have a station within the city?

No, just one office

What is the address of this station?

NA

How many sworn full-time officers are there in the police substation/station nearest to site (the one in the City of Grand Terrace if this is applicable)? NA

How many patrol cars serve the City of Grand Terrace?

SAA, 3.50 Marked patrol cars.....

How many of these patrol cars would be available to patrol the area around the proposed project site?

All

What is the response time to an emergency call from the proposed project site (12700 Taylor Street)? 4 Min. or less

What other stations would respond to an emergency from the proposed project site? What other station would come to the aid of the station nearest the proposed project site?

Loma Linda and or our Central Station located at the 3<sup>rd</sup> St. address in San Bernardino.

### **Potential Impacts**

#### **I. Construction Phase:**

The proposed project will have an average of 115 construction workers per month during the 15 construction period. Most of these workers are expected to come from within San Bernardino and Riverside County, some may already be residing in Grand Terrace.

Do you anticipate that having these additional, though temporary, workers in the area is likely to impact your department's law enforcement? Minimal if any

If so, how?

What would you suggest as a mitigation measure if your department resources are to be affected? None

#### **I. Operation Phase:**

The proposed project will have 12 workers once it is operational. A majority of these workers are expected to come from within San Bernardino and Riverside County, some may already be residing in Grand Terrace.

Do you anticipate that having these additional 12 workers in the area is likely to impact your department's law enforcement? Minimal if any

If so, how?

What would you suggest as a mitigation measure if your department resources are to be affected? [None](#)

APPENDIX 8.12A

## Offsite Consequence Analysis

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## Off-site Consequence Analysis

PREPARED FOR: John Carrier  
Julie Way

PREPARED BY: Stephen O’Kane, William Heung, Jerry Salamy

DATE: May 19, 2006

AES Corporation (AES) is proposing to construct and operate a simple-cycle power plant, known as AES Highgrove. The project site is located in the city of Grand Terrace, San Bernardino County on the site of the former Southern California Edison oil-fired generating plant. Highgrove will be located on the portion of the site formerly used for liquid fuel storage.

AES Highgrove will consist of a nominal 300-megawatt (MW) simple-cycle plant, using three natural gas-fired GE LMS 100 gas turbines and associated infrastructure. The project will include a tie-in to the existing 115-kV substation adjacent to the site. A natural gas pipeline tie-in will be made to a new Southern California natural gas metering station, on the southern boundary of the project site. Process water for the project would be delivered from onsite wells.

AES Highgrove is required by both the Clean Air Act and the South Coast Air Quality Management District (SCAQMD) to install Best Available Control Technology (BACT) to control emissions of criteria air pollutants from the combustion turbines. The project’s turbines will incorporate water injection to reduce emissions of oxides of nitrogen (NO<sub>x</sub>). Carbon monoxide (CO) and volatile organic compounds (VOC) emissions will be controlled using an oxidation catalyst system. In addition, emissions of NO<sub>x</sub> from the turbines will be further reduced through the use of selective catalytic reduction (SCR). The SCR control system uses ammonia as the reduction reagent in the presence of a catalyst. Two forms of ammonia may be used in currently designed SCR systems; i.e., aqueous ammonia or anhydrous ammonia. AES is proposing to use the less toxic form, aqueous ammonia.

AES will store a 19-percent aqueous ammonia solution in a single stationary storage tank. The capacity of the tank will be approximately 16,000 gallons, but will be limited by regulation to storing a maximum amount of 13,600 gallons (85 percent capacity). The tank will be surrounded by a secondary containment structure approximately 1,100 square feet (22 feet by 50 feet) that is capable of holding the full contents of the tank. The containment area will be filled with polyballs to reduce the surface area in the event of a spill. The polyballs were assumed to line edge-to-edge across the containment area such that for each square inch of containment area, a 1-inch diameter polyball would cover most of the surface. For the 1,100-square-foot containment area, the area exposed using the polyballs is approximately 236 square feet.

Aqueous ammonia will be delivered to the plant by truck transport. The truck loading area will be located within a bermed area adjacent to the storage tank. The bermed area will be sufficient to contain the contents of the truck in the event of a spill.

## Analysis

An analysis of a tank failure and subsequent release of aqueous ammonia was prepared. The analysis assumes the complete failure of the tank and the formation of an evaporating pool of aqueous ammonia within the secondary containment structure. For purposes of this analysis, the following meteorological data were used:

- U.S. Environmental Protection Agency (USEPA) default (worst case) meteorological data, supplemented by daily temperature data as required by CCR Title 19, Section 2750.2.

AES Highgrove will be located in the City of Grand Terrace, San Bernardino County, California. The maximum temperature recorded near the proposed site in the past 75 years was 116 °F or 319.82 Kelvin (<http://www.wrcc.dri.edu/cgi-bin/cliGCSdT.pl?carvrf>). Maximum temperatures combined with low wind speeds and stable atmospheric conditions are expected to result in the highest modeled ammonia concentrations at the furthest distance downwind of the project site.

Table 1 displays the meteorological data values used in the modeling analysis.

**TABLE 1**  
Meteorological Input Parameters

| Parameter                        | Worst Case Meteorological Data |
|----------------------------------|--------------------------------|
| Wind Speed, meters/second        | 1.5                            |
| Stability Class                  | F                              |
| Relative Humidity, Percent       | 50                             |
| Ambient Temperature, Kelvin (°F) | 319.82 (116)                   |

One modeling run was conducted for an evaporating pool release caused by a single tank failure leaking into the entire bermed area, for corresponding meteorological scenario listed in Table 1. Modeling was conducted using the SLAB numerical dispersion model. A complete description of the SLAB model is available in *User's Manual for SLAB: An Atmospheric Dispersion Model for Denser-Than-Air Releases*, D. E. Ermak, Lawrence Livermore National Laboratory, June 1990. The SLAB user manual contains a substance database, which includes chemical-specific data for ammonia. This data was used in all modeling runs without exception or modification.

Emissions of aqueous ammonia were calculated pursuant to the guidance given in *RMP Offsite Consequence Analysis Guidance*, EPA, April 1999 and using the "evaporation calculator" provided by the National Oceanic and Atmospheric Administration (<http://archive.orr.noaa.gov/cameo/evapcalc/evap.html>). Release rates for ammonia vapor from an evaporating 19-percent solution of aqueous ammonia were calculated

assuming mass transfer of ammonia across the liquid surface occurs according to principles of heat transfer by natural convection. The ammonia release rate was calculated using the evaporation calculator, meteorological data displayed in Table 1, and the dimensions of the secondary containment area.

An initial ammonia evaporation rate was calculated and assumed to occur for at least one hour. For concentrated solutions, the initial evaporation rate is substantially higher than the rate averaged over time periods of a few minutes or more, since the concentration of the solution immediately begins to decrease as evaporation begins.

For the main storage tank scenarios, the complete release of the storage tank contents (13,600 gallons of 19-percent aqueous ammonia) was assumed to be the worst case scenario. The failure of the tank would cause the aqueous ammonia to leak into the containment area and the release of ammonia would result from evaporation.

Although the edge of the tank containment area is raised above ground level, the release heights used in the modeling were set at 0 meters above ground level (AGL) to maintain the conservative nature of the analysis. Downwind concentrations of ammonia were calculated at heights of 0, 1.6, 5 and 10 meters AGL. Reported distances to specified toxic endpoints are the maximum distances for concentrations at 0, 1.6, 5 or 10 meters AGL. The California Office of Environmental Health Hazard Assessment (OEHHA) has designated 1.6 meters as the breathing zone height for individuals. Five and 10 meters correspond to the heights of a 2- and 3-story building, respectively.

An analysis of the tank loading hose failure with a leak below the excess flow valves activation set-point and the subsequent impacts was considered. This analysis would normally be completed under typical or average meteorological conditions for the area. However, after review of the possible failure modes, it was determined that the impact of this leak would be bracketed by the complete tank failure as a worst-case for the hose failure.

## Toxic Effects of Ammonia

With respect to the assessment of potential impacts associated with an accidental release of ammonia, three offsite “bench mark” exposure levels are typically evaluated, as follows: (1) the Occupational Safety and Health Administration’s (OSHA) Immediately Dangerous to Life and Health (IDLH) level of 300 ppm; (2) the Emergency Response Planning Guideline (ERPG) level of 200 ppm, which is also the RMP level 1 criterion used by the USEPA and California [Note: in the year 2005 the American Industrial Hygiene Association (AIHA) updated the ERPG-2 for ammonia to 150 ppm]; and (3) the level considered by CEC staff to be without serious adverse effects on the public for a one-time exposure of 75 ppm (*Preliminary Staff Assessment-Otay Mesa Generating Project, 99-AFC-5, May 2000*).

The odor threshold of ammonia is about 5 ppm, and minor irritation of the nose and throat will occur at 30 to 50 ppm. Concentrations greater than 140 ppm will cause detectable effects on lung function even for short-term exposures (0.5 to 2 hours). At higher concentrations of 700 to 1,700 ppm, ammonia gas will cause severe effects; death occurs at concentrations of 2,500 to 7,000 ppm.

The specified toxic endpoint (TE) value for ammonia is 0.105 mg/L, which is approximately equal to 150 ppm. The TE value is based on a one-hour exposure or averaging time; therefore, the modeling concentrations at all offsite receptors will be given in terms of one-hour (or 60-minute) averaging time.

## Modeling Results

Table 2 shows the distance to the three benchmark criteria modeled: OSHA's IDLH (300 ppm), AIHA's ERPG-2 (150 ppm), and the CEC significance value (75 ppm).

**TABLE 2**  
Distance to EPA/CalARP and CEC Toxic Endpoints: Scenario 1 – Release into entire bermed area

| Scenario  | Distance in Meters to IDHL (300 ppm) | Distance in Meters to AIHA's ERPG (150 ppm) | Distance in Meters to CEC Significance Value (75 ppm) |
|-----------|--------------------------------------|---------------------------------------------|-------------------------------------------------------|
| 0 m AGL   | 10.1                                 | 10.4                                        | 10.5                                                  |
| 1.6 m AGL | 11.9                                 | 12.1                                        | 12.2                                                  |
| 5 m AGL   | 19.2                                 | 20.0                                        | 20.4                                                  |
| 10 m AGL  | 37.4                                 | 38                                          | 38.3                                                  |

The model input file and the output files are available upon request.

The distance to the CEC's extremely protective 75 ppm ammonia concentration does not extend off the project site under the very conservative release scenario (see Figure 8.12A-1).

## Assessment of the Methodology Used

Numerous conservative assumptions were used in the above analysis of the tank failure. These include the following:

- Modeling & Meteorology
  - Worse case of a constant mass flow, initial evaporation rate was modeled; whereas, in reality the evaporation rate would decrease with time as the concentration in the solution decreases.
  - Worst case stability class was used, which almost exclusively occurs during nighttime hours, but the maximum ambient temperature of 116°F was used, which would occur during daylight hours.
  - Again worst-case meteorology corresponds to nighttime hours, whereas the worst-case release of a tank failure would most likely occur during daytime activities at the power plant. At night, activity at a power plant is typically minimal.

## Risk Probability

Accidental releases of aqueous ammonia in industrial use situations are rare. Statistics compiled on the normalized accident rates for RMP chemicals for the years 1994-1999 from *Chemical Accident Risks in U.S. Industry-A Preliminary Analysis of Accident Risk Data from U.S. Hazardous Chemical Facilities*, J.C. Belke, Sept 2000, indicates that ammonia (aqueous) averages 0.017 accidental releases per process per year, and 0.018 accidental releases per million pounds stored per year. Data derived from *Guidelines for Technical Management of Chemical Process Safety*, AIChE, 1989, indicates the accidental release scenarios and probabilities for ammonia in general shown in Table 3.

**TABLE 3**  
General Accidental Release Scenarios and Probabilities for Ammonia

| Accident Scenario    | Failure Probability |
|----------------------|---------------------|
| Onsite Truck Release | 0.0000022           |
| Loading Line Failure | 0.005               |
| Storage Tank Failure | 0.000095            |
| Process Line Failure | 0.00053             |
| Evaporator Failure   | 0.00015             |

## Conclusions

Several factors need to be considered when determining the potential risk from the use and storage of hazardous materials. These factors include population densities near the project site, meteorological conditions, the process design, and the probability of occurrence. Considering the results of this analysis, the probability of a catastrophic storage tank failure resulting in the modeled ammonia concentrations, and the probability of a tank failure occurring under low wind speeds and F class atmospheric stability, the risk posed to the local community from the storage of aqueous ammonia at the AES Highgrove site is insignificant.

As described above, numerous conservative assumptions have been made at each step in the analysis. This compounding of conservative assumptions has resulted in a significant overestimation of the probability of an ammonia release at AES Highgrove. Even if it were to happen, the predicted distances to toxic endpoints do not pose a threat to public receptors. Therefore, it is concluded that the risk from exposure to aqueous ammonia due to the AES Highgrove facility is less than significant.

## References

American Industrial Hygiene Association (AIHA) 2005 Emergency Respond Planning Guidelines

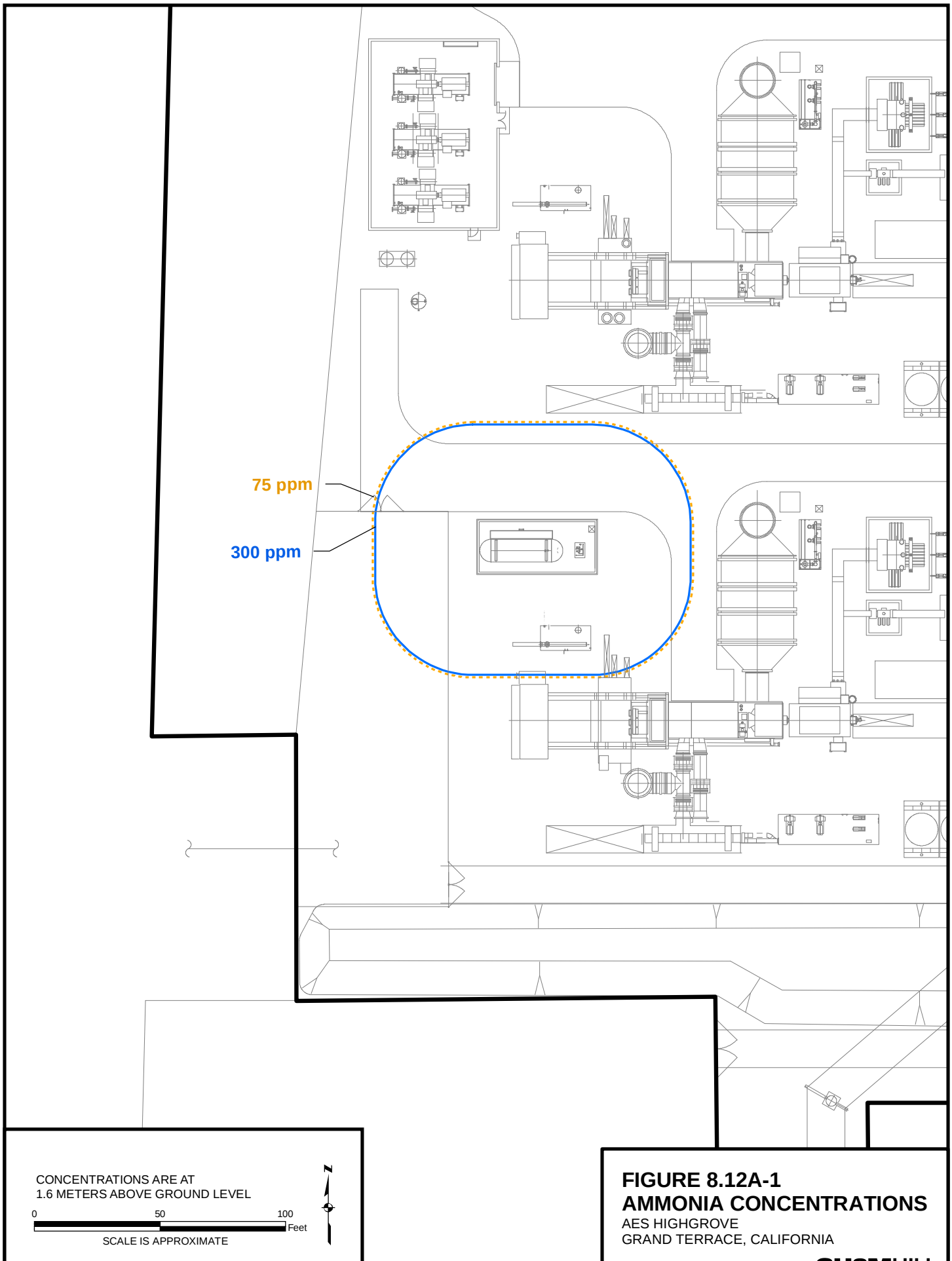
Chemical Accident Risks in U.S. Industry-A Preliminary Analysis of Accident Risk Data from U.S. Hazardous Chemical Facilities, J.C. Belke, Sept 2000

Guidelines for Technical Management of Chemical Process Safety, AIChE, 1989

Preliminary Staff Assessment-Otay Mesa Generating Project, 99-AFC-5, May 2000

RMP Offsite Consequence Analysis Guidance, EPA, April 1999

User's Manual for SLAB: An Atmospheric Dispersion Model for Denser-Than-Air Releases, D. E. Ermak, Lawrence Livermore National Laboratory, June 1990



APPENDIX 8.12B

## **Gas Line Study**

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# PIPELINE RISK ANALYSIS FOR A 12-INCH DIAMETER NATURAL GAS PIPELINE—PLANNED HIGHGROVE FACILITY NEAR THE PROPOSED COLTON HIGH SCHOOL SITE NO. 3, GRAND TERRACE, SAN BERNARDINO COUNTY, CALIFORNIA

## CDE DRAFT STANDARD PIPELINE PROTOCOL-STAGE 2 ANALYSIS

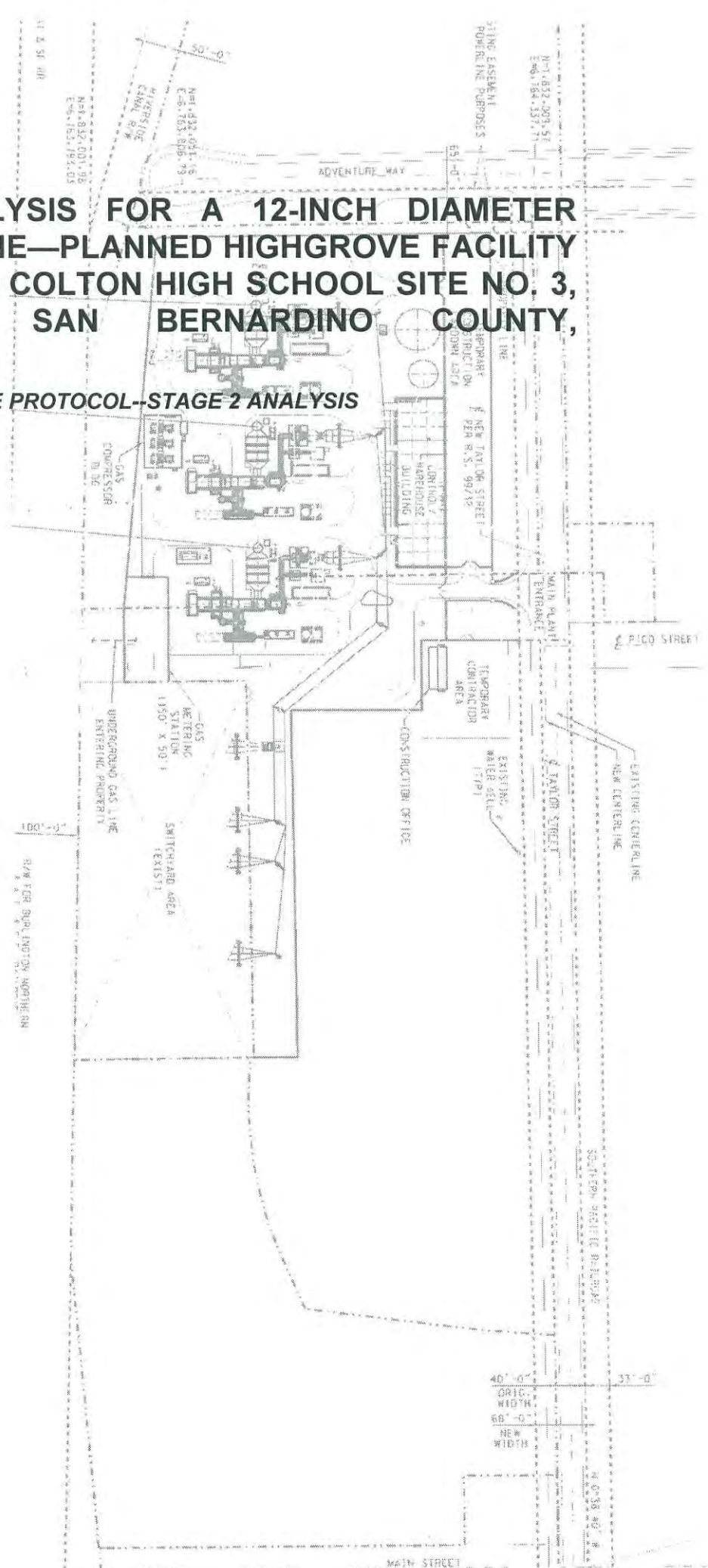
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August 2005



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# WILSON GEOSCIENCES INC.

Engineering and Environmental Geology

August 22, 2005

Julie D. Way, Project Director  
AES Pacific, Inc.  
690 Studebaker Road  
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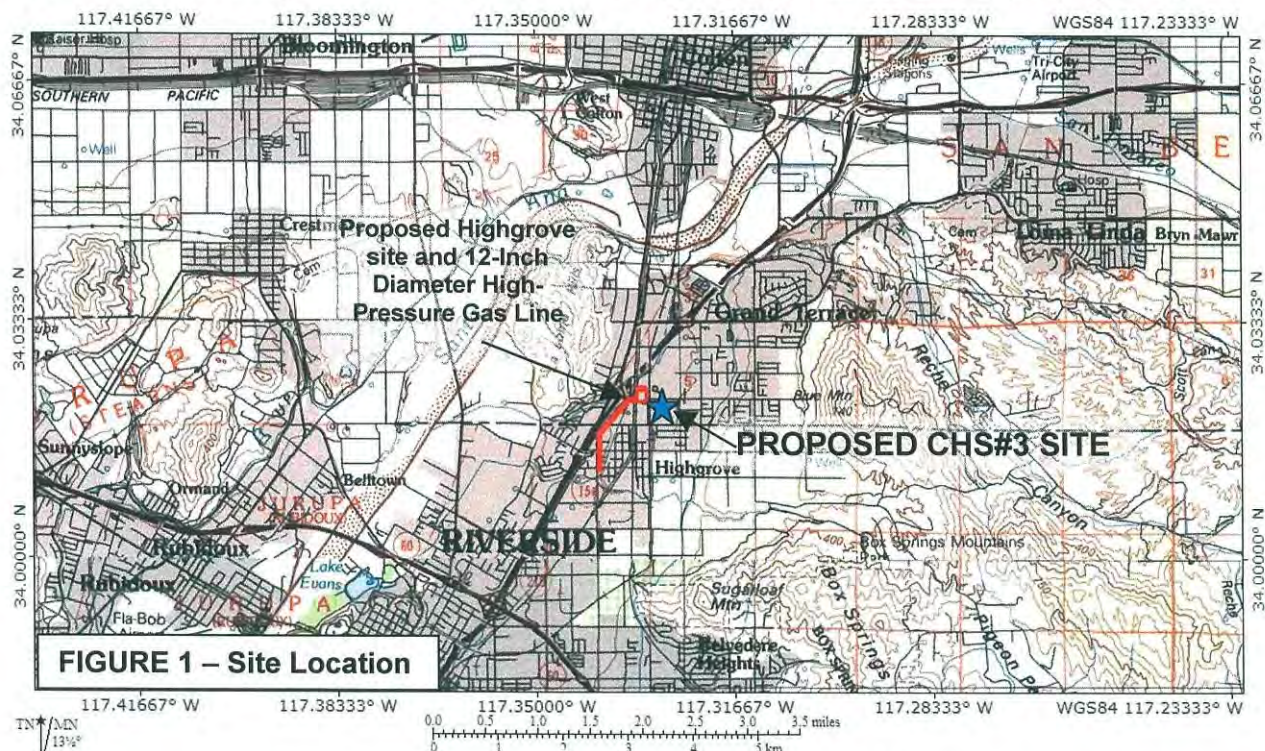
**Subject: TECHNICAL REPORT AND APPENDIX: Proposed Highgrove Site—An Update of the California Department of Education “Stage 2” Natural Gas Pipeline Risk Assessment for the Proposed Colton High School No. 3 Site, Colton Joint Union High School District, Grand Terrace, San Bernardino County, California**

Dear Ms. Way:

## Introduction

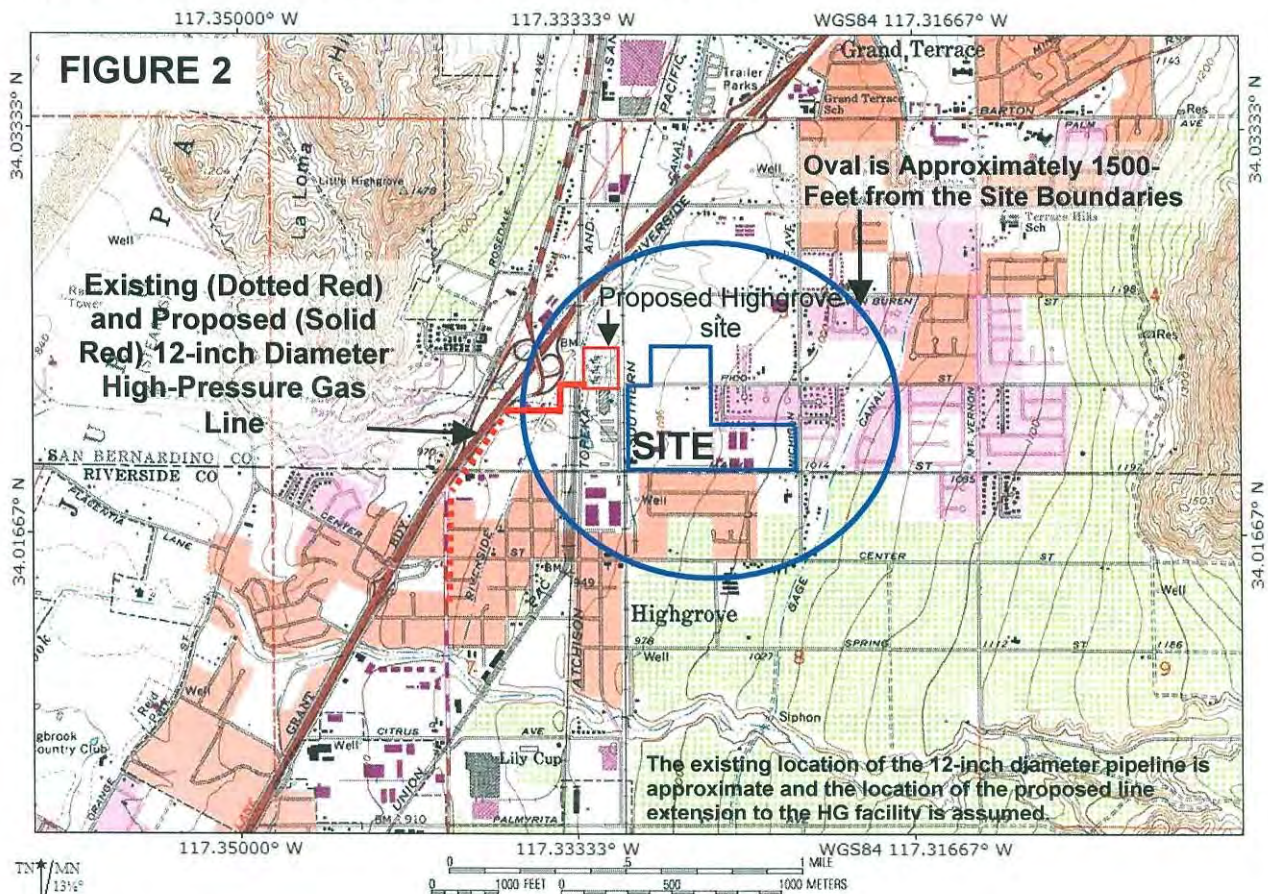
### INTRODUCTION, APPROACH, AND SCOPE

Based on your approval of our proposal (June 22, 2005), we have completed an update of the December 16, 2004 Stage 2 study report for the subject Colton High School No. 3 (CHS#3) site in the Colton Joint Union High School District (CJUHSD; Figure 1). In that report (for The Planning Center), Wilson Geosciences Inc. (WGI) evaluated the potential pipeline risk posed by the existing 8-inch diameter Southern California Gas Company (SCGC) high-pressure natural gas line located in the Riverside Canal Power Company property within 1,500 feet west of the proposed CHS#3 site. The proposed CHS#3 site is located north of Main Street, mostly south of Pico Street, east of Taylor Street, and west of Michigan Avenue in Grand Terrace (Figure 2).



AES Pacific, Inc. (AES) plans to demolish the existing Riverside Canal Power Company plant and construct a new facility (AES Highgrove, LLC), which will require a new 12-inch diameter high-pressure pipeline. The new pipeline would most likely be constructed and owned by Southern California Gas Company (SCGC), and interconnect with SCGC Line 2001 several miles south of Grand Terrace. The new pipeline would enter the proposed Highgrove Site (HG) in close proximity to the existing 8-inch diameter line, except with a southerly approach that would parallel, then cross under the adjacent railroad tracks to enter the site. Pipeline pressure is expected to be a minimum of 300 pounds per square inch gauge (psig) for the proposed gas compressors and it is assumed that the delivery pressure will be approximately 450 psig.

We have utilized the information developed by AES (J. Way, 2005) regarding the high-pressure pipeline proposed near the CHS#3 site. For purposes of this report we are relying on this information as a final determination that this single high-pressure line will be located as described above within 1,500-feet of the proposed CHS#3 site (Figure 2) and have assessed the site risk based on this information. We have been provided with a proposed HG site plan (CH2MHill, 2005 from J. Way) that outlines the site boundary west and northwest of the intersection of Taylor and Pico Streets. This study is to establish the level of risk posed by the proposed 12-inch diameter pipeline where it enters the HG.



We have used the same school site plan originally provided by The Planning Center that outlines the proposed campus (parking, buildings, play areas, and open space) and have assumed the same population as in the previous study. This study establishes the level of risk posed to the proposed CHS#3 site given the pipeline and distance parameters involved using the California Department of Education (CDE, 2002) pipeline risk analysis methodology (protocol). In the analysis we consider the proposed 12-inch diameter pipeline up to the point at which it enters the AES HG Site. Once in the AES HG Site, the CDE protocol no longer applies to plant site-specific analysis; if necessary such an analysis of HG plant safety will be performed by others.

Approach: Prior to late 2000, the CDE site selection process required only that the school district indicate the presence and location of pressurized natural gas pipelines if they are located within 1,500 feet of the site boundary. Regulations (Title 5, California Code of Regulations, Division 1, Chapter 130, Subchapter 1, School Facilities Construction, Article 2. School Sites, § 14010, Standards for School Site Selection) that took affect in late 2000 require that a “site shall not be located near an above-ground fuel or water storage tank or within 1,500 feet of the easement of an above-ground or underground pipeline that can pose a safety hazard as determined by a risk analysis study, conducted by a competent professional, which may include certification from a local public utility commission.”

In June 2002 the CDE received a “*DRAFT California Department of Education Proposed Standard Protocol for Pipeline Risk Analysis*” that proposed a staged evaluation method for pipeline risk studies. CDE is reviewing the protocol and has suggested that it be used now in advance of final changes. The protocol methodology has three basic steps, a Stage 1 Risk Screening Assessment, a Stage 2 Probabilistic Assessment, and a Stage 3 Detailed Risk Analysis.

Scope: Detailed elements of the scope of work were summarized in our June 22, 2005 proposal. We have prepared this report to provide the results of the Stage 2 analysis conducted in accordance with our understanding of the CDE protocol process. Pipeline annual incident rates (also called base failure or release rates) per mile of pipeline have been determined, for the proposed SCGC 12-inch diameter high-pressure pipeline, from Table B-4 in the CDE draft protocol (CDE, 2002).

We address the individual and societal risk consequences of an unplanned pipeline incident for the subject pipeline. An incident is assumed to be a break in the pipeline that would release natural gas into the air in proximity to the pipeline and the school. No other high-pressure natural gas or liquid petroleum pipelines are reported within 1,500-feet of the site (M. Watson, personal communication, 2004; L. Dowdy, CSFM, 2004). Due to the low pressures (less than 80 psig) in the neighborhood serving natural gas lines (normally less than 8-inch diameter) there is no need (from the CDE regulation) to include them in our analysis.

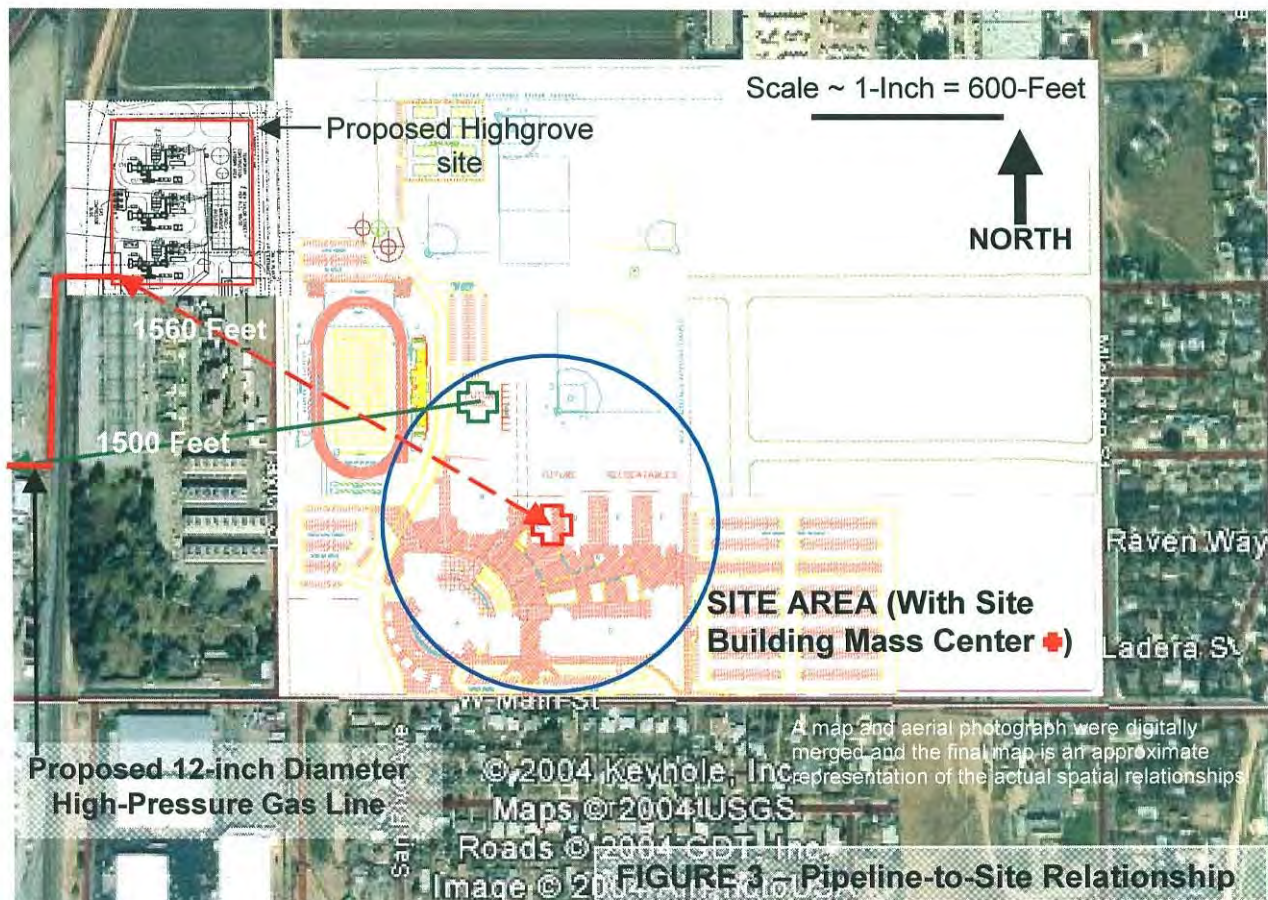
The study was conducted using the existing data described throughout the report. None of the study phases for a draft pipeline risk protocol include a) on- or offsite risks due to hazardous materials or toxic substances on or near the prospective site, b) offsite risks to any other facilities due to failure of the pipeline, or c) risks due to any other man-made or natural hazards other than as they may affect the pipeline described above within 1,500 feet of the proposed school site. On-site is considered to mean within the prospective school site. The draft protocol is subject to

further detailed technical and administrative peer review, and aspects of it may change in the future.

### NATURAL GAS PIPELINE

The high-pressure natural gas pipeline analyzed is a proposed 12-inch diameter distribution line that would serve the Highgrove Site (HG) across Taylor Street west of the site. We assume the pipeline would be built from Iowa Avenue east to the west side of the existing Burlington Northern Santa Fe railroad corridor trending nearly south-to-north, then north and east under the railroad tracks into the site (Figures 2 and 3; J. Way, 2005). The closest approach of the proposed SCGC line to the site would be about 510 feet on the west, which would be about 1,560 feet northwest of the site building mass centerpoint. About 2,530 feet of the pipeline would be located within 1,500-feet of the site boundaries and 1,520 feet within 1,500 feet of the site centerpoint (Figure 3). Pipeline maximum operating pressure (MAOP) is proposed to be 560 psig, with an expected average operating pressure of 300 to 450 psig (J. Way, 2005).

It is anticipated that the pipeline would be buried at a depth of 42- to 60-inches (J. Way, 2005 based on discussions with SCGC). Pipeline construction is anticipated to occur in 2007-2008 and would be constructed of modern materials; the valve locations are unknown. It is estimated that the gas flow could be shut down within 30 minutes of an incident.



## ANNUAL PROBABILITY OF PIPELINE FAILURE

Table 1 summarizes the conditions for the proposed 12-inch diameter SCGC natural gas pipeline that would be constructed near the proposed CJUHSD Colton High School Site No. 3 site in support of the proposed Highgrove project. The annual failure probability for the SCGC pipeline was taken from Table B-4 of the draft CDE protocol, rather than calculating a unique annual failure probability for this site and this pipeline. Table B-4 lists incidents for the category of >12-inch diameter pipelines for all operators consisting of the annual failure probabilities per pipeline mile ( $2.5 \times 10^{-4}$ ), which would encompass the subject pipeline. This value was derived from data for 663 miles of >12-inch diameter pipeline. Due to the older pipelines considered in the statistical database, this value is considered very conservative for a pipeline to be constructed in 2005-2006.

The  $2.5 \times 10^{-4}$  estimate is an average value for all distribution pipelines within the diameter class considered in California for the period 1984-2001. For the same period SCGC-only pipelines in this class (201 miles) have a per mile failure probability of  $2.8 \times 10^{-4}$ , and the more conservative value for all companies was used for the Stage 2 analysis. This estimate does not include consideration of the specific features (age, wall thickness, joint type, etc.) of this 12-inch diameter pipeline or the CHS#3 site-specific earthquake, geology, and geotechnical factors. When this annual per mile failure probability (frequency) is normalized to the length of pipeline within 1,500 feet of the preferred site (940-feet), a frequency of  $4.98 \times 10^{-5}$ , or once every 20,080 years, is obtained. Such failures can be categorized as "rare" during the life of the proposed school facility based on pipeline risk criteria used by the California Public Utilities Commission (Aspen, 1998).

**Table 1** – Pipeline Characteristics, Distance to CJUHSD School Site No. 3, Annual Failure Probability (Per Table B-4 of the CDE Draft Protocol), and Failure Return Period

| PIPELINE CHARACTERISTICS                                                                      | DISTANCE TO SCHOOL SITE                                                         | ANNUAL FAILURE PROBABILITY                                                           | FAILURE RETURN PERIOD |
|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------|
| 12-inch diameter, natural gas distribution (SCGC), 560-psig MAOP, 2007-2008 construction date | Approximately 510 Feet From West Side (1,560 feet to building mass centerpoint) | $4.98 \times 10^{-5}$ (for the 940 feet within 1,500-feet of the site; see Figure 2) | 20,080 years          |

## POTENTIAL GEOLOGIC AND EARTHQUAKE IMPACTS ON PIPELINE FAILURE PROBABILITIES

The site rests on old and very old alluvial fan deposits of Pleistocene age (Morton and Miller, 2003). Strong earthquake groundshaking (from any of several nearby faults, but primarily the San Jacinto and San Andreas) is a hazard for the pipeline near the site and local ground conditions should not be conducive to potential geotechnical/geologic hazards (settlement, soil consolidation, liquefaction). The pipeline within 1,500 feet of the site is not located along a known active or potentially active fault (Morton and Miller, 2003). With an anticipated 2007-2008 construction date for the new pipeline, all advancements in pipeline design and construction determined from the 1971 San Fernando M6.4 earthquake, and other subsequent

large events, would be used in the design and construction of the 12-inch SCGC pipeline. Normal SCGC regulatory compliance, and compliance with Underground Service Alert procedures should minimize future age-related affects such as corrosion, settlement, and outside damage so that this pipeline should perform much more favorably (on a statistical basis) than the Statewide averages used in this evaluation. Very detailed site-specific studies along the pipeline would be necessary to determine if local hazards exist that could impact the future pipeline.

In general, underground pipelines are not subject to as much damage as surface structures (O'Rourke and Liu, 1999) during large seismic events, absent the potential for permanent ground displacement (PGD; e.g., landslides, fault rupture, liquefaction, lateral spreading). Since none of these PGD factors is known to be present along the adjacent pipeline based on the studies cited, there appears to be no significant potential for their occurrence within 1,500-feet of the site. A pipeline specific settlement/stability analysis would be necessary to evaluate the impact of up to several inches of area-wide earthquake-settlement on the future subject pipeline. Barring severe local differential settlement (8-inches occurring over a very short distance), the pipeline should perform as designed under modern standards (i.e., without a failure).

Based on only the potential for severe groundshaking, a pipeline failure (leak or less likely a rupture) has a lower potential than for an average southern California site. We estimate the pipeline within 1,500 feet of the site would experience geologic and earthquake hazards somewhat less severely than the pipelines represented in the CDE Table B-4. Therefore, considering the new construction and earthquake shaking potential, there is no reason to consider a change in the estimate for annual pipeline failure frequency for the segment within 1,500-feet of the site.

## **INDIVIDUAL AND SOCIETAL RISKS BASED ON CDE DRAFT PROTOCOL**

Assumptions and Procedures: We applied the draft CDE Stage 1 and 2 protocol to (1) determine by Stage 1 if the site-to-pipeline relationships posed sufficient potential for hazard at the proposed site to perform a Stage 2 analysis (which it did for pipeline length within 1,500-feet), and (2) then evaluated using Stage 2 the individual and societal risks for the natural gas pipeline segment within 1,500-feet of the site. Assumptions and procedures used are consistent with our understanding of the protocol based on reviewing the draft report and discussing it with various meeting participants in Sacramento in early July 2002. We used the per mile base frequency/annual failure probability value obtained from Table B-4 of the protocol for the natural gas pipeline.

A distance of 1,560 feet was used for the subject natural gas pipeline distance to the proposed site building mass centerpoint for the CDE protocol methodology (Figure 3). As shown on Figure 3, the overall site centerpoint-to-pipeline distance (including outdoor populations in all the but the easternmost parking area and athletic fields) would differ somewhat (it would be 1,170 feet away or 390 feet closer) from the building area (population indoors). This is due to the shape of the site as well as the internal distribution of the building area placed along the south boundary. We selected the site building mass centerpoint as the center of the smallest circle to encompass the buildings and future portable classrooms. This resulted in the pipeline-to-site building mass centerpoint distance of 1,560 feet. This is a somewhat conservative (shorter)

distance than actual due to the shape of the proposed building cluster. All distance measurements are approximate, and based on the plan provided by WLC Architects (B. Wu, 2004) and the proposed SCGC pipeline location (J. Way, 2005).

**Results:** Simple frame unreinforced construction was analyzed; base annual failure probability was taken from Table B-4 (CDE, 2002). A site population of 3200 persons was assumed, including 3000 students (B. Wu, 2004), and 200 teachers, support, and visitors. The individual risk and all societal risks were determined by the CDE protocol analysis to be insignificant (below established thresholds; Table 2).

**Table 2 – Significance of Individual Fatality and Societal Risks Relative to the Site Building Mass Centerpoint for the 12-Inch Diameter SCGC Pipeline**

| <b>RISKS AND CORRESPONDING EVENTS</b> | <b>12-Inch Diameter Pipeline<sup>2</sup></b><br>Industry Distribution Line Failure Rate (Table B-4, CDE Protocol) |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Type of Construction</b> →→→→      | SFC <sup>1</sup>                                                                                                  |
| <b>Individual Risks</b> <sup>3</sup>  | I                                                                                                                 |
| <b>Societal Risks</b>                 |                                                                                                                   |
| Leak Flash Fire                       | I                                                                                                                 |
| Rupture Flash Fire                    | I                                                                                                                 |
| Leak Jet Fire                         | I                                                                                                                 |
| Rupture Jet Fire                      | I                                                                                                                 |
| Leak Explosion                        | I                                                                                                                 |
| Rupture Explosion                     | I                                                                                                                 |

1) SFC = Simple Frame Construction; 2) Table B-4 is from the CDE Draft Protocol Appendix B page B-12; and 3) Individual Risks are Significant (S) or Insignificant (I) if above or below the  $1 \times 10^{-6}$  threshold.

Appendix A provides the risk analysis spreadsheet, details of the site-specific input data, and standard CDE protocol factors used in the analysis. The CDE protocol Figures 2, 5, 9, 18, and 22 were used to estimate the heat flux and overpressure values for the 1,560-foot pipeline-to-site building mass centerpoint distance considering a 12-inch diameter pipeline at 560 psig. Figures 27 and 28 were used to estimate the overpressure and heat flux impacts.

With respect to other possible SCGC pipelines within 1,500- feet of the site, in a July 21, 2004 letter to The Planning Center, the SCGC indicated two high-pressure pipelines were within 1,500-feet of the site boundaries, a 2-inch diameter line and an 12-inch diameter line. Subsequently, Haley & Aldrich (M. Watson, personal communication, 2004) contacted the SCGC (C. Dahl, Redlands) and they mutually determined that no 2-inch diameter line could be found on the atlas sheets within 1,500-feet of the site. Our inspection of the atlas sheets provided (specifically RCO 526) indicates a 12-inch diameter high-pressure line at the intersection of Iowa Avenue and Main Street that appears to continue northeast along Iowa Avenue, however the atlas sheet for the northern area (SBD26) was not provided. Watson (personal communication, 2004) indicates that Dahl determined that the 12-inch diameter pipeline diverges from Iowa Avenue to the west passing under the 215 Freeway where Iowa curves to the east before it crosses the freeway at the Iowa/La Cadena overcrossing. This would place the existing 12-inch diameter line approximately 1,620 feet away from the site. It is from roughly this point

that we have assumed an extension of the pipeline would be made into the Highgrove site and therefore is the subject pipeline analyzed in this study.

## **CONCLUSIONS AND SUGGESTED ADDITIONAL MEASURES**

Conclusions: Due to the relatively small diameter of the 12-inch diameter 560-psig natural gas pipeline and the distance to the site building mass centerpoint (1,560 feet), the individual and societal fatality risks were found to be insignificant based on the CDE protocol analysis method. While the consequences from the rupture of the new 12-inch diameter pipeline could potentially be greater than for the 8-inch pipeline previously analyzed in our December 2004 report, the risk outcome in both analyses using the CDE draft protocol is insignificant.

There are three fire stations within approximately 3.5 miles of the CHS#3 site (nearest at Center Street and Michigan Avenue about 0.7 miles east) that could provide emergency services within 5 to 10 minutes of any pipeline accident. Southern California Gas Company (SCGC) would respond from its Beaumont facility (approximately 30 miles east) or more likely with local crews in the area.

Suggested Measures to Increase Site Safety: Statistically the annual potential for a pipeline incident (unplanned release) within 1,500-feet of the site is very low with a recurrence interval of over 200 times longer than a 100-year useful life for a public building. This includes the individual probabilities of releases for the one pipeline considered, specifically the SCGC 12-inch diameter natural gas high-pressure line that is proposed to be extended into the Highgrove site located within 1,500 feet of the proposed Colton High School No. 3 site. The results indicate the probability of an individual fatality is less than one in one million for the pipeline, with no measurable risk of societal fatalities. It therefore appears that there is no need to add confidence to these findings for the pipelines near the site by instituting mitigation measures. However, with regard to school site emergency planning it is assumed that all evacuation and emergency response planning required by local State and Federal laws would be implemented prior to school construction. AES could assist the CJUHSD with the plan and could include a discussion of pipeline and plant safety considerations using available information from AES, SCGC and the local fire agency. For example, evacuation related to all pipeline incidents should avoid Taylor Street and Pico Street north of the school focusing egress to the south and east along Pico and Main Streets.

With regard to third-party digging accidents, current law requires that any subsurface excavation contractor, including responsible agencies and individuals, contact Underground Service Alert (USA) at least 48 hours prior to the planned start of an excavation (e.g., backhoe, drill rig, trench excavator). Utilities and underground structures are marked and identified to minimize the chance for "dig-in"-type accidents. SCGC, the District and the City could consider the addition of numerous pipeline warning markers within 1,500-feet of the school site boundaries adjacent to the new portion of the subject 12-inch diameter high-pressure pipeline to further decrease the probability of an accidental "dig-in" type accident near the school.

AES could consider a “safe shutdown” valve or other device at the point where the 12-inch diameter pipeline enters the facility. Connections may be the most vulnerable points in the pipeline and if any plant emergency occurred (e.g., large seismic event or accident), minimizing releases from the 12-inch diameter pipeline at the nearest point to the campus would have a positive impact on potential consequences to the CHS#3 population.

## **RECOMMENDATION**

It is recommended that AES discuss the protocol-developed risk levels outlined in this report with CJUHSD and the CDE representatives, and determine if these risk levels are acceptable since they fall within acceptable CDE thresholds for individual and societal risk. If additional measures are considered necessary to reduce the risk, an emergency plan could be prepared. In addition, additional pipeline markers could be established.

## **CLOSURE**

The results and conclusions presented in this report were prepared in compliance with normal industry practice in the San Bernardino and Los Angeles County areas. Other consultants may arrive at different results and conclusions with the same information. Although some hazard risk may always remain, a lower risk of future problems may result if more site-specific evaluation is undertaken, and if conservative criteria for pipeline design, safe and reliable pipeline shutoff valves, pipeline identification markers, and contingency evacuation planning are adopted. Distance and length measurements cited in this report are estimates from available maps (e.g., USGS, Thomas Guide, The Planning Center, WLC Architects, SCGC, and AES). The scope of this portion of the risk analysis did not include modeling of detailed site-specific probabilities or of site-specific hazard impacts (Stage 3 consequence analysis) associated with failure of the pipeline considered herein. The CDE draft protocol is the work of others and as such, WGI is not responsible for errors or omissions made by the authors of the protocol. Use of the protocol requires interpolation and estimation of certain values used in the risk analysis. Final pipeline design and location decisions are the responsibility of others. We make no warranties expressed or implied.

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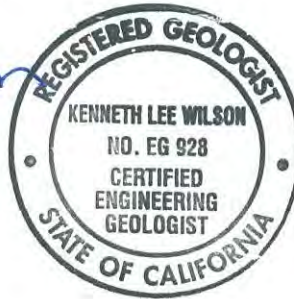
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Please contact the undersigned at 626 791-1589 if you have any questions.

Sincerely,  
WILSON GEOSCIENCES INC.

*Kenneth Wilson*

Kenneth Wilson  
Principal Geologist  
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## ***APPENDIX A***

CDE Draft Protocol Analysis Results for 12-inch Diameter Natural Gas Pipeline—Highgrove Site near the Proposed Colton High School Site No. 3, Colton Joint Union High School District, Grand Terrace, California

- Site Building Mass Centerpoint-to-Pipeline Distance-Simple Frame Unreinforced Construction  
Type - 12-inch Diameter SCGC Natural Gas Distribution Pipeline