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November 2, 2012

VIA HAND DELIVERY

Ms. Felicia Miller, Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Re: Huntington Beach Energy Center Project (12-AFC-02)
Applicant's Responses to Staff's Data Requests, Set 1A (#1-72)

Dear Ms. Miller:

On behalf of Applicant Huntington Beach Energy Center, please find enclosed herewith for docketing twelve (12) paper copies and five (5) discs containing electronic copies of Applicant's responses to Staff's Data Requests, Set 1A (#1-72). Due to the size of the response document exceeding 5MB, a CD will be served to all those identified on the enclosed Proof of Service.

Should you have any questions relating to the responses or this filing, please do not hesitate to contact me.

Respectfully submitted,

Melissa A. Foster

MAF:jmw
Enclosures

cc: *See* Proof of Service List

Data Response Set 1A

Application for Certification

Huntington Beach Energy Project

(12-AFC-02)

November 2012

Submitted by

AES

the power of being global

With Technical Assistance from

CH2MHILL®

IS120911143713SAC

Huntington Beach Energy Project

(12-AFC-02)

Data Responses, Set 1A

(Response to Data Requests 1 to 72 and Coastal Commission Letter CCC-1 through CCC-5)

Submitted to

California Energy Commission

Prepared by

AES Southland Development, LLC

With Assistance from

CH2MHILL®

2485 Natomas Park Drive
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Sacramento, CA 95833

November 2, 2012

Contents

Tables

Tables, cont.

Figures (Figures are provided at the end of their respective sections)

Attachments

Introduction

Attached are AES Southland Development, LLC's (AES or the Applicant) responses to the California Energy Commission (CEC) Data Request, Set 1A (numbers 1 through 72) and Coastal Commission Letter (CCC-1 through CCC-5) regarding the Huntington Beach Energy Project (HBEP) (12-AFC-02) Application for Certification (AFC).

The responses are grouped by individual discipline or topic area. Within each discipline area, the responses are presented in the same order as the CEC presented them and are keyed to the Data Request numbers (1 through 72). What was noted as Data Request number 8 is part of the background discussion provided by CEC staff and is therefore not actually a Data Request.

New or revised graphics or tables are numbered in reference to the Data Request number. For example, the first table used in response to Data Request 36 would be numbered Table DR36-1. The first figure used in response to Data Request 42 would be Figure DR42-1, and so on. Figures or tables from the HBEP AFC that have been revised have "R1" following the original number, indicating revision 1.

Additional tables, figures, or documents submitted in response to a data request (for example, supporting data, stand-alone documents such as plans, folding graphics, etc.) are found at the end of each discipline-specific section and are not sequentially page-numbered consistently with the remainder of the document, though they may have their own internal page numbering system.

Air Quality (1–22)

BACKGROUND

The proposed project will require a Preliminary Determination of Compliance and a Final Determination of Compliance from the South Coast Air Quality Management District (SCAQMD or "District"). These documents will contain permit limits that will be integrated into the staff analysis. Therefore, staff will need copies of all correspondence between the applicant and the District in a timely manner in order to stay up to date on any permit issues that arise prior to completion of the Preliminary or Final Staff Analysis.

DATA REQUEST

1. Please provide copies of all substantive District correspondence regarding the permit application to the District, including e-mails, within one week of submittal or receipt. This request is in effect until the final Commission Decision has been recorded.

Response: Attachment DR1-1 contains recent electronic correspondence with the District. The Applicant will also provide copies of all future correspondence with the District to the CEC's project manager.

BACKGROUND

AFC Appendix 5.1A (Construction Emission Calculations) and 5.1B (Operational and Commissioning Emissions Calculations) are used to document emissions calculations. Staff needs the original spreadsheet files of these estimates with live, embedded calculations to complete their review.

DATA REQUEST

2. Please provide the spreadsheet versions of Appendix 5.1A and 5.2B worksheets with the embedded calculations live and intact.

Response: The AFC Appendix 5.1A and 5.1B worksheets, with embedded calculations, are included on the *DR Set1A – Supplemental Files for the Air Quality and Public Health Responses* CD provided herewith.

Missing Meteorology Data

BACKGROUND

As indicated in the AFC (page 5.1-20), the surface meteorology data used for the project modeling have been compiled and preprocessed by the District, and directly downloaded from the District website. However, staff noticed the current meteorology files have a high percentage of missing data, especially for years 2005 and 2006. Staff usually accepts a maximum of 10 percent missing meteorology data, which is consistent with EPA guidance. The missing data percentage is 20.15 percent for 2005, 19.91 percent for 2006, and 9.42 percent for 2007 respectively.

DATA REQUEST

3. Please verify that the currently-used meteorology files with high missing data percentages have been approved by the District to model project impacts. If not, please specify which substitute meteorology station or data substitution procedure is approved for use by the District.

Response: As Staff has correctly noted and as discussed in the Applicant's dispersion modeling protocol submitted to the CEC and District for review,[1] the Applicant accessed the District's website[2] to download the AERMOD-ready surface and profile meteorological data files used in the HBEP air quality impact analysis. The District's website notes the meteorological data are available for download free of charge and that the data are ready for use with the U.S. EPA dispersion model, AERMOD, without any additional processing. As a result, no additional data processing was conducted with the exception of separating the combined 3-year data file into three individual years. However, the Applicant notes that both the "calm" and "missing" hours appear to have been categorized as "missing" hours in the AERMOD output files. Although AERMOD considers calm and missing hours the same when calculating downwind concentrations,[3] this combined approach would give the appearance that the data set is less complete than it would be if the calm hours were considered separately in the data completeness count.

DATA REQUEST

4. If the District directs the applicant to use an alternative date set, please provide updated construction and operation air quality modeling analyses based on the new meteorology data as approved by the District.

Response: See the response to Data Request #3. To date, the District has not directed the Applicant to use an alternative meteorological data set.

Construction NO_2 Modeling

BACKGROUND

NO_2 modeling for the construction phase shows that the increments from the project for both 1-hour impact (591 µg/m^3 for both the state and the federal 1-hour ambient air quality standards) and annual impact (155 µg/m^3) are above corresponding ambient air quality standards. Staff believes a more refined modeling analysis is required. For example, the reanalysis should use the OLM or PVMRM option. In addition, the 1-hour NO_2 modeling files in the CD assume 100 percent conversion of NOx to NO_2 and the resulting impact from project emissions, without background, is as high as 3722 µg/m^3 in year 2006. This value was apparently reduced to 591 µg/m^3 using a SCAQMD adjustment value (called the "SCAQMD localized significance threshold methodology") and this reduced level was reported in Table 5.1-27.

DATA REQUEST

5. Please provide the details showing how the 591 µg/m^3 value was derived. This should include the processing file for the application of SCAQMD localized significance threshold methodology if it is used in the updated modeling.

Response: Although the construction modeling did not include the use of OLM or PVMRM, the SCAQMD localized significance threshold methodology incorporates the concept of an in-stack ratio of NO_2-to-NOx, as well as a NO_2 conversion rate as a function of downwind distance. For instance, it is assumed that only five percent of the emitted NOx is NO_2 initially. At 5,000 meters downwind, 100 percent conversion of NO-to-NO_2 is assumed. Therefore, the maximum predicted concentrations at each receptor within 5,000 meters from the volume source locations were adjusted based on the downwind distance from the source to each receptor. The workbook used to determine the downwind distance, and corresponding NO_2 conversion rate, is included on the *DR Set1A – Supplemental Files for the Air Quality and Public Health Responses* CD provided herewith.

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[1] Submitted electronically on May 2, 2012, to John Yee and Andrew Lee at SCAQMD and Gerry Bemis and Robert Worl at the California Energy Commission.

[2] *AQMD Meteorological Data for AERMOD.* http://www.aqmd.gov/smog/metdata/AERMOD.html

[3] U.S. Environmental Protection Agency (EPA). 2005. Guideline on Air Quality Models, 40 CFR, Part 51, Appendix W. Section 8.3.4.2. November.

DATA REQUEST

6. Please conduct a more refined NO_2 modeling analysis for the construction phase to evaluate compliance with the NO_2 ambient air quality standards.

Response: A refined 1-hour NO_2 construction impact analysis was conducted using OLM along with the receptor grid, meteorological data, ozone data, and model settings outlined in the AFC. An NO_2 to NOx in-stack ratio of 0.2 was used based on the data presented in Appendix C of the CAPCOA *Modeling Compliance of the Federal 1-Hour NO2 NAAQS* guidance document (October 27, 2011). The results of the refined modeling analysis are presented in Table DR6-1. Based on a comparison of the OLM results to the predicted impacts in the AFC, the results of the LST method are less conservative. The AERMOD files are included on the *DR Set1A – Supplemental Files for the Air Quality and Public Health Responses* CD provided herewith.

TABLE DR6-1
Maximum Modeled Impacts from Construction Compared to the Ambient Air Quality Standards (BASIS: OLM)

Pollutant	Averaging Period	Maximum Modeled Concentration (µg/m^3)	Background Concentration[a] (µg/m^3)	Total Predicted Concentration (µg/m^3)	State Standard (µg/m^3)	Federal Standard (µg/m^3)
NO_2[b]	1-hour	823	152	975	339	—
	Federal 1-hour[c]	823	111	934	—	188

[a] Background concentrations were the highest concentrations monitored during 2008 through 2010.
[b] The maximum 1-hour NO_2 concentration incorporates the OLM methodology.
[c] Total predicted concentration for the federal 1-hour NO_2 standard is the maximum modeled concentration combined with the three-year average of 98th percentile background concentrations.

Commissioning Modeling

BACKGROUND

The AFC does not evaluate annual impacts during the commissioning phase with subsequent commercial operation of the project. Although the commissioning phase is expected to be completed within 180 calendar days, annual impacts during the commissioning year are expected to be higher than those during a normal operation year, which may trigger the need for additional mitigation measures and emission offsets. Staff needs to evaluate the commissioning annual impacts and determine compliance with the corresponding ambient air quality standards.

DATA REQUEST

7. Please provide air quality modeling for the annual impacts during the commissioning phase and determine compliance with the annual ambient air quality standards.

Response: The annual predicted impacts presented in Table 5.1-29 of the AFC for NOx, PM_{10}, and $PM_{2.5}$ were based on the maximum annual potential to emit for the facility. Therefore, the Applicant does not anticipate a scenario that would result in a combination of commissioning and operations that would exceed the annual potential to emit or the corresponding predicted impacts for the annual operating scenario presented in Table 5.1-29 of the AFC. However, in order to evaluate the potential impacts for a conservative annual scenario including commissioning emissions (i.e., Scenario DR7), the annual PTE was calculated assuming the entire 6 months of commissioning emissions occur within the same 12-month period as the maximum annual PTE during operations.

The maximum annual NOx, PM_{10}, and $PM_{2.5}$ emission rates included in the AFC[4] and the revised operating profile[5] are presented in Table DR7-1, along with the total commissioning emissions associated with Block 2. As presented in Table DR7-1, the total commissioning emissions represent a small percentage of the annual facility emissions and the PM_{10} and $PM_{2.5}$ total emissions for Scenario DR7 are less than the maximum annual emissions presented in the AFC as a result of the emissions decrease associated with the revised operating scenario.

TABLE DR7-1
Annual Operating and Block 2 Commissioning Emissions Compared to Scenario DR7

Pollutant	Revised HBEP Operating Profile Annual Facility Emissions [a] (tons/year)	Block 2 Commissioning [b] (tons)	Scenario DR7[c] (tons)	HBEP AFC Annual Facility Emissions[d] (tons/year)	Percent Difference[e]
NOx	242.3	12.4	254.7	245.6	3.6
PM10	99.3	4.4	103.7	108.0	-4.0
PM2.5	99.3	4.4	103.7	108.0	-4.0

[a] AES's response letter to the SCAQMD, dated September 20, 2012 (Docket Log #67317).
[b] Total commissioning period emissions from AFC Table 5.1-12.
[c] Scenario DR7 emissions represent a conservative scenario assuming 6 months of commissioning occur within the same 12 months as the maximum annual facility operating emissions.
[d] Annual operating emissions from HBEP AFC Table 5.1-17.
[e] Percent difference between Scenario DR7 and the annual HBEP AFC annual facility emissions.

Because the only emission sources included in the air dispersion modeling assessment are the six identical turbines, the annual impacts associated with Scenario DR7 can be estimated by scaling the annual NO_2 and $PM_{10}/PM_{2.5}$ impacts presented in AFC Section 5.1, Table 5.1-29, by the percent difference presented in Table DR7-1. The resulting annual NO_2 and $PM_{10}/PM_{2.5}$ impacts for Scenario DR7 are presented in Table DR7-2. The results of the analysis indicate that the annual operating emissions for HBEP combined with the commissioning emission would be less than the modeled annual $PM_{10}/PM_{2.5}$ impacts and slightly higher for the annual NO_2 impact presented in Table 5.1-29 of the AFC.

TABLE DR7-2
HBEP Scenario DR7 - NO_2, PM_{10} and $PM_{2.5}$ Impacts Compared to the Ambient Air Quality Standards

Pollutant	Averaging Time	Modeled Concentration[a] ($\mu g/m^3$)	Concentration – Scenario DR7 ($\mu g/m^3$)[b]	Background Concentration ($\mu g/m^3$)[a]	Total Predicted Concentration ($\mu g/m^3$)	State/Federal Standard ($\mu g/m^3$)
NO_2[c]	Annual	0.86	0.89	24.8	25.7	57/100
PM_{10}	Annual	0.44	0.42	23.5	23.9	20/—
$PM_{2.5}$	Annual	0.44	0.42	10.4	10.8	12/15

[a] Modeled concentrations and background data from HBEP AFC Table 5.1-29.
[b] Revised modeled concentrations based on the values from HBEP AFC Table 5.1-29 multiplied by the ratio of the revised annual emissions to the emissions in the original permit application (see Table DR7-1).
[c] The annual NO_2 concentrations conservatively assume a complete conversion of NO_x to NO_2.

4 AES Huntington Beach, LLC. *Application for District Permit to Construct and Modification to the Title V Permit to Operate*. June 22, 2012.

5 The revised facility emissions are based on a proposed operating scenario of 5,900 hours of base load operation without duct burner firing per turbine per year, 470 hours of base load operation with duct burner firing per turbine per year, and 624 startups and shutdowns per turbine per year. AES Huntington Beach, LLC. *Response Letter to the SCAQMD's July 24, 2012, Request for Additional Information*. September 20, 2012

Cumulative Air Quality Impacts

BACKGROUND

8. The AFC (Section 5.1.7 and Appendix 5.1F) describes the methodology for the cumulative effects analysis but does not include the analysis because a project list had not been provided by the District at the time the AFC was prepared. The cumulative analysis should include all reasonably foreseeable projects within a 6-mile radius, i.e. the projects that have received construction permits but are not yet operational, and those that are in the permitting process or can be reasonably expected to be in permitting in the near future. A complete cumulative impacts analysis should identify all existing and planned stationary sources that affect the baseline conditions and consider them in the modeling effort.

DATA REQUEST

9. Please provide a copy of the District's correspondence regarding existing and planned cumulative sources located within six miles of the project site.

Response: Attachment DR9-1 presents correspondence with the District regarding the sources identified for inclusion in the cumulative air quality impact analysis.

DATA REQUEST

10. Please provide the list of sources to be considered in the cumulative air quality impact analysis for staff review and approval.

Response: Attachment DR10-1 presents a listing of sources considered for inclusion in the cumulative air quality impact analysis. This listing is a refinement of the sources identified in the response to Data Request #9. A complete list of sources considered for inclusion in the cumulative modeling and the criteria used to refine the list are included on the *DR Set1A – Supplemental Files for the Air Quality and Public Health Responses* CD provided herewith.

DATA REQUEST

11. Please provide the cumulative modeling and impact analysis, including HBEP and the other projects approved by staff.

Response: As noted in Applicant's October 22, 2012 correspondence to the Siting Committee, the Applicant requires additional time to respond to this data request. A cumulative impact analysis will be provided by December 14, 2012.

Emission Offsets

BACKGROUND

The emission offsets described in the AFC only include those for NOx and SOx emissions. The South Coast Air Quality Management District (SCAQMD) adopted Rule 1325 on June 3, 2011, which requires PM2.5 emission increases to be offset at an offset ratio of 1.1:1 if the rule is triggered. In addition, the Energy Commission requires CEQA mitigation for increases of all nonattainment criteria pollutants and their precursors at a ratio of at least 1:1 regardless of whether a rule is triggered.

DATA REQUEST

12. Please discuss whether or not HBEP triggers Rule 1325. If so, please provide PM2.5 offset strategy to meet this rule. The response to this data request should include any changes in assumed capacity factor, as requested in the data request 23.

Response: As noted in the Applicant's September 20, 2012, letter to the District (CEC Docket Log #67317), the Applicant has proposed an operating profile that reduces HBEP's annual $PM_{2.5}$ emissions below the major source threshold of Rule 1325. The revised operating profile includes 5,900 unfired turbine hours, 470 fired turbine hours, and 624 startups and shutdowns per year. Tables DR12-1 and DR12-2 present the revised annual operating profile and emission estimates from the September 20, 2012, letter. The Applicant also proposed a condition to limit annual $PM_{2.5}$ emissions to a level below the Rule 1325 applicability threshold. Therefore, the HBEP is not subject to Rule 1325 or the requirement to secure and surrender $PM_{2.5}$ offsets. However, as discussed in the response to Data Request #13 below, HBEP PM_{10}/$PM_{2.5}$ emissions will be mitigated.

TABLE DR12-1
HBEP Revised Annual Operating Profile

HBEP Operating Profile	Events	Hours
Annual Unfired Hours (i.e., no duct burner firing)	—	5900
Annual Fired Hours (i.e., with duct burner firing)	—	470
Annual Cold Starts	24	36.0
Annual Warm Starts	150	81.3
Annual Hot Starts	450	243.8
Annual Shutdowns	624	104
Total Annual Startup/Shutdown Hours (per turbine)	—	465
Total Annual Op Hours (per turbine)	—	6835

TABLE DR12-2
HBEP Revised Annual Air Emissions

Pollutant	Annual Emissions per Turbine (tons)	Annual Emissions Facility Total (tons)
NOx	40.4	242.3
CO	46.2	277.0
VOC	21.8	130.7
SO_2	2.16	12.9
PM_{10}	16.6	99.3
$PM_{2.5}$	16.6	99.3
GHG	523,528	3,141,167

The revised facility emissions are based on an operating scenario of 5,900 hours of base load operation without duct burner firing per turbine per year, 470 hours of base load operation with duct burner firing per turbine per year, and 624 startups and shutdowns per turbine per year. AES Huntington Beach, LLC. *Response Letter to the SCAQMD's July 24, 2012, Request for Additional Information*. September 20, 2012.

DATA REQUEST

13. Please provide the offset strategy for all nonattainment criteria pollutants to meet the Energy Commission's CEQA mitigation requirements. The response to this data request should include any changes in assumed capacity factor, as requested in the data request 23.

Response: As presented in Section 5.1.8.2 of the AFC, the Applicant proposes to fully offset non-attainment pollutant (and precursor) emissions using two different strategies. The offset strategy for NOx and SO_2 includes the use of RECLAIM trading credits (RTCs). As HBEP is subject to SCAQMD Rule 2005 (RECLAIM), the Applicant will secure RTCs consistent with the amounts shown in Table DR13-1. The RTC quantities presented in this table are based on the revised operating profile presented in the response to Data Request #12.

TABLE DR13-1
SCAQMD NOx/SOx RECLAIM Requirements

Operating Period	NOx RTCs[a]	SO_2 RTCs[b]
1st Year of Operation (Block 1 Plus Commissioning)	267,133	16,130
2nd Year of Operation (Block 1 Operational)	242,285	12,938
3rd Year of Operation (Block 1 Operational Plus Block 2 Commissioning)	509,418	29,069
4th Year of Operation (Blocks 1 and 2 Operational)	484,571	25,877

[a]The first- and third-year RTC calculation includes the commissioning activities for Block 1 and Block 2, respectively, plus 624 startups and shutdowns per year, 470 hours of turbine operation at 100 percent load, 65.8°F and duct burner firing, and 5,900 hours of turbine operation at 100 percent load, 65.8°F for each of the three turbines. The second and fourth year normal operation RTC calculation includes 624 startups and shutdowns per year, 470 hours of turbine operation at 100 percent load, 65.8°F and duct burner firing, and 5,900 hours of turbine operation at 100 percent load, 65.8°F for each of the three turbines for the second year and each of the six turbines the fourth year.

[b]The SOx RECLAIM calculation is based on the average hourly SOx emission rate without duct burner firing during startups, shutdown, and normal operations.

The Applicant's strategy for offsetting VOC and PM_{10} emissions incorporates the provisions of SCAQMD Rule 1304(a)(2), which applies to the retirement of electric utility steam boilers without a net increase in basin generation capacity in megawatts (MW). In order to offset the HBEP project's net generating capacity of 939 MW, the Applicant proposes to surrender the air permits and render inoperable electric utility steam boilers at its Huntington and Redondo Beach Generating Stations. Table DR13-2 presents a comparison of the SCAQMD-permitted megawatt ratings for the units to be retired to the HBEP generating capacity. Table DR13-2 illustrates that sufficient megawatts are available for retirement to satisfy the provisions of Rule 1304(a)(2). As presented in Section 5.1.8.2 in the AFC, the surplus megawatts from these retirements will be applied to repowering projects at other AES-owned facilities in the future.

TABLE DR13-2
HBEP Rule 1304 Compliance

Retiring Units	Net MWs*
Redondo Beach Generating Station Unit 6	175
Redondo Beach Generating Station Unit 8	480
Huntington Beach Generating Station Unit 1	215
Huntington Beach Generating Station Unit 2	215
Total MWs Retired	1,085
HBEP Net MWs	939

*Boiler megawatt ratings in the SCAQMD Title V permits equipment descriptions.

The Applicant understands that SCAQMD will draw upon the District's emissions offset account or bank (defined in Rule 1315) to offset the full amount of VOC and PM_{10} emissions for HBEP, including applicable emission offsets

ratios. Table DR13-3 presents an estimate of the VOC and PM_{10} ERCs that the SCAQMD will surrender in accordance with Rule 1303.

TABLE DR13-3
Estimate of SCAQMD ERCs to be Surrendered

Maximum Monthly HBEP Operating Profile				
	Number	**Hours**		
Cold Starts/Month	5	—		
Warm Starts/Month	25	—		
Hot Starts/Month	60	—		
SD Starts/Month	90	—		
Total Start-Stop/Month	—	69		
Fired Hours	—	186		
Unfired Hours	—	489		
Total Monthly Hours		744		
Pollutant	**Lb/Month**	**Lb/Day**	**ERC Offset Ratio**	**1303 Offsets Required (lb/day)**
VOC	36,256	1,209	1.2	1,450.2
PM_{10}	25,668	856	1.2	1,026.7

Emergency Fire Water Pumps Operation

BACKGROUND

The AFC indicates that the HBEP intends to continue to use two existing 275-horsepower diesel-fired emergency fire water pumps installed during the existing Huntington Beach Generating Station's Unit 3 and 4 retooling project in 2001. Since these pumps were permitted in 2001, staff does not think these old pumps can comply with current California Air Resources Board's (ARB's) Airborne Toxic Control Measure for Stationary Compression Ignition Engines. This measure was adopted as part of California's Diesel Risk Reduction Plan in 2004 and updated periodically through 2011. California Code of Regulations, Title 17, Section 93115.6 (a)(4) addresses allowable emissions rates for diesel engines driving fire pumps. In addition, the fire pumps are not included in the current HBEP air quality analysis. Staff disagrees that operation of the fire pumps are adequately reflected in the background conditions measured at a monitoring station located a few miles away due to the low stack height and resulting short plume length of fire pump emissions.

DATA REQUEST

14. Please determine whether the two emergency fire water pumps meet the limits specified in Table 2 of Section 93115.6 (a)(4) or need to be retrofitted or completely replaced to meet these applicable requirements.

Response: Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's October 22, 2012, correspondence to the Siting Committee. Notwithstanding such objections, Applicant provides the following response.

Section 93115.6(a)(4) referenced in this data request is titled "*New Direct-Drive Emergency Standby Fire Pump Engines*." (17 Cal. Code Regs. § 93115.6(a)(4).) Section 93115 defines "new" as "a stationary CI engine installed at a facility after January 1, 2005…". As noted in Data Request #14, these engines were permitted and installed as part of the Huntington Beach Generating Station Unit 3 and 4 retooling project in 2001. Therefore, the fire pumps

were installed prior to January 1, 2005, and would be classified as "in-use" engines and compliance with Section 93115.6(a)(4) is not applicable.

Furthermore, pursuant to section 93115.3(n), "The requirements of section 93115.6(b)(3) do not apply to in-use emergency fire pump assemblies that are driven directly by stationary diesel-fueled CI engines and only operated the number of hours necessary to comply with the testing requirements of National Fire Protection Association (NFPA) 25 *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, 2002 edition, which is incorporated herein by reference." As permitted, the existing fire pump engines are operated weekly consistent with the National Fire Protection Association standard for Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems.

The fire pumps are also limited to 30 hours of non-emergency operation per year and the following emission limits: 6.9 grams/brake horse power-hour NOx; 0.38 gram/brake horse power-hour PM_{10}; and 1.0 gram/brake horse power-hour VOC.[6] The Title V permit also includes a recordkeeping requirement to ensure these engines comply with the applicable SCAQMD Rule 1470 particulate matter emission limit. Therefore, even though the engine is exempt per Section 93115.3(n), the engines also meet the requirements outlined in section 93115.6(b)(3) for a "In-Use Stationary Emergency Standby Diesel-Fueled CI Engine > 50 bhp".

DATA REQUEST

15. Please submit any correspondence to or from SCAQMD regarding the District's determination on the fire pump engine permitting.

Response: Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's October 22, 2012, correspondence to the Siting Committee. Notwithstanding such objections, Applicant provides the following response.

The Applicant does not have any specific correspondence with the SCAQMD regarding the fire water pump engines permitting for HBEP, as these fire water pumps are covered by the Huntington Beach Generating Station Units 3 and 4 (CEC Siting Case Number 01-AFC-13) Title V permit. As such, and based on the information provided in the response to Data Request #14, Applicant does not expect the SCAQMD to issue any revisions to the existing permit for these engines.

DATA REQUEST

16. Please describe the operating schedule and emissions of the updated emergency fire pumps, and modify the air quality modeling to include emissions from the updated fire pumps.

Response: Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's October 22, 2012, correspondence to the Siting Committee. Notwithstanding such objections, Applicant provides the following response.

The operating schedule and emission limits have been included in response to Data Request #14. Because the engines have been permitted and in operation for more than a decade, the source would be considered part of the existing baseline conditions under CEQA. Therefore, including an existing source as part of the project, while excluding the same source from the baseline condition, would be inconsistent with the approach of evaluating significance of the project under CEQA and overestimate the project impacts.

[6] SCAQMD RECLAIM/Title V Permit for the AES Huntington Beach facility (Facility ID 115389), May 4, 2011.

DATA REQUEST

17. Please update the emissions reduction credits (ERCs) as necessary due to the inclusion of fire pump emissions.

Response: Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's October 22, 2012 correspondence to the Siting Committee. Notwithstanding such objections, Applicant provides the following response.

As noted in the response to Data Request #15, the emergency fire water pump engines are included in the Huntington Beach Generation Station Units 3 and 4 Title V permit. These engines are identified as RECLAIM process units for NOx and SOx, for which the project owner is required to monitor and report emissions from these engines and to secure RECLAIM Trading Credits for actual NOx and SOx emissions. Therefore, additional mitigation is not warranted.

Steam Turbine Bypass System

BACKGROUND

According to AFC Table 2.6-1, the HBEP will use a steam turbine bypass system which allows both CTG/HRSG trains to operate at base load with the steam turbine out of service. Staff needs more details to understand the operation of this system, especially assurances that this will not bypass the SCR/CO catalyst, as well as the effect on emissions.

DATA REQUEST

18. Please provide the detailed description of the steam turbine bypass system.

Response: The steam turbine bypass system consists of a series of valves that allows steam generated in the heat recovery steam generators to be diverted from entering the steam turbine and directed to the air-cooled condenser. The steam turbine bypass would be operated only during plant upsets and during starts/shutdowns. Operation of the steam turbine bypass during upset conditions will allow safe shutdown of the CTGs should the steam turbine generator trip or fail.

The steam turbine bypass allows the combustion turbines to be started and ramped to 100 percent load in 10 minutes, while allowing the steam turbine to be warmed to operating conditions independent of the combustion turbine load. Without the steam turbine bypass, the combustion turbines would need to be operated at a reduced load, below which the dry low NOx combustors may not be fully functional. Use of the steam turbine bypass reduces start up and shutdown air emissions by allowing the combustion turbine to operate at a load rate where the dry low NOx combustors and the SCR and oxidation catalyst systems are functional during a larger portion of the start up/shutdown sequence. The steam bypass system operation has no affect on the SCR or oxidation catalyst systems function or efficiency.

DATA REQUEST

19. If the operation of the steam turbine bypass system will affect emissions and project heat rates and capacity factors, please describe how the use of the bypass system has been considered in the different operating scenarios and corresponding emissions and heat rate estimates and annual capacity factors.

Response: If the steam turbine bypass was operated during non-start up/shutdown or upset conditions, it would not affect air emissions on either a concentration or mass basis. The Applicant does not propose normal operation and power generation from HBEP with the steam turbine bypass employed. As such, the steam turbine bypass

was not included in operating scenarios used to estimate HBEP heat rate or annual capacity factor other than operations during start-up/shutdown.

Thermal Efficiency and Heat Rates

BACKGROUND

Section 3.2 of Appendix 5.1 D includes a GHG Best Available Control Technology (BACT) analysis that concludes the proposed configuration is GHG-BACT for this project. Figure 4 in this section compares heat rates of HBEP with those of alternative design but does not give the details of the load points.

DATA REQUEST

20. Page 3-6 of Section 3.2 indicates that duct burners would be use to "... close the production gap between starting the second and third combustion turbines of a power block …" However, Energy Commission staff was not able to replicate Figure 4 using data in the AFC. Please indicate which configurations represent each of the load/efficiency data points in Figure 4 of Section 3.2 of Appendix 5.1D.

Response: The load and heat rates presented in Figure 4 of AFC Appendix 5.1D represent site conditions for a 500 MW generating facility consisting of five General Electric LMS100 combustion turbines in a simple cycle configuration, a Siemens Flex Plant 10 (FP-10) with two combustion turbines and a steam turbine generator, and the Mitsubishi Power Systems Americas (MPSA) 501D as configured in the HBEP AFC for one power block (three combustion turbines and one steam turbine generator). Table DR20-1 presents the ambient conditions, load rates, electrical generating and heat rates for these respective designs without consideration of ambient site conditions. The site conditions that were considered include the parasitic energy losses due to auxiliary loads, electrical transformers, and fuel compression. The performance of the FP-10, LMS100, and 501D designs were incorporated into a commercially available thermal flow model (Thermoflow GT Pro[7]) to generate net electrical production and heat rates, shown in Tables DR20-2a, DR20-2b, and DR20-2c, depicted in Figure 4 of AFC Appendix 5.1D.

TABLE DR20-1
Comparison of Different Project Design Performance

Siemens Flex Plant 10 Base Reference Conditions										
Turbine Load (%)	100	50	25							
Inlet Temperature (F)	71	71	71							
Relative Humidity (%)	60	60	60							
Net Power (kW)	282,800	147,200	79,900							
Heat Rate (Btu/kWh - LHV)	7,310	8,280	10,560							
GE LMS 100										
Turbine Load (%)	100	90	80	70	60	50	40	30	20	10
Inlet Temperature (F)	71	71	71	71	71	71	71	71	71	71
Relative Humidity (%)	60	60	60	60	60	60	60	60	60	60
Net Power (kW)	102,326	92,102	81,878	71,643	61,414	511,84	40,960	30,733	20,521	10,347
Heat Rate (Btu/kWh - LHV)	7,951	8,085	8,301	8,639	9,070	9,624	10,404	11,599	13,778	19,774

[7] http://www.thermoflow.com/combinedcycle_GTP.html

TABLE DR20-1
Comparison of Different Project Design Performance

MHI 501D					
Turbine Load (%)	100	90	80	70	100 with DB
Inlet Temperature (F)	71	71	71	71	71
Relative Humidity (%)	60	60	60	60	60
Net Power (kW)					
Heat Rate (Btu/kWh - LHV)					

TABLE DR20-2A
Siemens FP-10 Performance

	Turbine Load Rate (Percent)	**KWs - Net**	**MMBtu/Hr - LHV**	**Site Heat Rate (Btu/kW-hr – Net)**
Turbine 1	25	77,801	844	10,845
	50	144,021	1,219	8,463
	100	277,065	2,066	7,456
Turbine 1 and 2	50/50	288,042	2,438	8,463
Turbine 2	25	354,866	2,910	8,199
	50	421,086	3,285	7,800
	100	554,129	4,132	7,456

TABLE DR20-2B
GE LMS100 Performance

	Turbine Load Rate (Percent)	**KWs - Net**	**MMBtu/Hr - LHV**	**Site Heat Rate (Btu/kW-hr – Net)**
Turbine 1	55	55,450	441	7,959
	60	60,485	482	7,971
	65	65,526	523	7,984
	70	70,559	564	7,997
	75	75,599	606	8,018
	80	80,631	648	8,041
	85	85,670	691	8,062
	90	90,709	733	8,084
	95	95,749	776	8,106
	100	100,778	819	8,126
Turbine 2	50	151,188	1,288	8,519
	55	156,228	1,320	8,448
	60	161,263	1,351	8,381
	65	166,304	1,382	8,312
	70	171,337	1,412	8,244
	75	176,377	1,443	8,182
	80	181,409	1,472	8,116
	85	186,448	1,502	8,058
	90	191,487	1,536	8,022
	95	196,527	1,570	7,989
	100	201,556	1,604	7,959

TABLE DR20-2B
GE LMS100 Performance

	Turbine Load Rate (Percent)	KWs - Net	MMBtu/Hr - LHV	Site Heat Rate (Btu/kW-hr – Net)
Turbine 3	50	251,966	2,090	8,295
	55	257,006	2,122	8,256
	60	262,041	2,154	8,218
	65	267,082	2,184	8,179
	70	272,115	2,215	8,138
	75	277,155	2,245	8,101
	80	282,187	2,274	8,060
	85	287,226	2,305	8,023
	90	292,265	2,338	8,001
	95	297,305	2,372	7,979
	100	302,334	2,406	7,959
Turbine 4	50	352,744	2,892	8,199
	55	357,784	2,924	8,173
	60	362,819	2,956	8,146
	65	367,860	2,987	8,119
	70	372,893	3,017	8,090
	75	377,933	3,047	8,063
	80	382,965	3,076	8,033
	85	388,004	3,107	8,007
	90	393,043	3,140	7,990
	95	398,083	3,174	7,974
	100	403,112	3,208	7,959
Turbine 5	50	453,522	3,694	8,146
	55	458,562	3,726	8,126
	60	463,597	3,758	8,106
	65	468,638	3,789	8,084
	70	473,671	3,819	8,062
	75	478,711	3,849	8,041
	80	483,743	3,879	8,018
	85	488,782	3,909	7,997
	90	493,821	3,942	7,984
	95	498,861	3,976	7,971
	100	503,890	4,010	7,959

TABLE DR20-2C
MHI 501D Performance

	Turbine Load Rate (Percent)	KWs - Net	MMBtu/Hr - LHV	Site Heat Rate (Btu/kW-hr – Net)
Turbine 1	70	116,977	932	7,969
	80	130,750	1,019	7,796
	90	144,285	1,107	7,669
	100	161,150	1,221	7,578
	100 plus DB	203,570	1,624	7,979

TABLE DR20-2C
MHI 501D Performance

	Turbine Load Rate (Percent)	KWs - Net	MMBtu/Hr - LHV	Site Heat Rate (Btu/kW-hr – Net)
Turbine 2	70	241,081	1,864	7,733
	80	268,702	2,039	7,587
	90	295,720	2,213	7,484
	100	329,459	2,442	7,413
	100 plus DB	367,913	2,827	7,683
Turbine 3	70	363,249	2,796	7,698
	80	403,656	3,058	7,575
	90	443,066	3,319	7,492
	100	492,265	3,662	7,440

DATA REQUEST

21. Please indicate how Figure 4 would change if duct burners were not used to close the production gap as stated on page 3-6.

Response: The HBEP design attempts to provide a nearly continuous electrical output from 117 MWs to 939 MWs by using the duct burners to increase electrical production during the 10 minutes it takes to reach full load when starting up a second or third combustion turbine. The effect of not operating the duct burners in this manner on Figure 4 would eliminate the heat rate increases (shown on Figure 4) between 160,000 to 200,000 kilowatts (kW) and between 330,000 and 360,000 kW, resulting in an electrical production gap between these values.

DATA REQUEST

22. Please indicate if the proposed design represents the configuration with the best heat rate. If not, please describe more fully why design configurations with a better heat rate cannot be used.

Response: As stated in Project Objectives[8] of the BACT analysis, HBEP is designed to start and stop very quickly and quickly ramp up and down through a wide range of generating capacity to allow the integration of the ever increasing contribution of intermittent renewable energy into the electrical grid. The proposed design does represent the configuration with the best heat rate to achieve the stated project objectives. A design configuration which would result in a lower heat rate would not be capable of achieving the quick response and ramping capabilities of HBEP due to differences in construction materials and the use of a multi-pressure steam turbine generator. For instance, a facility designed for base load operation would employ a different alloy composition in the heat recovery steam generator heat transfer surfaces, which would reduce the rate at which temperature changes could occur. Likewise, a higher efficiency multi-pressure steam turbine could extend the length of start up and shutdown and would reduce the speed at which electrical production rates could occur.

[8] Section 1.2 of the AFC Appendix 5.1D, page 1-1.

Attachment DR1-1
Recent Permit Application Correspondence with SCAQMD

Finn, Mary/SAC

From: Stephen O'Kane [stephen.okane@AES.com]
Sent: Tuesday, October 23, 2012 4:27 PM
To: 'Chris Perri'
Subject: RE: SCR and CO Catalysts

Chris,

We'll track down this data with the vendor and get back to you.

I'll have the rest of the data you asked for as well. I'm still waiting on my engineer to run the heat balances at ISO conditions.

Stephen

From: Chris Perri [mailto:CPerri@aqmd.gov]
Sent: Tuesday, October 23, 2012 2:53 PM
To: Stephen O'Kane
Subject: SCR and CO Catalysts

Stephen – could you help me out with the SCR/CO catalyst dimensions and volume? The form 400-E-5 says the SCR catalyst is 10'2"X2'1.25"X6'7". I assume that's the dimension of the catalyst layer, correct? It also says there are 20 modules/layers and the total volume is 140.8 ft3. So does that mean there is just 1 SCR catalyst layer?

The form also says the CO catalyst is 2'2"X0'2"X2'2" there are 261 layers/modules and the total volume is 2655 ft3. I'm guessing that the width is 2'2" not 0'2"? How many layers of CO catalyst are there?

Could you please provide the following:

1) Drawings of the SCR and CO catalysts
2) total dimensions of the catalyst bed
3) total dimensions of the catalyst housing,
4) # of catalyst layers, and
5) arrangement of the modules in each layer

Thank you

Chris Perri
Air Quality Engineer
South Coast Air Quality Management District
(909) 396-2696

the subject matter of the above e-Mail, this e-Mail does not constitute a contract offer, a contract amendment, or an acceptance of a contract offer. This e-Mail does not constitute consent to the use of sender's contact information for direct marketing purposes or for transfers of data to third parties.

Finn, Mary/SAC

From: Chris Perri [CPerri@aqmd.gov]
Sent: Wednesday, October 17, 2012 2:59 PM
To: Stephen O'Kane
Subject: Turbine Data

Hi Stephen,

Can you please provide the following information:

	ISO 59 F- 60% RH	110 F-8% RH	32 F – 87% RH	63 F – 65% RH
Gas Turbine Heat Input, mmbtu/h HHV		1,350	1,498	
Total Heat Input, mmbtu/h HHV (w/duct fire)		1,857	2,005	
Gas Turbine Gross Output, kW		114,505	131,469	
Steam Turbine Gross Output, kW				
Total Gross Power Output, kW				
Net Power Output, Kw				
Net Plant Heat Rate, btu/kWh, LHV				
Net Plant Heat Rate, btu/kWh, HHV				

Also, still waiting for updated modeling so that I can forward to our planning group for review.

Thanks.

Chris Perri
Air Quality Engineer
South Coast Air Quality Management District
(909) 396-2696

Finn, Mary/SAC

From: Stephen O'Kane [stephen.okane@AES.com]
Sent: Thursday, October 25, 2012 10:59 AM
To: 'Chris Perri'
Cc: Mason, Robert/SCO; Salamy, Jerry/SAC; 'McKinsey, John A.'; 'Foster, Melissa A.'; 'Miller, Felicia@Energy'
Subject: RE: HBEP emission rates and modeling results

Chris,

We can provide that data.

Your question regarding operations without steam turbine output is puzzling. The answer is 0 hours. This is a CCGT, at any time there is heat input into the system we are making steam. We'd have to bypass the steam turbine and blowdown all steam to the condenser and atmosphere to operate without steam turbine output. While we would install a bypass for safety reasons to allow rapid depressurization of the steam cycle, it would not be used for normal operations. Also, as this is a Rule 1304 exempt project which specifically defines the technology allowed as replacement, operating the unit in a simple cycle mode would not be permissible.

Stephen O'Kane

From: Chris Perri [mailto:CPerri@aqmd.gov]
Sent: Thursday, October 25, 2012 10:53 AM
To: Stephen O'Kane
Cc: Robert.Mason@CH2M.com; 'Jerry.Salamy@CH2M.com'; McKinsey, John A.; Foster, Melissa A.; Miller, Felicia@Energy
Subject: RE: HBEP emission rates and modeling results

Thanks, Stephen. As a follow up to the issue about plant heat rate, could you also provide the data for output during 1-on-1 and 2-on-1 operation. Specifically, for each temp/humidity condition, the following:

Steam turbine gross output
Total gross power output
Net power output

Also, out of the 5,900 hrs/yr operation that the plant will operate without duct firing, how much of that is it anticipated would be without steam turbine output?

Chris Perri
Air Quality Engineer
South Coast Air Quality Management District
(909) 396-2696

From: Stephen O'Kane [mailto:stephen.okane@AES.com]
Sent: Tuesday, October 23, 2012 6:07 PM
To: Chris Perri
Cc: Robert.Mason@CH2M.com; 'Jerry.Salamy@CH2M.com'; McKinsey, John A.; Foster, Melissa A.; Miller, Felicia@Energy
Subject: RE: HBEP emission rates and modeling results

Chris,

I response to your request for additional information regarding emission rates and modeling results for the Huntington Beach Energy Project, as detailed below and in your subsequent email (attached) I have prepared the attached letter and accompanying documents.

Thanks

Per: Stephen O'Kane
Permitting and Regulatory Approvals, Southland Repower Team

AES Southland
690 N. Studebaker Rd. | Long Beach, CA | 90803
Direct: 562-493-7840 | Cell: 562-508-0962 | Fax: 562-493-7737
stephen.okane@aes.com | www.aes.com

From: Chris Perri [mailto:CPerri@aqmd.gov]
Sent: Friday, October 05, 2012 8:12 AM
To: Stephen O'Kane
Cc: Keith.McGregor@CH2M.com; 'Robert.Mason@CH2M.com'
Subject: RE: HBEP emission rates and modeling results

Stephen,

Thanks for the info.

There are a few things concerning the modeling that I think should be addressed at this point.

1) To be consistent with the revised annual operating scenario, the annual NOx, PM10 and PM2.5 modeling should be re-done based on 5,900 hrs/yr wo duct firing and 470 hrs/yr with duct firing

2) To be consistent with AB2588 and our current practice for estimating toxic emissions from gas turbines, the HRA should be redone using AP42 Table 3.1-3 factors. There should be no adjustment to the formaldehyde factor, and if you want to use the PAH results from a source test, we have to have the test results to review, otherwise just use the AP42 factor.

3) The 1 hour NOx should be done using stack parameters that correspond to a cold start up, unless you can justify that case 15 simulates a cold start up.

Also, a couple of questions –
1) Is the MPSA start up emissions table in the document or can I get a copy of it? and,
2) Do the units have DLN combustors? If so, at what load are they operational and what is their outlet NOx concentration?

Thank you.

Chris Perri
Air Quality Engineer
South Coast Air Quality Management District
(909) 396-2696

From: Stephen O'Kane [mailto:stephen.okane@AES.com]
Sent: Wednesday, October 03, 2012 5:28 PM
To: Chris Perri
Cc: Keith.McGregor@CH2M.com; 'Robert.Mason@CH2M.com'
Subject: RE: HBEP emission rates and modeling results

Chris,

Admittedly, the stack parameters that correspond to each of the emission rates that produced the highest predicted AERMOD impacts are a little tough to follow. The stack parameters (temp and velocity) for each of the ambient and load conditions are detailed in the file 7-HBEP_Appendix 5.1C_Dispersion Modeling.pdf in tables 5.1C-4 and 5.1C-7 The operational performance data and emission rates and calcs are in the file 6-HBEP_Appendix 5.1B_Ops Emissions Calcs.pdf.

- The 1-hour NO2 and CO emissions were based on 60 minutes of a cold startup (maximum mass emission rate of these pollutants for an hour) matched with the stack parameters at an ambient temp of 110F and 70% load (Case 15). In this scenario the lower load results in lower velocities, and the higher ambient temp results in less plume buoyancy (smaller temp delta between stack gas and ambient) to get the maximum ground level 1-hour impact.
- The 1, 3 and 24 hour SO2 emission rate was based on max fuel flow (therefore maximum sulfur mass) so that corresponds to 100% load with duct burners and again an ambient temperature of 110F to get the maximum ground level impact (Case 11). (Note that in this scenario, the greater fuel consumption at 100% load means more sulfur, thus gives a higher impact than the 70% load case with the lower velocity)
- The 24-hour PM2.5 and PM10 were based on 100% load with duct burners to produce the maximum PM mass emissions, matched with the 110F ambient case (Case 11)
- The annual PM2.5 and PM10 emission rates were based on the total PM emitted from 5000 hours turbine fired, 1200 hours of duct firing hours and 624 startup/shutdowns. This is then averaged and matched with the stack parameters from the average ambient temperature case and 70% load. Since the PM from the turbines is guaranteed by the manufacturer at 4.0 lbs/hr (not including fuel sulfur) regardless of load the 70% load case produces the maximum ground level impact (Case 10)
- The annual NO2 emission rates were based on the total NOx emitted from 5000 hours turbine fired, 1200 hours of duct firing hours and 624 startup/shutdowns. This is then averaged and matched with the stack parameters from the average ambient temperature case and 100% load. (Case 7) Since NOx mass emissions are highest at the high load, the high load stack parameters at average ambient temp was used.

Hope this helps.

Stephen O'Kane

From: Chris Perri [mailto:CPerri@aqmd.gov]
Sent: Wednesday, October 03, 2012 3:32 PM
To: Stephen O'Kane
Subject: RE: HBEP emission rates and modeling results

Stephen,

Thank you for the previous email in response to my questions. I'm still a little confused on the modeling, though. I see the stack parameters that were used in each of the 15 screening scenarios. How do those stack parameters correspond to the refined modeling runs for each pollutant/averaging time? For example, NOx 1 hour modeling was based on a start up emission rate of 25.5 lbs/hr. What were the stack parameters used? Was it from the highest screening model result (which looks like would be case 15 - 110°F and 70% load) or were there start up stack parameters that were used? Again, I apologize if this information is already in the document, but I wasn't able to locate it.

Chris Perri
Air Quality Engineer
South Coast Air Quality Management District
(909) 396-2696

From: Stephen O'Kane [mailto:stephen.okane@AES.com]
Sent: Thursday, September 27, 2012 11:43 AM
To: Chris Perri
Subject: FW: HBEP emission rates and modeling results

Chris,

It was easiest just to forward the email I got back from my consultant. Per your request I will also ask them to forward the additional modeling files.

Regards,

Stephen O'Kane

From: Keith.McGregor@CH2M.com [mailto:Keith.McGregor@CH2M.com]
Sent: Thursday, September 27, 2012 11:22 AM
To: Stephen O'Kane
Cc: Jerry.Salamy@CH2M.com; Robert.Mason@CH2M.com
Subject: RE: HBEP emission rates and modeling results

Hello Stephen,

Based on our interpretation of the modeling exemption in Rule 1303(b)(1) and Rule 1304(a), it was assumed that the SCAQMD would only be reviewing the modeling results associated with Rule 1401, Rule 2005, and Regulation XVII (PSD). As a result, only the modeling files and summaries associated with NOx and TACs were included as part of our SCAQMD submittal package. Please let us know if Chris is planning to review the modeling for all pollutants and we can provide the additional modeling files.

With that said, I think the attached summaries may provide some of the supporting documentation that Chris may be requesting:

AFC Excerpts:
Table 5.1-24 Emission Rates Corresponding to the Highest Predicted AERMOD Impacts – the footnotes include a description of the assumptions each emission rate is based on.
Table 5.1C.7 (AFC Appendix) Operational Modeling Results Summary – contains the predicted output for each modeling scenario and each year of meteorological data*
Table 5.1-29 Operation Impacts Analysis – Maximum Modeled Impacts Compared to the Ambient Air Quality Standards
Table 5.1-30 Rule 2005 Air Quality Thresholds and Standards Applicable to the Project (per emission unit) – a summary of the results for each stack are listed below.**
Table 5.1-31 HBEP Predicted Impacts Compared to the PSD Air Quality Impact Standards
Table 5.1-32 HBEP Predicted Impacts Compared to the Class I SIL and Increment Standards

*Please note that we identified during the compilation of this data that the annual PM10 and PM2.5 data are underreported in the attached Appendix Table 5.1C.7. However, the values in Table 5.1-24 (the main part of the AFC) are correct and match the final dispersion modeling files.

As indicated above, the following summary presents the maximum predicted impacts for each individual turbine for comparison to the Rule 2005 thresholds and applicable standards. The results are based on a maximum NOx emission rate of 25.5 lb/hr.

Huntington Beach Energy Project
SCAQMD Rule 2005 NO2 Modeling Results Summary

Stack 1		
Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	5.34	0.148
2006	11.1	0.138

Stack 4		
Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	4.31	0.147
2006	3.87	0.138

2007	12.6	0.106

2007	4.33	0.106

Stack 2

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	20.6	0.148
2006	23.6	0.138
2007	24.4	0.106

Stack 5

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	4.27	0.147
2006	3.87	0.138
2007	4.23	0.106

Stack 3

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	10.5	0.148
2006	12.4	0.138
2007	22.1	0.106

Stack 6

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	4.20	0.147
2006	6.51	0.138
2007	4.25	0.106

Give me a call if you have any questions or if you would like to provide additional data.

Thank you,

Keith McGregor
Project Manager
CH2MHILL
2485 Natomas Park Drive Suite 600
Sacramento, CA 95833
Direct: (916) 286-0221
Mobile: (916) 705-7624
Fax: (916) 614-3450

From: Stephen O'Kane [mailto:stephen.okane@AES.com]
Sent: Wednesday, September 26, 2012 8:33 AM
To: McGregor, Keith/SAC; Salamy, Jerry/SAC
Cc: Mason, Robert/SCO
Subject: HBEP emission rates and modeling results

Keith,

I just got a call from Chris Perri at the SCAQMD. He's having a little trouble correlating the emission rate used for each of the maximum modeled impacts. Could you put together a table that shows the emission scenario, emission rate and modeled impact for each pollutant and averaging period. I believe all the information is in the application but he's having a bit of a hard time matching the emission rate used for each modeling scenario.

Also, I confirmed that we presented the maximum impact for each scenario out of the entire 3 years of modeling data and we did not average the maximum impact from each individual year and then present that as the maximum.

Thanks

Per: Stephen O'Kane
Permitting and Regulatory Approvals, Southland Repower Team

AES Southland
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Finn, Mary/SAC

From: Stephen O'Kane [stephen.okane@AES.com]
Sent: Thursday, October 25, 2012 12:10 PM
To: 'Chris Perri'
Cc: Mason, Robert/SCO; Salamy, Jerry/SAC; 'McKinsey, John A.'; 'Foster, Melissa A.'; 'Miller, Felicia@Energy'
Subject: RE: HBEP emission rates and modeling results

Chris,

I spoke too fast. I do not have the off base performance for all of the temperature cases where we provided the 3-on-1 data.

- The low temp 32o 3-on-1 case was provided only for the1304 MW-MW comparison as the maximum gross output and for screening the worst case emissions scenarios, and therefore there was no need to run the full heat balances for the 1-on-1 and 2-on-1 case.
- The high temp 110o 3-on-1 case was calculated only for maximum emissions impact and therefore there was no need to run the heat balances for the off base performance case
- The ISO temp 59o case was a special one off we provided for you at the last request and has no use for evaluating performance or environmental impact

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Please let me know if this data would meet your needs.

If you need the off base performance conditions for the other temperature cases I will need more time to run the heat balance model. Also you might enlighten me as to why other cases would be required as all of the requisite emissions, modeling and BACT analysis would be captured by the data already provided.

Thanks

Stephen

From: Chris Perri [mailto:CPerri@aqmd.gov]
Sent: Thursday, October 25, 2012 10:53 AM
To: Stephen O'Kane
Cc: Robert.Mason@CH2M.com; 'Jerry.Salamy@CH2M.com'; McKinsey, John A.; Foster, Melissa A.; Miller, Felicia@Energy
Subject: RE: HBEP emission rates and modeling results

Thanks, Stephen. As a follow up to the issue about plant heat rate, could you also provide the data for output during 1-on-1 and 2-on-1 operation. Specifically, for each temp/humidity condition, the following:

Steam turbine gross output
Total gross power output
Net power output

Also, out of the 5,900 hrs/yr operation that the plant will operate without duct firing, how much of that is it anticipated would be without steam turbine output?

Chris Perri
Air Quality Engineer

South Coast Air Quality Management District
(909) 396-2696

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Sent: Tuesday, October 23, 2012 6:07 PM
To: Chris Perri
Cc: Robert.Mason@CH2M.com; 'Jerry.Salamy@CH2M.com'; McKinsey, John A.; Foster, Melissa A.; Miller, Felicia@Energy
Subject: RE: HBEP emission rates and modeling results

Chris,

I response to your request for additional information regarding emission rates and modeling results for the Huntington Beach Energy Project, as detailed below and in your subsequent email (attached) I have prepared the attached letter and accompanying documents.

Thanks

Per: Stephen O'Kane
Permitting and Regulatory Approvals, Southland Repower Team

AES Southland
690 N. Studebaker Rd. | Long Beach, CA | 90803
Direct: 562-493-7840 | Cell: 562-508-0962 | Fax: 562-493-7737
stephen.okane@aes.com | www.aes.com

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Stephen,

Thanks for the info.

There are a few things concerning the modeling that I think should be addressed at this point.

1) To be consistent with the revised annual operating scenario, the annual NOx, PM10 and PM2.5 modeling should be re-done based on 5,900 hrs/yr wo duct firing and 470 hrs/yr with duct firing

2) To be consistent with AB2588 and our current practice for estimating toxic emissions from gas turbines, the HRA should be redone using AP42 Table 3.1-3 factors. There should be no adjustment to the formaldehyde factor, and if you want to use the PAH results from a source test, we have to have the test results to review, otherwise just use the AP42 factor.

3) The 1 hour NOx should be done using stack parameters that correspond to a cold start up, unless you can justify that case 15 simulates a cold start up.

Also, a couple of questions –
1) Is the MPSA start up emissions table in the document or can I get a copy of it? and,
2) Do the units have DLN combustors? If so, at what load are they operational and what is their outlet NOx concentration?

Thank you.

Chris Perri
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(909) 396-2696

From: Stephen O'Kane [mailto:stephen.okane@AES.com]
Sent: Wednesday, October 03, 2012 5:28 PM
To: Chris Perri
Cc: Keith.McGregor@CH2M.com; 'Robert.Mason@CH2M.com'
Subject: RE: HBEP emission rates and modeling results

Chris,

Admittedly, the stack parameters that correspond to each of the emission rates that produced the highest predicted AERMOD impacts are a little tough to follow. The stack parameters (temp and velocity) for each of the ambient and load conditions are detailed in the file 7-HBEP_Appendix 5.1C_Dispersion Modeling.pdf in tables 5.1C-4 and 5.1C-7 The operational performance data and emission rates and calcs are in the file 6-HBEP_Appendix 5.1B_Ops Emissions Calcs.pdf.

- The 1-hour NO2 and CO emissions were based on 60 minutes of a cold startup (maximum mass emission rate of these pollutants for an hour) matched with the stack parameters at an ambient temp of 110F and 70% load (Case 15). In this scenario the lower load results in lower velocities, and the higher ambient temp results in less plume buoyancy (smaller temp delta between stack gas and ambient) to get the maximum ground level 1-hour impact.
- The 1, 3 and 24 hour SO2 emission rate was based on max fuel flow (therefore maximum sulfur mass) so that corresponds to 100% load with duct burners and again an ambient temperature of 110F to get the maximum ground level impact (Case 11). (Note that in this scenario, the greater fuel consumption at 100% load means more sulfur, thus gives a higher impact than the 70% load case with the lower velocity)
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Hope this helps.

Stephen O'Kane

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result (which looks like would be case 15 - 110°F and 70% load) or were there start up stack parameters that were used? Again, I apologize if this information is already in the document, but I wasn't able to locate it.

Chris Perri
Air Quality Engineer
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Regards,

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Subject: RE: HBEP emission rates and modeling results

Hello Stephen,

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AFC Excerpts:
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Table 5.1C.7 (AFC Appendix) Operational Modeling Results Summary – contains the predicted output for each modeling scenario and each year of meteorological data*
Table 5.1-29 Operation Impacts Analysis – Maximum Modeled Impacts Compared to the Ambient Air Quality Standards
Table 5.1-30 Rule 2005 Air Quality Thresholds and Standards Applicable to the Project (per emission unit) – a summary of the results for each stack are listed below.**
Table 5.1-31 HBEP Predicted Impacts Compared to the PSD Air Quality Impact Standards
Table 5.1-32 HBEP Predicted Impacts Compared to the Class I SIL and Increment Standards

*Please note that we identified during the compilation of this data that the annual PM10 and PM2.5 data are underreported in the attached Appendix Table 5.1C.7. However, the values in Table 5.1-24 (the main part of the AFC) are correct and match the final dispersion modeling files.

As indicated above, the following summary presents the maximum predicted impacts for each individual turbine for comparison to the Rule 2005 thresholds and applicable standards. The results are based on a maximum NOx emission rate of 25.5 lb/hr.

Huntington Beach Energy Project

SCAQMD Rule 2005 NO2 Modeling Results Summary

Stack 1

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	5.34	0.148
2006	11.1	0.138
2007	12.6	0.106

Stack 2

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	20.6	0.148
2006	23.6	0.138
2007	24.4	0.106

Stack 3

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	10.5	0.148
2006	12.4	0.138
2007	22.1	0.106

Stack 4

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	4.31	0.147
2006	3.87	0.138
2007	4.33	0.106

Stack 5

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	4.27	0.147
2006	3.87	0.138
2007	4.23	0.106

Stack 6

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	4.20	0.147
2006	6.51	0.138
2007	4.25	0.106

Give me a call if you have any questions or if you would like to provide additional data.

Thank you,

Keith McGregor
Project Manager
CH2MHILL
2485 Natomas Park Drive Suite 600
Sacramento, CA 95833
Direct: (916) 286-0221
Mobile: (916) 705-7624
Fax: (916) 614-3450

From: Stephen O'Kane [mailto:stephen.okane@AES.com]
Sent: Wednesday, September 26, 2012 8:33 AM
To: McGregor, Keith/SAC; Salamy, Jerry/SAC
Cc: Mason, Robert/SCO
Subject: HBEP emission rates and modeling results

Keith,

I just got a call from Chris Perri at the SCAQMD. He's having a little trouble correlating the emission rate used for each of the maximum modeled impacts. Could you put together a table that shows the emission scenario, emission rate and modeled impact for each pollutant and averaging period. I believe all the information is in the application but he's having a bit of a hard time matching the emission rate used for each modeling scenario.

Also, I confirmed that we presented the maximum impact for each scenario out of the entire 3 years of modeling data and we did not average the maximum impact from each individual year and then present that as the maximum.

Thanks

Per: Stephen O'Kane
Permitting and Regulatory Approvals, Southland Repower Team

AES
the power of being global

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Finn, Mary/SAC

From: Stephen O'Kane [stephen.okane@AES.com]
Sent: Thursday, October 25, 2012 4:40 PM
To: 'Chris Perri'
Cc: Mason, Robert/SCO; Salamy, Jerry/SAC; 'McKinsey, John A.'; 'Foster, Melissa A.'; 'Miller, Felicia@Energy'
Subject: RE: HBEP emission rates and modeling results

Chris,

Here's the data I can provide. If you really need the additional performance data at the other temperatures I will have to get our consultants to run some additional heat balance models. Please let me know as this is an extra expenditure and additional time to execute.

With these two temperature cases you can see the performance of the CCGT in both 1-on-1 and 2-on-1 modes. Additional data would merely show the same relative difference compared to the 3-on-1 case for different operating temperatures and humidities. Note the highlighted numbers. Our CCGT design actually provides the best performance on a heat rate basis (and consequently CO2e per MW) in the 2-on-1 case. Which is a big part of the design objective. Instead of the normal heat rate curve of a CCGT that deteriorates as output or load is decreased, this design will maintain a very constant heat rate across a wide range of output, and be able to ramp up and down output very quickly. Thus we achieve approximately 800-1,000 BTU/kwh better heat rate than a simple cycle LMS 100 and still provide the fast ramp and quick start support.

	32 F – 87% RH (Evaporative Cooling Off, Case 2)	ISO 59 F-60% RH (Evaporative Cooling Off)	66 F – 58% RH (Evaporative Cooling On, Case 7)	85 F - 45.75% RH (Evaporative Cooling On)	110 F-8% RH (Evaporative Cooling On, Case 12)
Gas Turbine Heat Input, mmbtu/h HHV[1]	1,498	1,388	1,403	1,354	1,350
Total Heat Input, mmbtu/h HHV (w/duct fire)[2]	2,005	1,895	1,910	1,861	1,857
Gas Turbine Gross Output, kW[3]	132,256	121,435	121,840	115,962	115,264
Steam Turbine Gross Output, kW[3]	49,579	51,865	50,192	48,523	43,632
Total Gross Power Output, kW[3]	181,835	173,300	172,032	164,485	158,896
Total Net Power Output, Kw[3]	175,925	167,583	166,328	158,901	153,352
Net Plant Heat Rate, btu/kWh, LHV	7,558	7,354	7,487	7,508	7,814
Net Plant Heat Rate, btu/kWh, HHV	8,516	8,285	8,435	8,459	8,803
Steam Turbine Gross Output, kW (2-on-1)			102,640	99,501	
Total Gross Power Output, kW (2-on-1)			346,320	331,425	
Total Net Power Output, Kw (2-on-1)			334,035	319,363	
Net Plant Heat Rate, btu/kWh, LHV (2-on-1)			7,337	7,408	
Net Plant Heat Rate, btu/kWh, HHV (2-on-1)			8,400	8,483	
Steam Turbine Gross Output, kW (1-on-1)			49,382	47,192	
Total Gross Power Output, kW (1-on-1)			171,222	163,154	
Total Net Power Output, Kw (1-on-1)			163,611	155,661	
Net Plant Heat Rate, btu/kWh, LHV (1-on-1)			7,489	7,600	
Net Plant Heat Rate, btu/kWh, HHV (1-on-1)			8,575	8,702	

Notes:

1. Cases 110F, 32F and 66F heat input taken directly from M501DA Gas Turbine Expected Performance and Emissions Provided by MPSA and included in Table 5.1B.2 of *HBEP_Appendix 5.1B_Ops Emissions Calcs.pdf*. ISO 59F Case Heat input taken from GT PRO model.

2. Total Heat Input per gas turbine with duct firing can only be achieved while operating in a 1-on-1 or 2-on-1 mode. The steam cycle is sized such the maximum heat input into the steam cycle is reached in a 3-on-1 mode without duct firing.

3. All output is provided on a per turbine basis assuming a 3-on-1 operating mode. To calculate total output for the entire power block these values must be multiplied by 3

Stephen

From: Chris Perri [mailto:CPerri@aqmd.gov]
Sent: Thursday, October 25, 2012 2:57 PM
To: Stephen O'Kane
Cc: Robert.Mason@CH2M.com; 'Jerry.Salamy@CH2M.com'; McKinsey, John A.; Foster, Melissa A.; Miller, Felicia@Energy
Subject: RE: HBEP emission rates and modeling results

Steve-

The data for the summer max and annual average are probably the most appropriate, but if you could also provide the max and min temperature cases as well for the sake of completing the table for all cases, I'd appreciate it.

Thanks

Chris Perri
Air Quality Engineer
South Coast Air Quality Management District
(909) 396-2696

From: Stephen O'Kane [mailto:stephen.okane@AES.com]
Sent: Thursday, October 25, 2012 12:10 PM
To: Chris Perri
Cc: Robert.Mason@CH2M.com; 'Jerry.Salamy@CH2M.com'; McKinsey, John A.; Foster, Melissa A.; Miller, Felicia@Energy
Subject: RE: HBEP emission rates and modeling results

Chris,

I spoke too fast. I do not have the off base performance for all of the temperature cases where we provided the 3-on-1 data.

- The low temp 32o 3-on-1 case was provided only for the1304 MW-MW comparison as the maximum gross output and for screening the worst case emissions scenarios, and therefore there was no need to run the full heat balances for the 1-on-1 and 2-on-1 case.
- The high temp 110o 3-on-1 case was calculated only for maximum emissions impact and therefore there was no need to run the heat balances for the off base performance case
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Hope this helps.

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Air Quality Engineer
South Coast Air Quality Management District
(909) 396-2696

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Sent: Thursday, September 27, 2012 11:22 AM
To: Stephen O'Kane
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Table 5.1C.7 (AFC Appendix) Operational Modeling Results Summary – contains the predicted output for each modeling scenario and each year of meteorological data*
Table 5.1-29 Operation Impacts Analysis – Maximum Modeled Impacts Compared to the Ambient Air Quality Standards
Table 5.1-30 Rule 2005 Air Quality Thresholds and Standards Applicable to the Project (per emission unit) – a summary of the results for each stack are listed below.**
Table 5.1-31 HBEP Predicted Impacts Compared to the PSD Air Quality Impact Standards
Table 5.1-32 HBEP Predicted Impacts Compared to the Class I SIL and Increment Standards

*Please note that we identified during the compilation of this data that the annual PM10 and PM2.5 data are underreported in the attached Appendix Table 5.1C.7. However, the values in Table 5.1-24 (the main part of the AFC) are correct and match the final dispersion modeling files.

As indicated above, the following summary presents the maximum predicted impacts for each individual turbine for comparison to the Rule 2005 thresholds and applicable standards. The results are based on a maximum NOx emission rate of 25.5 lb/hr.

Huntington Beach Energy Project
SCAQMD Rule 2005 NO2 Modeling Results Summary

Stack 1

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	5.34	0.148
2006	11.1	0.138
2007	12.6	0.106

Stack 2

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	20.6	0.148
2006	23.6	0.138
2007	24.4	0.106

Stack 3

Stack 4

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	4.31	0.147
2006	3.87	0.138
2007	4.33	0.106

Stack 5

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	4.27	0.147
2006	3.87	0.138
2007	4.23	0.106

Stack 6

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	10.5	0.148
2006	12.4	0.138
2007	22.1	0.106

Year	1-hr Concentration (µg/m³)	Annual Concentration (µg/m³)
2005	4.20	0.147
2006	6.51	0.138
2007	4.25	0.106

Give me a call if you have any questions or if you would like to provide additional data.

Thank you,

Keith McGregor
Project Manager
CH2MHILL
2485 Natomas Park Drive Suite 600
Sacramento, CA 95833
Direct: (916) 286-0221
Mobile: (916) 705-7624
Fax: (916) 614-3450

From: Stephen O'Kane [mailto:stephen.okane@AES.com]
Sent: Wednesday, September 26, 2012 8:33 AM
To: McGregor, Keith/SAC; Salamy, Jerry/SAC
Cc: Mason, Robert/SCO
Subject: HBEP emission rates and modeling results

Keith,

I just got a call from Chris Perri at the SCAQMD. He's having a little trouble correlating the emission rate used for each of the maximum modeled impacts. Could you put together a table that shows the emission scenario, emission rate and modeled impact for each pollutant and averaging period. I believe all the information is in the application but he's having a bit of a hard time matching the emission rate used for each modeling scenario.

Also, I confirmed that we presented the maximum impact for each scenario out of the entire 3 years of modeling data and we did not average the maximum impact from each individual year and then present that as the maximum.

Thanks

Per: Stephen O'Kane
Permitting and Regulatory Approvals, Southland Repower Team

AES Southland
690 N. Studebaker Rd. | Long Beach, CA | 90803
Direct: 562-493-7840 | Cell: 562-508-0962 | Fax: 562-493-7737
stephen.okane@aes.com | www.aes.com

an acceptance of a contract offer. This e-Mail does not constitute consent to the use of sender's contact information for direct marketing purposes or for transfers of data to third parties.

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Finn, Mary/SAC

From: Stephen O'Kane [stephen.okane@AES.com]
Sent: Tuesday, October 30, 2012 5:48 PM
To: 'Chris Perri'
Cc: Salamy, Jerry/SAC; McGregor, Keith/SAC
Subject: RE: Commissioning Model
Attachments: Table 5.1C.3 from Appendix 5.1C.pdf; Table 5.1C.1 for Appendix 5.1C.pdf

Chris,

The highest NO2 and CO impacts result from the steam-blow commission activity with the turbines operating at 50% load, which also has the highest emission rates. Attached is Table 5.1C.3 from Appendix 5.1C of the permit application. This table shows the commissioning NO2 and CO impacts for each commissioning scenario and year of meteorological data. Table 5.1C.3 was used to create Table 5.1-28. Since the SO2 and PM10/2.5 emissions during commissioning would be lower (since the turbines are fired at lower heat inputs during commissioning, thus less total mass) than the operational SO2 and PM10/2.5 emissions, we incorporated the operational modeling results for SO2 and PM10/2.5 (from Table 5.1-29) into Table 5.1-28.

I have also attached Table 5.1C.1 for Appendix 5.1C which shows the emission and exhaust parameters used in the commissioning modeling.

I still owe you the start up emissions on a per minute and incremental load basis to show how we came up with the total mass per start event. I have the table of incremental load and emissions per start event but wanted to also correlate that to the timing of the start so I've asked our vendor to reproduce the table to show the time, incremental load and emissions through a start event. I hope to have that to you this week.

Thanks

Stephen.

From: Chris Perri [mailto:CPerri@aqmd.gov]
Sent: Tuesday, October 30, 2012 3:47 PM
To: Stephen O'Kane
Subject: Commissioning Model

Hi Stephen –

I'm looking at page 5.1-23 where it talks about the modeling done for commissioning. I wasn't clear on which emission rates/stack parameters were used in the model. From what I can tell, there were 3 commissioning activities that were looked at, listed in Table 5.1-23 as 1) CTG Testing, 2) Steam Blows, and 3) Steam Safety Valve Settings, along with 3 turbines in cold start up. Which one of the commissioning scenarios results in the impacts listed in Table5.1-28?

Chris Perri
Air Quality Engineer
South Coast Air Quality Management District
(909) 396-2696

an acceptance of a contract offer. This e-Mail does not constitute consent to the use of sender's contact information for direct marketing purposes or for transfers of data to third parties.

Huntington Beach Energy Project
Table 5.1C.3
Commissioning Modeling Results Summary
June 2012

Scenario	Year	NO_2 ($\mu g/m^3$)	CO ($\mu g/m^3$)	
		1-hr	1-hr	8-hr
5% Load	2005	37.4	2437	1027
	2006	56.4	3733	1877
	2007	65.6	4275	1606
40% Load	2005	22.6	2214	962
	2006	32.7	3247	1738
	2007	36.7	3591	1471
50% Load	2005	98.7	5284	2313
	2006	142	7688	4157
	2007	161	8582	3544
100% Load	2005	14.8	55.3	962
	2006	15.6	53.7	1738
	2007	19.3	56.8	1471

Huntington Beach Energy Project
Table 5.1C.1
Commissioning Source Parameters for AERMOD Input
June 2012

Point Sources

Scenario	Building Name	Easting (X) (m)	Northing (Y) (m)	Base Elevation (m)	Stack Height (m)	Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)	NO_2 (g/s)	NO_2 (lb/hr)	CO (g/s)	CO (lb/hr)
5% Load	Stack 1	409185	3723252	3.7	36.6	500	10.1	5.49	6.11	48.5	215.4	1709
	Stack 2	409216	3723231	3.7	36.6	500	10.1	5.49	6.11	48.5	215.4	1709
	Stack 3	409245	3723210	3.7	36.6	500	10.1	5.49	6.11	48.5	215.4	1709
	Stack 4	409522	3723157	3.7	36.6	461	15.4	5.49	3.21	25.5	14.53	115.3
	Stack 5	409522	3723194	3.7	36.6	461	15.4	5.49	3.21	25.5	14.53	115.3
	Stack 6	409522	3723230	3.7	36.6	461	15.4	5.49	3.21	25.5	14.53	115.3
40% Load	Stack 1	409185	3723252	3.7	36.6	473	9.9	5.49	3.27	26.0	172.9	1373
	Stack 2	409216	3723231	3.7	36.6	473	9.9	5.49	3.27	26.0	172.9	1373
	Stack 3	409245	3723210	3.7	36.6	473	9.9	5.49	3.27	26.0	172.9	1373
	Stack 4	409522	3723157	3.7	36.6	461	15.4	5.49	3.21	25.5	14.53	115.3
	Stack 5	409522	3723194	3.7	36.6	461	15.4	5.49	3.21	25.5	14.53	115.3
	Stack 6	409522	3723230	3.7	36.6	461	15.4	5.49	3.21	25.5	14.53	115.3
50% Load	Stack 1	409185	3723252	3.7	36.6	466	9.9	5.49	13.82	109.7	399.3	3169
	Stack 2	409216	3723231	3.7	36.6	466	9.9	5.49	13.82	109.7	399.3	3169
	Stack 3	409245	3723210	3.7	36.6	466	9.9	5.49	13.82	109.7	399.3	3169
	Stack 4	409522	3723157	3.7	36.6	461	15.4	5.49	3.21	25.5	14.53	115.3
	Stack 5	409522	3723194	3.7	36.6	461	15.4	5.49	3.21	25.5	14.53	115.3
	Stack 6	409522	3723230	3.7	36.6	461	15.4	5.49	3.21	25.5	14.53	115.3
100% Load	Stack 1	409185	3723252	3.7	36.6	472	22.7	5.49	5.29	42.0	3.57	28.4
	Stack 2	409216	3723231	3.7	36.6	472	22.7	5.49	5.29	42.0	3.57	28.4
	Stack 3	409245	3723210	3.7	36.6	472	22.7	5.49	5.29	42.0	3.57	28.4
	Stack 4	409522	3723157	3.7	36.6	461	15.4	5.49	3.21	25.5	14.53	115.3
	Stack 5	409522	3723194	3.7	36.6	461	15.4	5.49	3.21	25.5	14.53	115.3
	Stack 6	409522	3723230	3.7	36.6	461	15.4	5.49	3.21	25.5	14.53	115.3

Attachment DR9-1
Cumulative Source Public Records Request Correspondence with SCAQMD

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Information Management
Public Records Unit

Direct Dial: (909) 396-3700
FAX: (909) 396-3330

PUBLIC RECORDS REQUEST FORM

PRU Office Use Only
CONTROL NUMBER

ATTENTION REQUESTOR: To expedite your request for District records, please fill out this form completely, and identify specifically the type of records you are requesting. Please limit your request to one facility or one site address for each request form filed, and three requested items per form. Additional forms or pages can be used if requesting information for more than one facility or for records not identified on this form. Requests should reasonably describe identifiable records prepared, owned, used, or retained by the District. Public Records Unit staff is available to assist you in identifying those records in the District's possession. The District is not required by law to create a new record or list from an existing record.

REQUESTOR INFORMATION

NAME: Keith McGregor		DATE: 5/30/2012
COMPANY: CH2M HILL		
MAILING ADDRESS: 2485 Natomas Park Drive, Suite 600		
CITY: Sacramento	STATE: CA	ZIP CODE: 95833
PHONE NUMBER: (916) 286-0221	FAX NUMBER: (916) 614-3450	
EMAIL ADDRESS: kmcgrego@ch2m.com		

REQUESTED RECORDS (*3 items per form*)

☐ Applications (APPLS)	☐ Complaints	☐ Asbestos Notifications/Records
☐ Permits to Operate (P/O)	☐ Site Inspection Reports (I/R)	☐ Facility Potential to Emit (PTE)
☐ Equipment List Report (EQL)	☐ Emissions Summary	☐ Facility Positive Balance (NSR)
☐ Notices of Violation (NOV)	☐ Source Test Reports (S/T RPTS)	☐ Toxic-Health Risk Assessment (HRA)
☐ Notices to Comply (N/C)	☐ Air Monitoring Data	✔ Other (describe below or on additional pages):

See attached memo.

TIME PERIOD OF DOCUMENTS REQUESTED From: To:

REQUESTED FACILITY INFORMATION (If Applicable)

FACILITY NAME:		
FACILITY ADDRESS:		
CITY:	STATE:	ZIP CODE:
FACILITY I.D. NO. (if known):	APPL. AND/OR PERMIT NO. (if known):	

***Direct cost of duplication**: $.15 per page for paper copies (first 10 pages free) and $5.00 per copied audio tape. No charge for copied Diskettes or CDs. Transfer of gathered electronic records onto CD or Diskette typically costs $10.00 each, but costs will vary (see Instructions for Requesting Records).*

✔ I wish to inspect the requested records, where applicable, or receive the requested records electronically at no charge. I do not want copies produced at this time.
☐ I request that the SCAQMD contact me prior to copying the requested records if the cost exceeds $20.00.
☐ I would like copies of the requested records and I hereby agree to reimburse the SCAQMD for the direct cost of duplicationin accordance with Gov. Code Sec. 6253(b).

Signature of Requestor

Note: After a preliminary estimate, advance payment may be required.

Public Records Request for Cumulative Source Information for the Huntington Beach Energy Project

PREPARED FOR: South Coast Air Quality Management District

PREPARED BY: Keith McGregor/CH2M HILL
Jerry Salamy/CH2MHILL

DATE: May 30, 2012

PROJECT NUMBER: 424103

CH2MHILL is currently working on the preparation of an Application for Certification (AFC) for the Huntington Beach Energy Project (HBEP). AES Southland Development, LLC, (AES) proposes to construct the HBEP at the existing AES Huntington Beach Generating Station site at 21730 Newland Street, Huntington Beach, CA 92646. The HBEP will consist of two three-on-one combined-cycle power blocks with a net capacity of 939 megawatts. Each power block will consist of three Mitsubishi Power Systems Americas (MPSA) 501DA combustion turbines, one steam turbine, and an air cooled condenser.

A cumulative air quality modeling impacts analysis will be required by the California Energy Commission (CEC) as part of the AFC process. Prior to completing the cumulative impacts analysis, the CEC requests that the applicant contact the respective air districts to obtain the appropriate source information. Therefore, on behalf of AES, CH2M HILL would like to request a list of all stationary sources (including their physical address) of new or modified emissions which meet each of the following criteria:

1) sources that are located within a six-mile radius, and
2) sources that have recently received construction permits but are not yet operational or are currently in the permitting process (such as, the NSR or CEQA permitting process), and
3) sources that have a potential to emit five tons or more per year of NOx, CO, PM_{10}, $PM_{2.5}$, or SOx.

Based on the three criteria above, it is anticipated the following sources would be excluded from the cumulative impacts analysis: VOC only sources, equipment shutdowns, permit-exempt equipment registrations, rule compliance, permit renewals, or replacement/system upgrades.

The six MPSA 501DA turbines will have the following coordinates (UTM Coordinates, NAD83, zone 11):

East (meters)	North (meters)
409185.3	3723251.6
409215.5	3723230.8
409245.4	3723209.9
409522.2	3723157.1
409521.9	3723193.8
409521.5	3723230.3

If you have any questions regarding this request or if there are additional data request forms required, please contact Keith McGregor (kmcgrego@ch2m.com) at (916) 286-0221 or Jerry Salamy (jerry.salamy@ch2m.com) at (916) 286-0270.

From:	McGregor, Keith/SAC
To:	"Lisa Ramos"; Salamy, Jerry/SAC
Subject:	RE: PUBLIC RECORDS REQUEST 68898 - HBEP
Date:	Tuesday, June 12, 2012 10:54:00 AM
Attachments:	image001.png Huntington_Beach_Energy_Project_zipcodes.pdf

Good Morning Lisa,

Please find attached the list of zip codes within a 6 mile radius of the Huntington Beach Energy Project site.

Let me know if you have any questions or if additional information is needed.

Thank you,

Keith McGregor
Project Manager
CH2MHILL
2485 Natomas Park Drive Suite 600
Sacramento, CA 95833
Direct: (916) 286-0221
Mobile: (916) 705-7624
Fax: (916) 614-3450

From: Lisa Ramos [mailto:lramos1@aqmd.gov]
Sent: Friday, June 01, 2012 2:43 PM
To: Salamy, Jerry/SAC
Cc: McGregor, Keith/SAC; Lisa Ramos
Subject: PUBLIC RECORDS REQUEST 68898

JERRY SALAMY
CONTROL 68898

AS PER OUR CONVERSATION , YOU WILL PROVIDE US WITH A LIST OF ZIP CODES WITHIN THE 6 MILE RADIUS SO THAT WE CAN PROCEED WITH YOUR REQUEST.

THANKS,

Lisa Ramos
Public Records Unit
909.396.3211

Huntington Beach Energy Project
List of Zip Codes within a 6-mile Radius of the HBEP
June 2012

NAME	POSTAL
Huntington Beach	92648
Santa Ana	92704
Midway City	92655
Huntington Beach	92647
Huntington Beach	92649
Westminster	92683
Costa Mesa	92627
Fountain Valley	92708
Costa Mesa	92626
Newport Beach	92661
Newport Beach	92660
Huntington Beach	92646
Santa Ana	92707
Newport Beach	92663
Newport Beach	92662
Corona del Mar	92625

Information Management
Public Records Unit

Direct Dial (909) 396-3700
Fax:(909) 396-3330

COMPLETION LETTER

June 19, 2012

KEITH MCGREGOR
CH2M HILL
2485 NATOMAS PARK DR.# SUITE 600
SACRAMENTO, CA 95833

Ref.: CONTROL NO. 68898
Received 5/30/2012

Re: LIST OF STATIONARY SOURCES FO NEW/MODIFIED EMISSIONS.

After a thorough search of this agency's records, the following records were found:
LIST OF STATIONARY SOURCES FO NEW/MODIFIED EMISSIONS.

YOUR REQUESTED RECORDS WERE PROVIDED ELECTRONICALLY ON 06/19/2012

If you have any questions, please do not hesitate to contact me, Tuesday through Friday, **8:00 a.m**. to **4:30 p.m.**

Sincerely,

LISA RAMOS x3211
For Colleen Paine
Public Records Coordinator

:lr

Facility ID	Facility Name	SIC Code	SIC Code Description	Appl Status	UTM East	UTM North	Street Address	City	State	Zip Code	ZIP4	Area Code	Phone Nbr	Rep First Name	Rep Last Name	Fac CO (tons yrly)	Fac NOx (tons yrly)	Fac Sox (tons yrly)	Fac PM10 (tons yrly)
11818	HIXSON METAL FINISHING	3479	METAL COATING/ALLIED SERVICES	20	413.73	3721.32	817-853 PRODUCTION PL	NEWPORT BEACH	CA	92663	2809	714	6454800	THOMAS	WALLIENG	4	20	0	68
16660	THE BOEING COMPANY	3769	SPACE VEHICLE EQUIPMENT, NEC	25	403.98	3734.11	5301 BOLSA AVE	HUNTINGTON BEACH	CA	92647	2099	714	8962416	ROBERT	COPELAND	6	33	0	8.4
17301	ORANGE COUNTY SANITATION DISTRICT	4952	SEWERAGE SYSTEMS	20, 25	413.24	3728.49	10844 ELLIS AVE	FOUNTAIN VALLEY	CA	92708	7018	714	5937082	TERRY	AHN	1372	718	78	137
24427	HUNTINGTON BEACH CITY, WATER DEPT	9511	AIR WATER & SOLID WASTE MANAG	20	407.33	3732.13	16221 GOTHARD ST	HUNTINGTON BEACH	CA	92648		714	5365503	HOWARD D	JOHNSON	10	6	0	0
29110	ORANGE COUNTY SANITATION DISTRICT	4952	SEWERAGE SYSTEMS	25	410.92	3722.36	22212 BROOKHURST ST	HUNTINGTON BEACH	CA	92646	8457	714	5937082	TERRY	AHN	3566	1141	156	102
42775	WEST NEWPORT OIL CO	1311	CRUDE PETRO AND NATURAL GAS	20	412.671	3722.01	1080 W 17TH ST	COSTA MESA	CA	92627	4503	949	6311100	TOM	MCCLOSKEY	28	39	0	4
71510	ORANGE, COUNTY OF - JOHN WAYNE AIRPOR	4581	AIRPORTS/FLYING FIELDS/SVCS	20	420.36	3727.07	18601 AIRPORT WAY	SANTA ANA	CA	92707		949	2526269	MARIA	POPE	93	34	0	13
111110	BRISTOL FIBERLITE INDUSTRIES, INC	3446	ARCHITECTURAL METAL WORK	25	420.006	3730.31	401 E GOETZ AVE	SANTA ANA	CA	92707		714	5452364	CHARLES	SCHMIDT	3	7	0	0
131732	NEWPORT FAB, LLC		Computer and Electronic Product Mfg.	20	419.622	3723.81	4321 JAMBOREE RD	NEWPORT BEACH	CA	92660		949	4358257	MARCELO	TREVINO	167	96	2	46
148232	CHEVRON ENVIRONMENTAL MANAGEMENT C(			20	408.34	3728.46	18501 BEACH BLVD	HUNTINGTON BEACH	CA	92648	2053	714	2576406	HAL	DIHM	1	5	0	0
166073	BETA OFFSHORE	1311	CRUDE PETRO AND NATURAL GAS	20, 25	406.35	3725.82	OCS LEASE PARCELS P300/P301	HUNTINGTON BEACH	CA	92648		562	6281526	MARINA	ROBERTSON	1400	4649	361	401
167066	ARLON GRAPHICS L.L.C.	2672	PAPER COATED & LAMINATED, NEC	20	414.79	3730.25	2811 S HARBOR BLVD	SANTA ANA	CA	92704	5805	714	4314221	ROBERT	NICHOLSON	12	41	0	3
168160	YAKULT U.S.A., INC.		Wholesale Trade	20	413.97	3730.33	17235 NEWHOPE ST	FOUNTAIN VALLEY	CA	92708		310	5427065	YUTAKA	MISUMI	14	2	0	2
169754	OXY USA INC	1311	CRUDE PETRO AND NATURAL GAS	20	406.22	3726.28	20101 GOLDENWEST ST	HUNTINGTON BEACH	CA	92648	2628	562	6243314	DIANA	LANG	5264	746	4	45
800302	CHEVRON PRODUCTS COMPANY	5171	PETRO BULK STATIONS/TERMINALS	20	407.34	3729.42	17881 GOTHARD ST	HUNTINGTON BEACH	CA	92647	6252	909	3969210	W CHUNG	LEE	25	19	1	0
800419	PLAINS WEST COAST TERMINALS LLC	4911	ELECTRIC SERVICES	20	409.155	3723.23	21652 NEWLAND ST	HUNTINGTON BEACH	CA	92646		562	7282358	MARK	REESE	292	27	0	4

20 = Ready for Permit to construct
25 = Permit to construct granted

Attachment DR10-1
Refined List of SCAQMD Cumulative Source Parameter Information Requests

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Information Management
Public Records Unit

Direct Dial: (909) 396-3700
FAX: (909) 396-3330

PUBLIC RECORDS REQUEST FORM

PRU Office Use Only
CONTROL NUMBER

ATTENTION REQUESTOR: To expedite your request for District records, please fill out this form completely, and identify specifically the type of records you are requesting. Please limit your request to one facility or one site address for each request form filed, and three requested items per form. Additional forms or pages can be used if requesting information for more than one facility or for records not identified on this form. Requests should reasonably describe identifiable records prepared, owned, used, or retained by the District. Public Records Unit staff is available to assist you in identifying those records in the District's possession. The District is not required by law to create a new record or list from an existing record.

REQUESTOR INFORMATION

NAME: Beth Storelli		DATE: 10/5/12
COMPANY: CH2M HILL		
MAILING ADDRESS: 2485 Natomas Park Drive, Suite 600		
CITY: Sacramento	STATE: Ca	ZIP CODE: 95833
PHONE NUMBER: (916) 286-0259	FAX NUMBER: (916) 920-8463	
EMAIL ADDRESS: elizabeth.storelli@ch2m.com		

REQUESTED RECORDS (*3 items per form*)

✔ Applications (APPLS)	☐ Complaints	☐ Asbestos Notifications/Records
✔ Permits to Operate (P/O)	☐ Site Inspection Reports (I/R)	☐ Facility Potential to Emit (PTE)
☐ Equipment List Report (EQL)	☐ Emissions Summary	☐ Facility Positive Balance (NSR)
☐ Notices of Violation (NOV)	☐ Source Test Reports (S/T RPTS)	☐ Toxic-Health Risk Assessment (HRA)
☐ Notices to Comply (N/C)	☐ Air Monitoring Data	☐ Other (describe below or on additional pages):

Please send electronic copies of the permits and applications for the list of sources attached.

TIME PERIOD OF DOCUMENTS REQUESTED From: To:

REQUESTED FACILITY INFORMATION (If Applicable)

FACILITY NAME: Orange County Sanitation District		
FACILITY ADDRESS: 10844 Ellis Avenue		
CITY: Fountain Valley	STATE: Ca	ZIP CODE: 92708
FACILITY I.D. NO. (if known): 17301	APPL. AND/OR PERMIT NO. (if known):	

***Direct cost of duplication**: $.15 per page for paper copies (first 10 pages free) and $5.00 per copied audio tape. No charge for copied Diskettes or CDs. Transfer of gathered electronic records onto CD or Diskette typically costs $10.00 each, but costs will vary (see Instructions for Requesting Records).*

✔ I wish to inspect the requested records, where applicable, or receive the requested records electronically at no charge. I do not want copies produced at this time.
☐ I request that the SCAQMD contact me prior to copying the requested records if the cost exceeds $20.00.
☐ I would like copies of the requested records and I hereby agree to reimburse the SCAQMD for the direct cost of duplicationin accordance with Gov. Code Sec. 6253(b).

Elizabeth Storelli

Signature of Requestor

ORANGE COUNTY SANITATION DISTRICT - Facility 17301 Sources							
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status
486760	G2955	5/22/2009	ACTIVE	Basic	I C E (>500 HP) NAT & DIGESTER GAS	8/12/2008	PERMIT TO OPERATE GRANTED
486792	G2956	5/22/2009	ACTIVE	Basic	I C E (>500 HP) NAT & DIGESTER GAS	8/12/2008	PERMIT TO OPERATE GRANTED
486793	G2957	5/22/2009	ACTIVE	Basic	I C E (>500 HP) NAT & DIGESTER GAS	8/12/2008	PERMIT TO OPERATE GRANTED
494460				Basic	BOILER (5-20 MMBTU/HR) NAT & PROC GAS	12/30/2008	PERMIT TO CONSTRUCT GRANTED
491468	G1549	2/19/2009	ACTIVE	Basic	UNSPECIFIED EQUIP/PROCESS (SCH C)	10/30/2008	PERMIT TO OPERATE GRANTED
520795				Basic	Title V Permit Revision	6/12/2009	BANKING/ PLAN GRANTED
514393				Basic	Title V Permit Revision	2/6/2009	BANKING/ PLAN GRANTED

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REQUESTOR INFORMATION

NAME: Beth Storelli		DATE: 10/05/12
COMPANY: CH2M HILL		
MAILING ADDRESS: 2485 Natomas Park Drive, Suite 600		
CITY: Sacramento	STATE: Ca	ZIP CODE: 95833
PHONE NUMBER: (916) 286-0259	FAX NUMBER: (916) 920-8463	
EMAIL ADDRESS: elizabeth.storelli@ch2m.com		

REQUESTED RECORDS (*3 items per form*)

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TIME PERIOD OF DOCUMENTS REQUESTED From: To:

REQUESTED FACILITY INFORMATION (If Applicable)

FACILITY NAME: Huntington Beach City, Water Department		
FACILITY ADDRESS: 16221 Gothard Street		
CITY: Huntington Beach	STATE: Ca	ZIP CODE: 92648
FACILITY I.D. NO. (if known): 24427	APPL. AND/OR PERMIT NO. (if known):	

***Direct cost of duplication**: $.15 per page for paper copies (first 10 pages free) and $5.00 per copied audio tape. No charge for copied Diskettes or CDs. Transfer of gathered electronic records onto CD or Diskette typically costs $10.00 each, but costs will vary (see Instructions for Requesting Records).*

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Elizabeth Storelli

Signature of Requestor

HUNTINGTON BEACH CITY, WATER DEPT - Facility 24427 Sources							
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status
532000	G19503	7/26/2012	ACTIVE	Basic	I C E (50-500 HP) N-EM STAT NAT GAS ONLY	2/3/2012	PERMIT TO OPERATE GRANTED

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COMPANY: CH2M HILL		
MAILING ADDRESS: 2485 Natomas Park Drive, Suite 600		
CITY: Sacramento	STATE: Ca	ZIP CODE: 95833
PHONE NUMBER: (916) 286-0259	FAX NUMBER: (916) 920-8463	
EMAIL ADDRESS: elizabeth.storelli@ch2m.com		

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☐ Notices to Comply (N/C)	☐ Air Monitoring Data	☐ Other (describe below or on additional pages):

Please send electronic copies of the permits and applications for the list of sources attached.

TIME PERIOD OF DOCUMENTS REQUESTED From: To:

REQUESTED FACILITY INFORMATION (If Applicable)

FACILITY NAME: Orange County Sanitation District		
FACILITY ADDRESS: 22212 Brookhurst St		
CITY: Huntington Beach	STATE: Ca	ZIP CODE: 92646
FACILITY I.D. NO. (if known): 29110	APPL. AND/OR PERMIT NO. (if known):	

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Signature of Requestor

ORANGE COUNTY SANITATION DISTRICT - Facility 29110 Sources							
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status
480908	G2958	5/22/2009	ACTIVE	Basic	I C E (>500 HP) NAT & DIGESTER GAS	4/2/2008	PERMIT TO OPERATE GRANTED
480909	G2959	5/22/2009	ACTIVE	Basic	I C E (>500 HP) NAT & DIGESTER GAS	4/2/2008	PERMIT TO OPERATE GRANTED
480911	G2964	5/22/2009	ACTIVE	Basic	I C E (>500 HP) NAT & DIGESTER GAS	4/2/2008	PERMIT TO OPERATE GRANTED
480912	G2966	5/22/2009	ACTIVE	Basic	I C E (>500 HP) NAT & DIGESTER GAS	4/2/2008	PERMIT TO OPERATE GRANTED
480916	G2967	5/22/2009	ACTIVE	Basic	I C E (>500 HP) NAT & DIGESTER GAS	4/2/2008	PERMIT TO OPERATE GRANTED
474766	F95584	2/27/2008	ACTIVE	Basic	I C E (>500 HP) EM ELEC GEN DIESEL	10/19/2007	PERMIT TO OPERATE GRANTED
474767	F95585	2/27/2008	ACTIVE	Basic	I C E (>500 HP) EM ELEC GEN DIESEL	10/19/2007	PERMIT TO OPERATE GRANTED
474768	F95586	2/27/2008	ACTIVE	Basic	I C E (>500 HP) EM ELEC GEN DIESEL	10/19/2007	PERMIT TO OPERATE GRANTED
474769	F95587	2/27/2008	ACTIVE	Basic	I C E (>500 HP) EM ELEC GEN DIESEL	10/19/2007	PERMIT TO OPERATE GRANTED
474770	F95588	2/27/2008	ACTIVE	Basic	I C E (>500 HP) EM ELEC GEN DIESEL	10/19/2007	PERMIT TO OPERATE GRANTED
540708				Basic	I C E (>500 HP) NAT & DIGESTER GAS	7/18/2012	ASSIGNED TO ENGINEER - CLASS III
540709				Basic	I C E (>500 HP) NAT & DIGESTER GAS	7/18/2012	ASSIGNED TO ENGINEER - CLASS III
540710				Basic	I C E (>500 HP) NAT & DIGESTER GAS	7/18/2012	ASSIGNED TO ENGINEER - CLASS III
540711				Basic	I C E (>500 HP) NAT & DIGESTER GAS	7/18/2012	ASSIGNED TO ENGINEER - CLASS III
540712				Basic	I C E (>500 HP) NAT & DIGESTER GAS	7/18/2012	ASSIGNED TO ENGINEER - CLASS III
526135	G18570	6/7/2012	ACTIVE	Basic	UNSPECIFIED EQUIP/PROCESS (SCH B)	8/4/2011	PERMIT TO OPERATE GRANTED
455673	F81556	4/12/2006	ACTIVE	Basic	I C E (50-500 HP) EM ELEC GEN-DIESEL	4/12/2006	PERMIT TO OPERATE GRANTED
455671	F81555	4/12/2006	ACTIVE	Basic	I C E (50-500 HP) EM ELEC GEN-DIESEL	4/12/2006	PERMIT TO OPERATE GRANTED
455670	F81554	4/12/2006	ACTIVE	Basic	I C E (50-500 HP) EM ELEC GEN-DIESEL	4/12/2006	PERMIT TO OPERATE GRANTED
499431				Basic	Title V Permit Revision	3/5/2009	BANKING/ PLAN GRANTED

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MAILING ADDRESS: 2485 Natomas Park Drive, Suite 600		
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EMAIL ADDRESS: elizabeth.storelli@ch2m.com		

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Please send electronic copies of the permits and applications for the list of sources attached.

TIME PERIOD OF DOCUMENTS REQUESTED From: To:

REQUESTED FACILITY INFORMATION (If Applicable)

FACILITY NAME: West Newport Oil Company		
FACILITY ADDRESS: 1080 W 17th Street		
CITY: Costa Mesa	STATE: Ca	ZIP CODE: 92627
FACILITY I.D. NO. (if known): 42775	APPL. AND/OR PERMIT NO. (if known):	

***Direct cost of duplication**: $.15 per page for paper copies (first 10 pages free) and $5.00 per copied audio tape. No charge for copied Diskettes or CDs. Transfer of gathered electronic records onto CD or Diskette typically costs $10.00 each, but costs will vary (see Instructions for Requesting Records).*

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Signature of Requestor

WEST NEWPORT OIL COMPANY - Facility 42775 Sources							
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status
536895			ACTIVE	Basic	BOILER (5-20 MMBTU/HR) NAT GAS ONLY	5/17/2012	PERMIT TO OPERATE GRANTED
509314				Basic	BOILER (5-20 MMBTU/HR) COMB GAS-LPG	3/24/2010	APPLICATION CHANGED FROM CLASS I - III
512550				Basic	FACILITY PERMIT AMEND-RECLAIM/TITLE V	7/1/2010	ASSIGNED TO ENGINEER - CLASS III

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EMAIL ADDRESS: elizabeth.storelli@ch2m.com		

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TIME PERIOD OF DOCUMENTS REQUESTED From: To:

REQUESTED FACILITY INFORMATION (If Applicable)

FACILITY NAME: Beta Offshore		
FACILITY ADDRESS: OCS LEASE PARCELS P300/P301		
CITY:	STATE: Ca	ZIP CODE: 92648
FACILITY I.D. NO. (if known): 166073	APPL. AND/OR PERMIT NO. (if known):	

***Direct cost of duplication**: $.15 per page for paper copies (first 10 pages free) and $5.00 per copied audio tape. No charge for copied Diskettes or CDs. Transfer of gathered electronic records onto CD or Diskette typically costs $10.00 each, but costs will vary (see Instructions for Requesting Records).*

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Elizabeth Storelli

Signature of Requestor

BETA OFFSHORE - Facility 166073 Sources							
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status
517842			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	1/18/2011	PERMIT TO OPERATE GRANTED
517841			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	1/18/2011	PERMIT TO OPERATE GRANTED
517840			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	1/18/2011	PERMIT TO OPERATE GRANTED
517839			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	1/18/2011	PERMIT TO OPERATE GRANTED
517838			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	1/18/2011	PERMIT TO OPERATE GRANTED
516030				Basic	I C E (>500 HP) N-EM STAT DIESEL	11/2/2010	PERMIT TO CONSTRUCT GRANTED
516026				Basic	I C E (>500 HP) N-EM STAT DIESEL	11/2/2010	APPLICATION CHANGED FROM CLASS I - III
516027				Basic	I C E (>500 HP) N-EM STAT DIESEL	11/2/2010	APPLICATION CHANGED FROM CLASS I - III
516028				Basic	I C E (>500 HP) N-EM STAT DIESEL	11/2/2010	APPLICATION CHANGED FROM CLASS I - III
516029				Basic	I C E (>500 HP) N-EM STAT DIESEL	11/2/2010	APPLICATION CHANGED FROM CLASS I - III
516024			ACTIVE	Basic	I C E (50-500 HP) EM ELEC GEN-DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
516034			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
516037			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
516020			ACTIVE	Basic	I C E (>500 HP) EM ELEC GEN DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
516021			ACTIVE	Basic	I C E (>500 HP) EM ELEC GEN DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
516022			ACTIVE	Basic	I C E (>500 HP) EM ELEC GEN DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
516023			ACTIVE	Basic	I C E (>500 HP) EM ELEC GEN DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
516025			ACTIVE	Basic	I C E (>500 HP) N-EM STAT DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
516045			ACTIVE	Control	FLARE, OTHER	11/2/2010	PERMIT TO OPERATE GRANTED
516047			ACTIVE	Control	FLARE, OTHER	11/2/2010	PERMIT TO OPERATE GRANTED
531455			ACTIVE	Basic	TURBINE ENGINE (<=50 MW) N G/P G-DIESEL	1/24/2012	PERMIT TO OPERATE GRANTED
516038			ACTIVE	Basic	TURBINE ENGINE (<=50 MW) N G/P G-DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
516039			ACTIVE	Basic	TURBINE ENGINE (<=50 MW) N G/P G-DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
516040			ACTIVE	Basic	TURBINE ENGINE (<=50 MW) N G/P G-DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
516041			ACTIVE	Basic	TURBINE ENGINE (<=50 MW) N G/P G-DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
516043			ACTIVE	Basic	TURBINE ENGINE (<=50 MW) N G/P G-DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
516044			ACTIVE	Basic	TURBINE ENGINE (<=50 MW) N G/P G-DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
516046			ACTIVE	Basic	TURBINE ENGINE (<=50 MW) N G/P G-DIESEL	11/2/2010	PERMIT TO OPERATE GRANTED
533625				Basic	FACILITY PERMIT AMEND-RECLAIM/TITLE V	3/8/2012	ASSIGNED TO ENGINEER - CLASS III
531454				Basic	FACILITY PERMIT AMEND-RECLAIM/TITLE V	1/24/2012	ASSIGNED TO ENGINEER - CLASS III
517837				Basic	FACILITY PERMIT AMEND-RECLAIM/TITLE V	1/18/2011	BANKING/ PLAN GRANTED

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COMPANY: CH2M HILL		
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CITY: Sacramento	STATE: Ca	ZIP CODE: 95833
PHONE NUMBER: (916) 286-0259	FAX NUMBER: (916) 920-8463	
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☐ Notices to Comply (N/C)	☐ Air Monitoring Data	✔ Other (describe below or on additional pages):

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TIME PERIOD OF DOCUMENTS REQUESTED From: To:

REQUESTED FACILITY INFORMATION (If Applicable)

FACILITY NAME: Arlon Graphics LLC		
FACILITY ADDRESS: 2811 S Harbor Blvd		
CITY: Santa Ana	STATE: Ca	ZIP CODE: 92704
FACILITY I.D. NO. (if known): 167066	APPL. AND/OR PERMIT NO. (if known):	

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Elizabeth Storelli

Signature of Requestor

ARLON GRAPHICS L.L.C. - Facility 167066 Sources							
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status
532299				Basic	TITLE V PERMIT RENEWAL APPLICATION	7/5/2011	BANKING/ PLAN GRANTED

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REQUESTOR INFORMATION

NAME: Beth Storelli		DATE: 10/05/12
COMPANY: CH2M HILL		
MAILING ADDRESS: 2485 Natomas Park Drive, Suite 600		
CITY: Sacramento	STATE: Ca	ZIP CODE: 95833
PHONE NUMBER: (916) 286-0259	FAX NUMBER: (916) 920-8463	
EMAIL ADDRESS: elizabeth.storelli@ch2m.com		

REQUESTED RECORDS (*3 items per form*)

✔ Applications (APPLS)	☐ Complaints	☐ Asbestos Notifications/Records
✔ Permits to Operate (P/O)	☐ Site Inspection Reports (I/R)	☐ Facility Potential to Emit (PTE)
☐ Equipment List Report (EQL)	☐ Emissions Summary	☐ Facility Positive Balance (NSR)
☐ Notices of Violation (NOV)	☐ Source Test Reports (S/T RPTS)	☐ Toxic-Health Risk Assessment (HRA)
☐ Notices to Comply (N/C)	☐ Air Monitoring Data	✔ Other (describe below or on additional pages):

Please send electronic copies of the permits and applications for the list of sources attached. We would also like to request the Engineering Evaluations, i.e. the Form-E and Form-PS for the attached sources. We are doing a cumulative air quality analysis and therefore need stack height/flow and emission rates, etc.

TIME PERIOD OF DOCUMENTS REQUESTED From: To:

REQUESTED FACILITY INFORMATION (If Applicable)

FACILITY NAME: Yakult U.S.A., INC.		
FACILITY ADDRESS: 17235 Newhope Street		
CITY: Fountain Valley	STATE: Ca	ZIP CODE: 92708
FACILITY I.D. NO. (if known): 168160	APPL. AND/OR PERMIT NO. (if known):	

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☐ I request that the SCAQMD contact me prior to copying the requested records if the cost exceeds $20.00.
☐ I would like copies of the requested records and I hereby agree to reimburse the SCAQMD for the direct cost of duplicationin accordance with Gov. Code Sec. 6253(b).

Elizabeth Storelli

Signature of Requestor

YAKULT U.S.A., INC. - Facility 168160 Sources							
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status
524509				Basic	BOILER (5-20 MMBTU/HR) NAT GAS ONLY	6/24/2011	APPLICATION CHANGED FROM CLASS I - III
524510				Basic	BOILER (5-20 MMBTU/HR) NAT GAS ONLY	6/24/2011	APPLICATION CHANGED FROM CLASS I - III

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

Information Management
Public Records Unit

Direct Dial: (909) 396-3700
FAX: (909) 396-3330

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EMAIL ADDRESS: elizabeth.storelli@ch2m.com		

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☐ Notices of Violation (NOV)	☐ Source Test Reports (S/T RPTS)	☐ Toxic-Health Risk Assessment (HRA)
☐ Notices to Comply (N/C)	☐ Air Monitoring Data	☐ Other (describe below or on additional pages):

Please send electronic copies of the permits and applications for the list of sources attached.

TIME PERIOD OF DOCUMENTS REQUESTED From: To:

REQUESTED FACILITY INFORMATION (If Applicable)

FACILITY NAME: OXY USA INC		
FACILITY ADDRESS: 20101 Goldenwest Street		
CITY: Huntington Beach	STATE: Ca	ZIP CODE: 92648
FACILITY I.D. NO. (if known): 169754	APPL. AND/OR PERMIT NO. (if known):	

***Direct cost of duplication**: $.15 per page for paper copies (first 10 pages free) and $5.00 per copied audio tape. No charge for copied Diskettes or CDs. Transfer of gathered electronic records onto CD or Diskette typically costs $10.00 each, but costs will vary (see Instructions for Requesting Records).*

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Elizabeth Storelli

Signature of Requestor

OXY USA INC - Facility 169754 Sources							
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status
538851				Basic	HEATER/FURNACE (	6/19/2012	ASSIGNED TO ENGINEER - CLASS I
533146				Basic	BOILER (5-20 MMBTU/HR) NAT GAS ONLY	3/6/2012	ASSIGNED TO ENGINEER - CLASS I
529234			ACTIVE	Basic	HEATER/FURNACE (	11/8/2011	PERMIT TO OPERATE GRANTED
529223			ACTIVE	Basic	I C E (50-500 HP) EM ELEC GEN-DIESEL	11/8/2011	PERMIT TO OPERATE GRANTED
529225			ACTIVE	Basic	I C E (50-500 HP) EM FIRE FGHT-DIESEL	11/8/2011	PERMIT TO OPERATE GRANTED
529224			ACTIVE	Basic	I C E (50-500 HP) EM FIRE FGHT-DIESEL	11/8/2011	PERMIT TO OPERATE GRANTED
529226			ACTIVE	Basic	I C E (50-500 HP) EMERG OTHER, DIESEL	11/8/2011	PERMIT TO OPERATE GRANTED
529240			ACTIVE	Basic	I C E (50-500 HP) N-EM STAT DIESEL	11/8/2011	PERMIT TO OPERATE GRANTED
529236			ACTIVE	Control	FLARE, OTHER	11/8/2011	PERMIT TO OPERATE GRANTED
529235			ACTIVE	Control	TAIL GAS INCINERATOR	11/8/2011	PERMIT TO OPERATE GRANTED
534354				Basic	MICRO-TURBINE NOT NAT GAS,METHANOL OR LPG	3/27/2012	ASSIGNED TO ENGINEER - CLASS I
529232			ACTIVE	Basic	NATURAL GAS DRYING	11/8/2011	PERMIT TO OPERATE GRANTED
529229			ACTIVE	Basic	NATURAL GAS DRYING	11/8/2011	PERMIT TO OPERATE GRANTED

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☐ Notices to Comply (N/C)	☐ Air Monitoring Data	☐ Other (describe below or on additional pages):

Please send electronic copies of the permits and applications for the list of sources attached.

TIME PERIOD OF DOCUMENTS REQUESTED From: To:

REQUESTED FACILITY INFORMATION (If Applicable)

FACILITY NAME: Chevron Products Company		
FACILITY ADDRESS: 17881 Gothard Street		
CITY: Huntington Beach	STATE: Ca	ZIP CODE: 92647
FACILITY I.D. NO. (if known): 800302	APPL. AND/OR PERMIT NO. (if known):	

***Direct cost of duplication**: $.15 per page for paper copies (first 10 pages free) and $5.00 per copied audio tape. No charge for copied Diskettes or CDs. Transfer of gathered electronic records onto CD or Diskette typically costs $10.00 each, but costs will vary (see Instructions for Requesting Records).*

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Elizabeth Storelli

Signature of Requestor

CHEVRON PRODUCTS COMPANY - Facility 800302 Sources							
Application Number	Permit Number	Permit Issued Date	Permit Status	Equipment Type	Equipment Description	Application Date	Application Status
540059				Control	AFTERBURNER, DIRECT FLAME	6/29/2012	ASSIGNED TO ENGINEER - CLASS III
514139				Control	AFTERBURNER, DIRECT FLAME	8/31/2010	ASSIGNED TO ENGINEER - CLASS III
514138				Basic	Title V Permit Revision	8/31/2010	BANKING/ PLAN GRANTED
501915				Basic	Title V Permit Revision	8/26/2009	BANKING/ PLAN GRANTED

Biological Resources (23–34)

BACKGROUND

The AFC (Section 5.2.3.3.1) states that the critical load for atmospheric nitrogen deposition into coastal wetlands is difficult to establish because wetlands subject to tidal exchange have open nutrient cycles. It further states that nitrogen loading in wetlands is often affected by sources other than atmospheric deposition. In addition, it states that air pollution controls limit emissions of oxides of nitrogen and that RECLAIM puts a cap on region wide NOx emissions. The section concludes that the HBEP nitrogen deposition impacts are not expected to contribute significantly to nitrogen loading on coastal salt marshes. However, there is no discussion of the relative location of the proposed project and sensitive habitats that could be affected by nitrogen emissions from HBEP nor is there a quantitative analysis of nitrogen deposition impacts.

Background data that could be used in conjunction with nitrogen deposition modeling for the HBEP could be established using available resources such as the California Energy Commission publication *Assessment of Nitrogen Deposition: Modeling and Habitat Assessment* (CEC-500-2006-032, March 2007). However, since no nitrogen deposition modeling was performed for the HBEP, this step is still needed and the qualitative information provided in the AFC does not support the applicant's conclusion that nitrogen deposition from HBEP emissions would have no impacts on coastal salt marshes. Energy Commission staff believes that nitrogen deposition resulting from emissions from the proposed HBEP, namely nitrogen oxides (NOx) and ammonia (NH_3) could have negative impacts on biological resources and that a quantitative analysis of such impacts is needed.

Impacts of excessive nitrogen deposition to plant communities include direct toxicity, changes in species composition among native species and enhancement of non-native invasive species. The increased dominance and growth of invasive annual grasses is especially prevalent in low-biomass vegetation communities that are naturally nitrogen-limited, such as salt marshes. Invasive non-native vegetation, enhanced by atmospheric nitrogen deposition, affects these species by outcompeting them for space, sunlight, moisture, and nutrients. The salt marshes fringing estuaries intercept a substantial part of the land-derived nitrogen load and thus protect other components of estuaries from eutrophication; loss of these fringing marshes would therefore have wider consequences. Additionally, southern coastal salt marsh, southern coast live oak woodland, and southern dune scrub located in the vicinity of the project site could potentially be impacted by nitrogen deposition contributed by the HBEP. The anticipated nitrogen emissions may contribute to the ongoing (cumulative) degradation of sensitive species habitat located near the project site.

In order to assess impacts to nitrogen-sensitive biological resources, staff requires additional information on nitrogen deposition as established by proper modeling of nitrogen emissions resulting from the HBEP.

DATA REQUEST

23. Please quantify the existing baseline total nitrogen deposition rate in the vicinity of the HBEP in kilograms per hectare per year (kg/ha/yr). The geographical extent of the nitrogen deposition mapping should be directed by the results, i.e. extend geographically to where the deposition is considered below any stated threshold of significance for vegetation communities. Conduct a literature review to identify appropriate thresholds. Thresholds for nitrogen deposition by vegetation type are available within the March 2007 California Energy Commission PIER report, titled "Assessment of Nitrogen Deposition: Modeling and Habitat Assessment," available at: http://www.energy.ca.gov/2006publications/CEC-500-2006-032/CEC-500-2006-032.PDF, and the May 2007 California Energy Commission PIER report, titled "Impacts of Nitrogen Deposition on California Ecosystems and Biodiversity, available at:

http://www.energy.ca.gov/2005publications/CEC-500-2005-165/CEC-500-2005-165.PDF. Please include references and guidelines used in your baseline analyses.

Response: As noted in the Applicant's October 22, 2012, letter the Applicant requests additional time to respond to this data request. The response to this data request will be submitted on December 14, 2012.

DATA REQUEST

24. Please use AERMOD or an equivalent model to provide an analysis of impacts due to total nitrogen deposition from operation of the HBEP. The analysis should specify the amount of total nitrogen deposition in kg/ha/yr at the Huntington Beach Wetlands Conservancy's Coastal Marsh Restoration Complex, the U.S. Army Corps of Engineers (USACE) Salt Marsh Restoration project, the Talbert Nature Preserve, the Bolsa Chica Ecological Reserve, and the Seal Beach National Wildlife Refuge and any other special status habitats, vegetation types, and critical habitat for wet and dry deposition. Please provide the complete citation for references used in determining this number

Response: As noted in the Applicant's October 22, 2012, correspondence to the Siting Committee, the Applicant requires additional time to respond to this data request. The response to this data request will be submitted on December 14, 2012.

DATA REQUEST

25. Please provide an isopleth graphic over USGS 7.5-minute maps (or equally detailed map) of the direct nitrogen deposition rates caused by the project. This will be a graphical depiction of the projects' nitrogen deposition.

Response: As noted in the Applicant's October 22, 2012, correspondence to the Siting Committee, the Applicant requires additional time to respond to this data request. The response to this data request will be submitted on December 14, 2012.

DATA REQUEST

26. Please provide a comprehensive cumulative impact analysis for the direct nitrogen deposition in kg/ha/yr caused by HBEP. Provide an isopleths graphic over USGS 7.5-minute maps of the direct nitrogen deposition values in the cumulative analysis and specify the cumulative nitrogen deposition rate in kg/ha/yr at any affected special status habitat, vegetation type, or critical habitat. The geographical extent of the cumulative nitrogen deposition mapping should be directed by the results, i.e. extend geographically to where the deposition is considered below any stated threshold of significance.

Response: As noted in the Applicant's October 22, 2012, correspondence to the Siting Committee the Applicant requires additional time to respond to this data request. The response to this data request will be submitted on December 14, 2012.

BACKGROUND

The HBEP will be located adjacent to the Huntington Beach Wetlands Conservancy Coastal Marsh Complex and the USACE Salt Marsh Restoration Project. These sensitive ecological reserves support several special-status wildlife species and other sensitive biological resources.

The applicant delineated wetlands as defined by the California Coastal Act, Section 30121: "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens"(AFC Section 5.2.2.2). However, the California Coastal Commission (CCC) has also adopted a one-parameter approach for delineating wetlands as stipulated in Cal. Code Regs., tit. 14, § 13577, which designates the following features to define the upper limits of wetlands:

- The boundary between land with predominantly hydrophytic cover and land with predominantly mesophytic or xerophytic cover;
- The boundary between soil that is predominantly hydric and soil that is predominantly nonhydric; or
- In case of wetlands without qualifying vegetation (including unvegetated wetlands) or soil, the boundary is between land that is flooded or saturated at some time each year and land that is not.

The delineation presented by the applicant does not provide a full assessment of the direct and indirect temporary or permanent impacts to the wetlands under the jurisdiction of the USACE and CCC. Section 5.2.3.2.5 of the AFC (page 5-2-35) determined that HBEP construction would not cause loss or fill of any wetlands. However, as depicted in Figure 5.2-2bR (Attachment DA5.2-5, AFC Supplement: Response to Data Adequacy Review), the proposed project has the potential to affect Estuarine and Marine Wetlands which are jurisdictional to the USACE and CCC.

DATA REQUEST

27. Please provide a wetland delineation using the guidelines of the USACE (1987 USACE Wetlands Delineation Manual) and guidelines of the Cal. Code Regs., tit. 14, § 13577 to assess any direct or indirect temporary impacts to wetlands adjacent to the power plant site and laydown areas.

Response: Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's October 22, 2012, correspondence to the Siting Committee. Notwithstanding such objections, the Applicant provides the following response.

The HBEP is adjacent to the Newland Marsh and Magnolia Marsh subunits of the Huntington Beach Wetlands Conservancy Coastal Marsh Complex; however, the USACE Salt Marsh Restoration Project is located 1.5 miles southeast from the centroid location of the HBEP (see Figure DR27-1a). In addition, the Huntington Beach Wetlands Conservancy Coastal Marsh Complex (aka Huntington Beach Wetlands) and the USACE Salt Marsh Restoration Project have already been identified by the USFWS as estuarine and marine wetland habitat (see Figure DR27-1b; USFWS, 2012). Furthermore, a delineation for jurisdictional wetlands and waters, which comprise the Huntington Beach Wetlands, were conducted for the Huntington Beach Wetlands Conservancy to apply for permits to conduct restoration of the Talbert Marsh, Brookhurst Marsh, Magnolia Marsh (not including upper Magnolia Marsh), and the Talbert Ocean Channel (CCC, 2008). Permits issued for the restoration activities include California Department of Fish and Game Streambed Alteration Agreement No. 1600-2007-0401-R5 and United States Army Corps of Engineers Provisional Permit No. SPL-2007-367-YJC (CCC, 2008). Thus, the Huntington Beach Wetlands have already been delineated; and, therefore, no additional delineation is required since both CDFG and USACE accepted the delineations that were prepared for the previously-listed permits.

The HBEP will not directly impact adjacent wetlands because no construction will occur within these areas. In addition, there are no USACE or section 13577 wetlands located within the HBEP boundary (a detailed description about the fuel oil tank [the tank has been decommissioned and cleaned] containment basins is provided below).

Indirect temporary impacts from construction and operation of the HBEP have the potential to impact the adjacent wetlands and associated biological resources. Construction- and demolition-related temporary impacts may include lighting, noise, dust, and general disturbances from worker activity. These potential impacts could potentially cause disturbances to nesting and foraging birds within the adjacent wetlands. Studies have demonstrated an increase in habituation for waterbirds at developed shorelines compared to undeveloped

shorelines (Donaldson et al., 2007). Furthermore, differences in avian species' responses to human disturbances also suggest a certain level of habituation (Hockin et al., 1992). Birds even become habituated to short-term noises from scaring devices, which are used to monitor flushing distances and responses, and traffic noise and aircraft engines (Hockin et al., 1992 and references therein). The existing Huntington Beach Generating Station has been at this location since the 1950s and the wetlands are also bordered by the Pacific Coast Highway, other industrial facilities (such as the Plains All American Tank Farm) and residential areas, so many of the species that utilize these areas are adapted to certain levels of human disturbance. Additional operation-related temporary impacts from the HBEP may include nitrogen deposition and emissions; however, since the HBEP replaces the older generating units of the existing Huntington Beach Generating Station with more efficient and advanced technological facilities, emissions from HBEP will be less than current emissions of the Huntington Beach Generating Station.

As noted in responses to Data Requests 23 to 26 above, the Applicant is preparing an analysis of nitrogen deposition and will provide additional information related thereto by December 14, 2012.

Fuel Oil Containment Basin within the HBEP:

The California Coastal Commission (CCC) has adopted a one parameter approach for delineating wetlands, but the CCC relies on the USACE scientific methods and guidance regarding the delineation process (CCC, 2011). According to the CCC, wetlands must have one of the following characteristics:

> *(1) at least periodically the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year (CCC, 2011).*[9]

The first parameter discussed under the CCC requirement is that periodically the land supports predominantly hydrophytic vegetation (CCC, 2011). CCC regulations do not provide guidance regarding what species are considered to be hydrophytes, but a National Plant List has been developed to provide the indicator status of plant species (Lichvar and Kartesz, 2009). Plant species are rated as the following: 1) OBL - obligate wetland, almost always occurs as a hydrophyte, rarely in uplands; 2) FAWC - facultative wetland, usually is a hydrophyte but occasionally found in uplands; 3) FAC - facultative, commonly occurs as either a hydrophyte or non-hydrophyte; 4) FACU - facultative upland, occasionally is a hydrophyte but usually occurs in uplands; and 5) UPL - upland, rarely is a hydrophyte, almost always in uplands (Lichvar and Minkin, 2008). Hydrophytic vegetation can tolerate prolonged periods of inundation or soil saturation during the growing season (USACE, 2008). Most wetlands are dominated by species that are rated with the indicator status OBL, FACW, and FAC. During the September 2010 site visit, vegetation species observed within the containment basin included pampas grass (*Cortaderia selloana*; FACU), hottentot fig (*Carpobrotus edulis*; UPL), lollypop tree (*Myoporum laetum*, FACU), Russian thistle (*Salsola tragus*, FACU) and crystalline iceplant (*Mesembryanthemum crystallinum*; FACU). The vegetation present within the containment basins does not exhibit a predominance of plants with an indicator status of FAC or wetter; therefore, the vegetation community associated with the containment basins is not hydrophytic.

The second parameter under CCC regulations is that the substrate is predominantly undrained hydric soil (CCC, 2011). Soils associated with the HBEP consist of fill (placed as part of the construction of the existing Huntington Beach Generating Station, alluvial/estuarine deposits, and marine deposits. Depending on the location within the HBEP site, the fill placed as part of the construction of the existing Huntington Beach Generating Station extends up to an approximate depth of between 5 to 8 feet below the current surface elevation of the HBEP site followed by alluvial/estuarine deposits at depths ranging from 9 to18 feet (Ninyo & Moore, 2011). The soils found within the containment basins are highly compacted fill that were placed onsite during construction. According to the NCRS, a hydric soil is formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (NCRS, 2010). The soils within the containment basins

[9] This is a summary of the criteria set forth in 14 California Code of Regulations Section 13577.

can pond, but the water is from stormwater runoff and there is not natural hydrology feeding into these areas. Such soils are therefore not the hydric soils typical of wetlands.

The third parameter under CCC regulations that could qualify as a wetland is that the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year (CCC, 2011).There are no hydrology indicators associated within the HBEP area, such as surface water, high water table, saturation, water marks, sediment deposits or drift deposits. As mentioned previously, any ponding that occurs within the containment basins is mainly associated with stormwater runoff. Ponding can occasionally occur within the containment basins because the soils are highly compacted fill that was placed during the original basin construction. Within the project area, groundwater was observed at a depth of approximately 14 feet below the surface (Ninyo & Moore, 2011); therefore, no saturation would be present within 12 inches or less below the soil. In addition, the technical standard for monitoring hydrology is that there must be 14 or more consecutive days of flooding or ponding at a site or a water table 12 inches or less below the soil surface during the growing seasons at a minimum frequency or five years out of ten (National Research Council, 1995). Thus, the containment basins do not have the hydrology associated with this parameter.

Based on the foregoing, the containment basins within the HBEP are not considered to be a "wetland" pursuant to section 13577 because these areas do not possess any of the three attributes (vegetation, hydric soils, hydrology) listed above. The containment basins are located within an active power-generating facility that is regularly maintained. Vegetation within these basins is actively managed and these basins do not have hydric soils or wetland hydrology. Therefore, there are no wetlands located within the HBEP boundary.

Additional Clarification:

The following figures in the AFC Section 5.2.2.2, Figures 5.2-1a, 5.2-1b, 5.2-2a, 5.2-2b, and the AFC Supplement at pp. 5.2-2 - 5.2-3 and Figures 5.2-2cR, 5.2-2aR, and 5.2-2bR (set forth in Attachment DA5.2-5) included data from the National Wetland Inventory (NWI) that was obtained in October 2011, which only had identified the lined detention basins within HBEP as PUBKx. Figure DR27-1b has been included to provide the most current data from USFWS, which includes a new designation for the fuel oil containment basin within the HBEP. The fuel oil containment basin has been identified as PUBFx on the eastern side and PUSCx on the western side. PUBFx describes palustrine systems that have an unconsolidated bottom, which are semipermanently flooded and have been excavated (USFWS, 2012). PUSCx is the classification used for palustrine systems that have an unconsolidated shore, which are seasonally flooded and have been excavated (USFWS, 2012). NWI prepares these maps though a desktop exercise that is based on an analysis of altitude imagery and wetlands are identified based on vegetation, visible hydrology when present and geography (USFWS, 2012). As mentioned previously, the fuel oil containment basin does not exhibit wetland hydrology and these areas pond after stormwater events because the basins have been designed to contain any fuel oil that would potentially leak while the tank was still operational. Furthermore, hydric soils typical of wetlands and the vegetation present were FACU and UPL species.

References:

California Coastal Commission (CCC). 2008. Staff Report: Regular Calendar (5-08-061).

California Coastal Commission (CCC). 2011. Definition and Delineation of Wetlands in the Coastal Zone. October 5.

Donaldson, M.R., K.M. Henein, and M.W. Runtz. 2007. Assessing the effect of developed habitat on waterbird behaviour in an urban riparian system in Ottawa, Canada. *Urban Ecosyst* 10:139-151.

Hockin, D., M. Ounsted, M. Gormant, D. Hillt, V. Kellert and M. A. Barker. 1992. Examination of the effects of disturbance on birds with reference to its importance in ecological assessments. *Journal of Environmental Management* 36:253-286.

Lichvar, R., and P. Minkin. 2008. *Concepts and Procedures for Updating the National Wetland Plant List*. ERDC/CRREL TN-08-03. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. http://libweb.erdc.usace.army.mil/Archimages/2295.PDF.

National Research Council. 1995. *Wetlands: Characteristics and boundaries*. Washington, DC: National Academy Press.

Ninyo & Moore Geotechnical and Environmental Sciences Consultants. 2011. Draft: Preliminary Geotechnical Evaluation Huntington Beach Generating Station. October 24.

Robert W. Lichvar and John T. Kartesz. 2009. North American Digital Flora: National Wetland Plant List, version 2.4.0 (https://wetland_plants.usace.army.mil). U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH, and BONAP, Chapel Hill, NC. October 2012.

U.S. Army Corps of Engineers (USACE). 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U. S. Fish and Wildlife Service (USFWS). 2012. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. http://www.fws.gov/wetlands/

United States Department of Agriculture, Natural Resources Conservation Service (NCRS). 2010. *Field Indicators of Hydric Soils in the United States, Version 7.0*. L.M. Vasilas, G.W. Hurt, and C.V. Noble (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.

DATA REQUEST

28. Please provide a detailed discussion of measures to avoid, minimize and mitigate any potential impacts of the proposed project on the jurisdictional wetlands.

Response: As set forth in response to Data Request #27, indirect temporary impacts from construction and operation of the HBEP have the potential to impact adjacent wetlands and associated biological resources. The following types of measures will be implemented during demolition and construction activities for HBEP to avoid, minimize and mitigate potential impacts of the project on the jurisdictional wetlands adjacent to the HBEP.

1. The project owner shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter the adjacent wetlands or be placed in locations that may be subjected to high storm flows.
2. Spoil sites shall not be located within drainages or locations that may be subjected to high storm flows, where spoil has the potential to be washed back into the adjacent wetlands.
3. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering the adjacent wetlands. These materials, placed within or where they may enter the adjacent wetlands by project owner or any party working under contract or with the permission of the project owner shall be removed immediately.
4. No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into, the adjacent wetlands.
5. When construction is completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 200 feet of the adjacent wetlands.
6. No equipment maintenance shall occur within 200 feet of the adjacent wetlands where petroleum products or other pollutants from the equipment may enter these areas under any flow condition.

DATA REQUEST

29. If it is determined that the project would impact wetlands under the jurisdiction of USACE, please provide contact information for USACE representative (name, title, phone number, address and email address, if known) and copies of all records of communication with the agency.

Response: The USACE issues Section 404 Permits for certain activities conducted in or impacting wetlands or other Waters of the United States. Section 404 of the Clean Water Act regulates the discharge of dredged, excavated, or fill material in wetlands, streams, rivers, and other Waters of the United States. However, there will be no activities in or affecting wetlands or Waters of the United States associated with HBEP (see responses to Data Requests 27 and 28). Therefore, a Section 404 Permit is not expected to be required for the HBEP.

BACKGROUND

Several sensitive ecological reserves and wetland preservation sites are adjacent to the project site, which include the Huntington Beach Wetlands Conservancy's Coastal Marsh Restoration complex, the USACE Salt Marsh Restoration project, and the Talbert Nature Preserve. The Huntington Beach Wetlands Conservancy's Coastal Marsh Restoration complex includes four units: Newland Marsh, Magnolia Marsh, Brookhurst Marsh, and Talbert Marsh. Section 5.2.2.2 of the AFC (page 5.2-4) states that several special-status wildlife species have been reported or observed in these wetlands, which support a breeding population of Beldings's savanna sparrows. Additionally, the wetland complex provides foraging habitats for western snowy plover, California brown pelicans and California least tern.

The applicant reported that no sensitive species were observed within the proposed power plant site and laydown area during the site visit and survey on September 29, 2011 and August 1, 2012; respectively. However, these ecological reserves contain essential habitats supporting several sensitive species, which would likely occupy these sites during HBEP construction and demolition activities. Avian species adapted to disturbed urban areas, such as burrowing owl, might also use the construction and laydown areas for foraging, breeding and nesting activities. In addition, the HBEP occurs along the Pacific Flyway, which serves as a major stopover and wintering area for waterfowl and migrating shorebirds.

Section 5.2.3.3.3 of the AFC (page 5.2-36) acknowledges that noise from site preparation, construction, and demolition, could temporarily discourage wildlife from foraging and nesting in the coastal wetland habitat immediately adjacent to the project area. This section also states that the expected loudest composite noise levels from HBEP are approximately 70 dBA at the HBEP fenceline, which will result in a noise level of 63 dBA at 400 feet from the fenceline. Bird nesting habitat is present in the Magnolia Marsh immediately adjacent to HBEP. However, the AFC concludes that noise from construction, demolition, and operation of the HBEP would not adversely affect wildlife, because wildlife would usually become accustomed to routine background noise and noise associated with the existing industrial uses including the existing Huntington Beach Generating Station and highway traffic. Staff anticipates that noise generated during construction, and operation, and demolition of the power plant facility would have an impact on sensitive biological resources and noise attributable to the construction of HBEP may be sufficiently high to temporarily discourage birds from nesting in this area. Therefore, staff requires detailed information related to the impacts of noise and on the sensitive biological resources during the construction, demolition, and operation of the proposed project. In addition, the proposed mitigation measures to offset the nighttime and noise impacts associated with the project (Section 5.2.5 of the AFC, page 5.2-368) are insufficient and need to be supplemented by specific measures.

DATA REQUEST

30. Please determine the expected noise levels and the extent and duration of noise and attenuation across the site and into the study area during construction and demolition at all sensitive habitat receptor locations near the project site, especially at the Newland Marsh,

Magnolia Marsh, Brookhurst Marsh, Talbert Marsh, Talbert Natural Preserve, and USACE Salt Marsh Restoration project. Also, please include the anticipated plant operational noise levels at the above wildlife receptors.

Response: Anticipated construction sound levels are described in Section 5.7.4.2.1 of the AFC. While construction and demolition activities are highly variable, the sound level at any location will typically be dominated by the closest activity or piece of equipment. The sound level from any single piece of equipment will also vary and periods of sustained high engine load operations, such as those portrayed in Table 5.7-8 of the AFC (p. 5.7-10) are generally limited in duration. Noise levels above 60 dBA could interfere with avian acoustic communication and are typically used as a threshold for assessing impacts (Dooling and Popper, 2007). Average sound levels at 375 feet from construction activities are anticipated to range between 60 and 71 dBA. These levels will dissipate with distance at a rate of approximately 6 dBA per doubling of distance which yields 48 to 59 dBA at 1,500 ft. These sound levels represent the range in average construction sound levels expected within the Magnolia Marsh. The Newland Marsh is approximately 1,762 feet from the center of the HBEP and construction- and operation-related noises are not expected to impact the marsh. Furthermore, impacts from construction, demolition and operations are not expected to occur at the Brookhurst Marsh, Talbert Marsh, Talbert Natural Preserve, and USACE Salt Marsh Restoration project, considering the distance from these receptors and the HBEP that ranges from 2,196 to 8,052 feet (distances are taken from the approximate centroid of the HBEP).

Construction noise minimization strategies include locating semi-permanent stationary equipment such as compressors or generators away from sensitive habitat or in locations where it is shielded by other equipment or structures. In addition, equipment will be in good working order and outfitted with adequate mufflers. Where appropriate, sound attenuated equipment packages may be evaluated (air compressors, generators, etc.) and exhaust may be oriented away from sensitive areas.

As described in Section 5.7.4.3.3 of the AFC, anticipated operational sound levels will not exceed 70 dBA at the property line and 60 dBA at M3, along Magnolia Street (see Figure DR30-1). These sound levels represent the range in levels expected within the Magnolia Marsh. Sound levels less than 60 dBA would be realized further south, at the Brookhurst and Talbert Marshes. Measurements of existing sound levels within and adjacent to the Magnolia Marsh indicate sound levels between approximately 60 and 66 dBA were repeatedly achieved at the Pier (M5) while sound levels ranged between approximately 50 to 57 dBA at the Huntington Beach Generating Station Property Line (M6). To the north, anticipated Huntington Beach Generating Station sound levels at the Newland Marsh would be less than the 63 dBA noted at M2.

References:

Dooling R. J., and A. N. Popper. 2007. *The effects of highway noise on birds*. Report to the California. Department of Transportation, contract 43AO139. California Department of Transportation, Division of Environmental Analysis, Sacramento, California, USA.

DATA REQUEST

31. Please include a thorough assessment of the proposed project's anticipated noise impacts and vibratory effects on wildlife as well as feasible avoidance, minimization and mitigation measures to offset the direct and indirect temporary and permanent impacts of elevated noise levels.

Response: Existing noise levels within the Magnolia Marsh indicate sound levels between 60 and 66 dBA were repeatedly achieved at the Pier (M5) while sound levels ranged between approximately 50 to 57 dBA at the Huntington Beach Generating Station Property Line (M6), which denotes a relatively high level of baseline noise within Magnolia Marsh. The restoration for this marsh was completed in 2010, which included excavating approximately 40,000 cubic yards of fill to recreate the channel system and removing the seaward levee of the Huntington flood control channel to restore tidal influence (Huntington Beach Wetlands Conservancy, 2012). The restoration was just completed in February 2010 and vegetation within the marsh is still becoming established.

According to USFWS, vegetation can take 10-12 years to become established to the appropriate conditions desired by the light-footed clapper rail (C. Medak, personal communication, 2012). Therefore, this species is not expected to nest within the marsh for several years.

Impacts from construction, demolition and operational noise are not expected to significantly impact special-status species. No special-status species were observed within the project area and documented occurrences of the Belding's savannah sparrow and light-footed clapper rail were in the Newland Marsh and Brookhurst Marsh, which are located approximately 1,762 feet and 2,196 feet from the project centroid.

Although burrowing owls (*Athene cunicularia*) may use construction and laydown areas for foraging, breeding and nesting activities, there are no CNDDB occurrences documented for this species within 1 mile of the HBEP and closest record for this species is over 2 miles northeast of the project area (see Figure 5.2-4a and Figure 5.2-4c of the AFC). In addition, burrowing owl habitat is typically associated with annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation (Zarn, 1974); therefore, this species was not included in the impact assessment.

References:

Medak, C. 2012. Personal communication at the HBEP site tour hosted by AES on September 28, 2012.

The Huntington Beach Wetlands Conservancy. 2012. *Current projects.* Available online at: http://www.hbwetlands.org/current.htm

Zarn, M. 1974. *Burrowing owl*. U. S. Department of Interior, Bureau of Land Management. Technical Note T-N 250. Denver, Colorado. 25pp.

BACKGROUND

Section 2C.7.5.4 (AFC Volume 2 Appendix 2C) states that groundwater was observed during exploratory borings at the time of drillings at a depth of approximately 14 feet. The observed groundwater depths are not considered stabilized groundwater depths. The California Geologic Survey Seismic Hazard Zone report for this area indicates that the historic high groundwater in the vicinity of the site is approximately 3 feet below the ground level. Section 2C.7.6.3 also indicated that the preliminary geotechnical evaluation recommends supporting the major improvement structures on deep pile foundations. The applicant proposes the use of 14-inch diameter pre-cast concrete pile driven to a depth of approximately 30 feet.

The staff anticipates that construction of foundations to support the HBEP structures would require dewatering, which could impact the level of groundwater with consequent impacts on neighboring wetlands.

DATA REQUEST

32. Please determine if any dewatering would be required during the construction of the foundations supporting the HBEP structures and submit a detailed dewatering plan. If the project would involve dewatering, please determine the resultant impacts on the groundwater level and wetlands located near the project site.

Response: The Data Request addresses the potential for dewatering associated with installing deep foundations, referencing Section 2C.4.6.3 of the applicant's Engineering Design Criteria (AFC Appendix 2C). The text of this appendix should be interpreted to mean that piles will be driven to a depth of approximately 30 feet, but excavation would not occur to that depth. No dewatering would occur for driving the piles.

However, dewatering may be required for some HBEP components depending on excavation depth for foundations or footings. Because final engineering design has not taken place (i.e., there is not a detailed construction plan), the exact extent of any required dewatering is unknown at this time. Moreover, it is premature to prepare a detailed dewatering plan at this time. As necessary, a detailed dewatering plan will be

included to support the final engineering design and, if requested, will be provided to the CEC Construction Compliance Manager (CPM).

Additional information about potential HBEP site excavation and grading was developed in response to Data Request 35 (See Data Request #35 for details). With regard to the potential need for groundwater dewatering, the applicant's design engineers state that the HBEP project will make plans to dewater excavations deeper than 5 feet. This is a conservative assumption based on the *potential* for groundwater to be shallower than the 14 feet below ground surface described in the geotechnical explorations. Based on the information gathered to respond to Data Request #35, the only Block 1 project component (the area closest to Magnolia Marsh) that would excavate to 5 feet below the existing grade are the step-up transformers. The foundations for these transformers – approximately 33 feet by 46 feet – would be excavated to a depth of 5 feet below the existing grade.

Because of the relatively small excavation areas and the short amount of time when some of the excavated area may require dewatering, it is unlikely that dewatering would generate either a large quantity of water or a high rate of water withdrawals. For this reason, dewatering is not expected to result in any drawdown of the groundwater table other than immediately adjacent to the excavation sites. At this time, it is assumed that any water pumped from excavation areas would be discharged to the existing onsite retention basin at the Huntington Beach Generating Station, which discharges to the Pacific Ocean. The Santa Ana Regional Water Quality Control Board allows low-threat waste discharges from sources such as construction dewatering through a regional general permit (Order No. 2003-0061/NPDES No. CAG998001). Any discharges associated with dewatering would follow the discharge limitations of this general permit.

The exact hydrodynamic qualities of the adjacent coastal marsh areas (including the restored Magnolia Marsh) are unknown. Ocean water enters the marsh directly through the Talbert Channel Outlet, and fresh water enters the marsh from the Huntington Beach Channel. Groundwater (or "base flow") is a likely third source of water; however, the interplay between these three sources is unknown. As stated above, the cone of depression created by dewatering as part of construction of HBEP is unlikely to extend far beyond the excavation site. In the unlikely case dewatering resulted in reduced base flow of groundwater into the marshes, any losses are likely to be offset by additional inflow from the Talbert Channel Outfall and the Huntington Beach Channel.

BACKGROUND

According to the AFC, HBEP will be constructed entirely within the existing operating Huntington Beach Generating Station site where the vegetation primarily consists of landscaping plants and non-native species that are regularly treated with herbicides and removed as necessary (Attachment DA5.2-5, AFC Supplement: Response to Data Adequacy Review). Section 2C.7.7.1 (AFC Volume 2 Appendix C) also states that the site subgrade preparation and grading would include the complete removal of all vegetation and topsoil. However, it is not clear whether any trees or shrubs at the boundaries of the existing facility would be removed. Resident birds may use these trees and shrubs for foraging and breeding activities.

DATA REQUEST

33. If the proposed vegetation removal would include removal of trees and shrubs, please provide the number, the exact locations, a schedule for vegetation removal activities, and a vegetation restoration plan.

Response: Currently, the removal of existing landscaping trees or scrubs along the perimeter of HBEP is not expected based on the preliminary engineering and site layout accomplished to date. If landscape trees or scrubs may need to be removed, the Applicant will provide an initial estimate and include this in the final engineering and site design for HBEP.

BACKGROUND

The AFC states the HBEP would not contribute to habitat loss because the construction, demolition and operation of the project will occur within the preexisting Huntington Beach Generation Station site and the offsite laydown area is located within the Alamitos Generating Station (Section 5.2.4 of the AFC, pages 5.2-37-38). In addition, the AFC states the HBEP will have a positive effect on the environment because the new facility will eliminate the use of ocean water and produce less emissions and noise.

Staff disagrees with the applicant's overall assessment of the cumulative impacts of HBEP on the biological resources. Sensitive biological resources bordering the project site and other significant regional wetlands and protected areas could be potentially impacted by the HBEP and future proposed projects in the project vicinity. Cal. Code Regs., tit. 20, requires the discussion of "all impacts (direct, indirect, and cumulative) to biological resources from project site preparation, construction activities, plant operation, maintenance, and closure. The discussion shall also address sensitive species habitat impacts from …and air emissions." Cal. Code Regs., tit. 14, § 15355 also states: 'Cumulative impacts' refers to two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental impacts. Therefore, the cumulative impacts analyses must consider the impacts of the proposed project together with any incremental effects of other closely related past, present and reasonably foreseeable future projects. Two future projects, the Poseidon Resources Huntington Beach Desalinization Facility and a reservoir proposed by the City of Huntington Beach, are planned in the project area. The anticipated cumulative impacts of these two projects were not included in the overall assessment of the cumulative effects.

DATA REQUEST

34. Please provide a comprehensive analysis of the cumulative impacts on sensitive biological resources, considering the impacts of the HBEP together with the Poseidon Desalinization project and the City of Huntington Beach reservoir. The cumulative impacts analysis should include schedules of all proposed projects and possible schedule modifications, in addition to all feasible measures that could avoid, reduce, or mitigate any potential cumulative impacts.

Response: The demolition and construction of the HBEP is expected to occur over 8 years. As noted in the response to Data Request 28, Applicant will implement measures during demolition and construction to avoid, minimize, and mitigate potential impacts on adjacent wetlands and sensitive biological resources as part of HBEP.

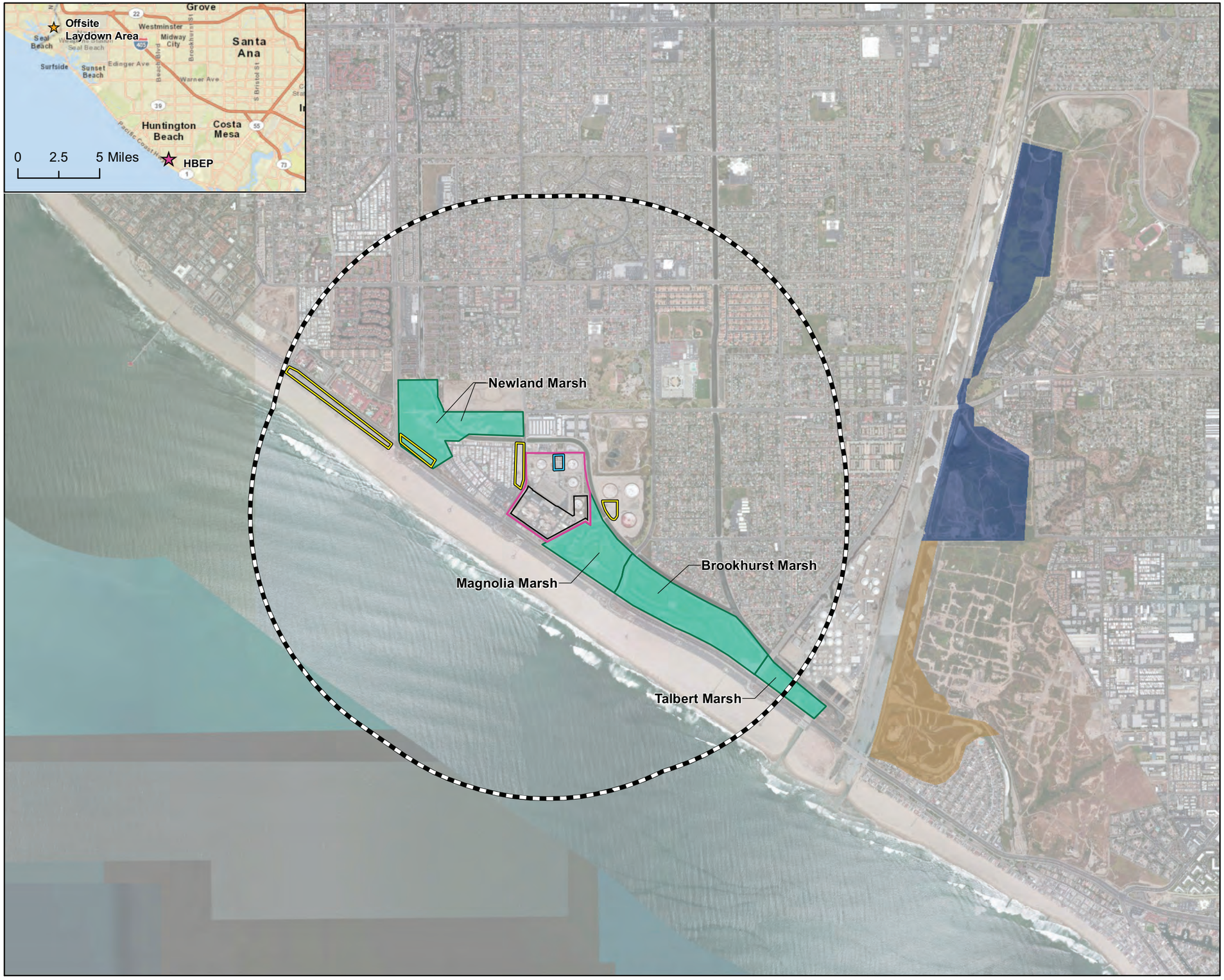
The demolition and construction phase of the Poseidon Resources Huntington Beach Desalinization Facility, as reported in the Environmental Impact Report for the Poseidon project prepared by the City of Huntington Beach, is expected to occur over 24 months (City of Huntington Beach, 2005). However, since a final determination has not been made regarding the Poseidon Resources Huntington Beach Desalinization Facility there is a possibility that these projects will not have overlapping construction and demolition phases. No specific information about construction was found for the City of Huntington Beach reservoir. In addition, since these are not AES projects, the Applicant does not possess any specific knowledge on possible schedule modifications for Poseidon or the reservoir. Any specific requests for information for these projects should be directed to the City of Huntington Beach, which is the lead agency for the Poseidon EIR.

Direct effects to the adjacent wetlands and protected areas are not expected to occur from the implementation of these three projects. Any construction- and demolition-related impacts from air quality, lighting and glare, noise, general disturbances from worker activity and storm water runoff are expected to be temporary and will cease after project construction. In addition, Applicant provided a list of measures that will be implemented during demolition and construction to avoid, minimize, and mitigate potential impacts on adjacent wetlands in response to Data Request #28. Further, and as mentioned previously, these wetlands and protected areas occur within urban areas and species are expected to have some level of habituation.

Based on the data available and the measures provided for in the HBEP, no significant cumulative impacts are expected even should these three projects occur simultaneously.

References:

City of Huntington Beach. 2005. Draft Recirculated Environmental Impact Report #2001051092 Seawater Desalination Project at Huntington Beach. April 5. Available online at: http://www.huntingtonbeachca.gov/government/departments/planning/major/poseidon.cfm



Legend

- AES Huntington Beach Generating Station (survey area)
- AES Huntington Beach Energy Project (survey area)
- Offsite Construction Parking (survey area)
- Onsite Construction Parking (survey area)
- 1-Mile Radius From Project Site
- Huntington Beach Wetlands Conservancy*
- Talbert Nature Preserve
- USACE Salt Marsh Restoration

Sources:
*Merkel & Associates, Inc. 2004,
CPAD 1.7, September 2011, ©GreenInfo Network - www.calands.org

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FIGURE DR27-1a
Wetlands and Nature Preserves
AES Huntington Beach Energy Project
Huntington Beach, California

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- AES Huntington Beach Generating Station (survey area)
- AES Huntington Beach Energy Project (survey area)
- Offsite Construction Parking (survey area)
- Onsite Construction Parking (survey area)
- 1-Mile Radius From Project Site
- Huntington Beach Wetlands Conservancy
- Talbert Nature Preserve
- USACE Salt Marsh Restoration

National Wetlands Inventory

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

Source:
National Wetlands Inventory, U.S. Fish and Wildlife Service
October 1, 2012

Notes:
1. NWI data is accurate to produce medium resolution information at a scale of 1:12,000. Larger scales will not contain the same level of accuracy
2. The lined detention basins and fuel oil containment basins within the Project area are designated as PUBFx and PUSCx, which have been artificially modified and are man-made structures

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FIGURE DR27-1b
National Wetlands Inventory
AES Huntington Beach Energy Project
Huntington Beach, California

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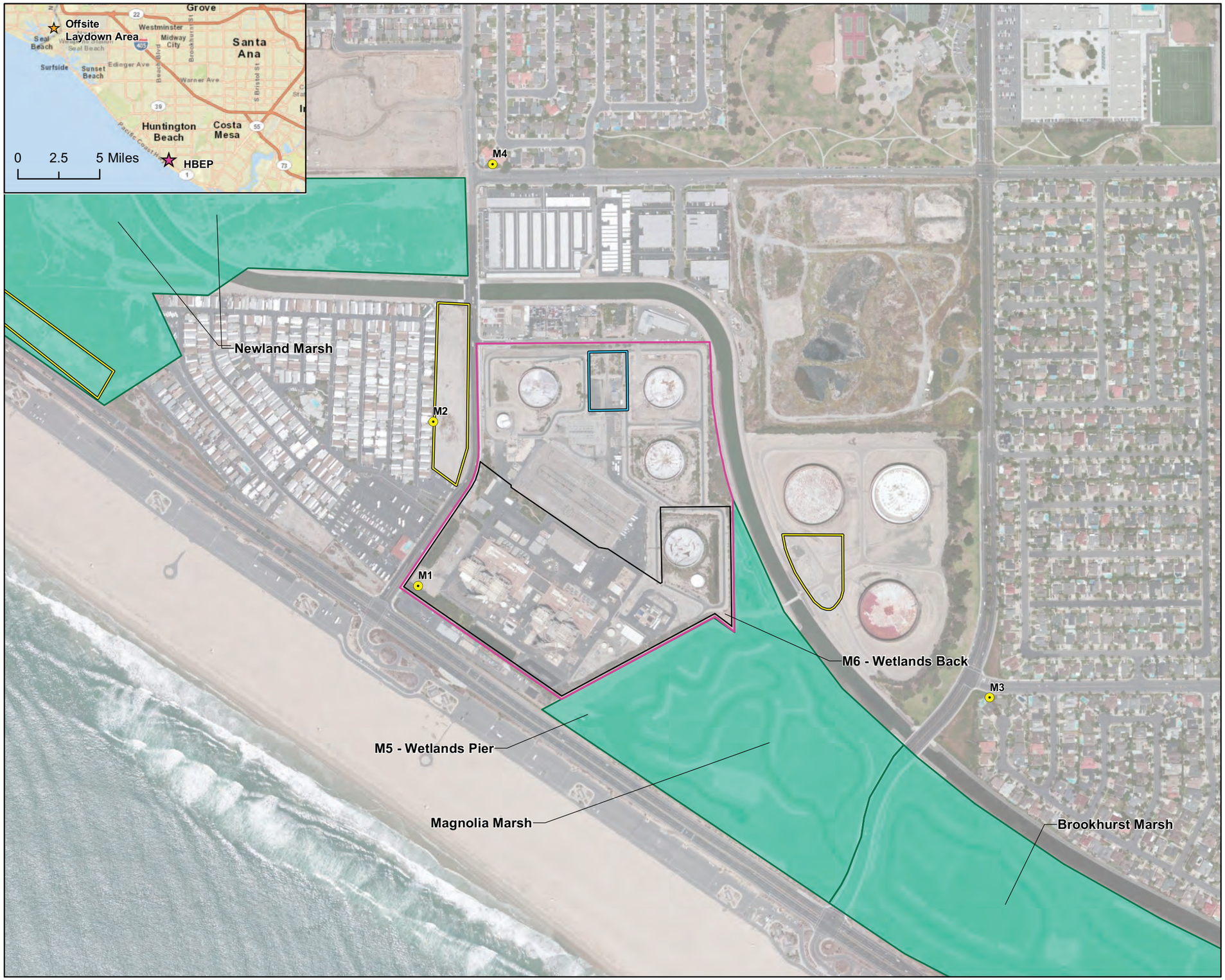

Legend

- Sound Monitoring Location
- AES Huntington Beach Generating Station (survey area)
- AES Huntington Beach Energy Project (survey area)
- Offsite Construction Parking (survey area)
- Onsite Construction Parking (survey area)
- 1-Mile Radius From Project Site
- Huntington Beach Wetlands Conservancy

Sources:
Merkel & Associates, Inc. 2004.

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FIGURE DR30-1
Sound Monitoring Locations
AES Huntington Beach Energy Project
Huntington Beach, California

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Cultural Resources (35–36)

Any responses to these Data Requests containing references to specific archaeological site locations or information, or cultural resources of concern to Native Americans, must be submitted under a request for confidentiality.

BACKGROUND

The proposed Huntington Beach Energy Project (HBEP) would replace the Huntington Beach Generating Station, a natural gas-fired electric generation facility on the Pacific Coast. As the proposed project is to occur on and around the site of a relatively large extant power generation facility, there is little likelihood that archaeological resources are present on the ground surface (AES 2012a:5.3-14). Upon review of the Application for Certification (AFC) and discussions with the Applicant and its consultant during a September 28, 2012 site visit, however, staff concludes that construction of the HBEP has the potential to disturb buried archaeological resources. This potential would be eliminated or reduced if the Applicant can clearly demonstrate that excavation would only transpire in fill sediments or that the underlying, native sediments are of a nature that buried archaeological deposits are not expectable. The purpose of this data request is to refine available information about the depths of excavation associated with the proposed project and the character of underlying sediments. With this information, staff can make an informed assessment of buried archaeological site potential.

This data request is put into context with the following discussion of soils and sediments underneath the project site. The project site is occupied by a power plant and is largely paved. The project site sits atop a layer of building foundations, asphalt concrete, aggregate base material, and imported fill sediments of variably thickness. The AFC and supporting documentation state that the project site rests atop 2–3 feet (ft) of fill dirt in the vicinity of the proposed combined-cycle gas turbine Block 1 (AES 2012a:5.8-3; Ninyo & Moore 2011:Boring Logs 1–2, Figure 3). In addition, the AFC reports that prior to the original construction of the Huntington Beach Generating Station, approximately 8 feet of a natural clay layer was removed from portions of the Huntington Beach Generating Station and replaced with engineered fill[10] (AES 2012a:5.8-3; AES 2012b:5.3-5; Cardenas et al. 2012:4-3). The underlying natural sediments are late Holocene[11] wind-deposited (eolian) sediments (ca. 4000 B.P.[12]–present) and alluvium or estuarine sediments. Beneath the alluvium or estuarine sediments are marine sediments. These latter two stratigraphic units are inferred to be late Holocene in age, although Pleistocene age sediments could be encountered with sufficient depth of excavation. (AES 2012a:5.8-6, 5.8-7; Morton 2004; Ninyo & Moore 2011:5.) Age estimates for the stratigraphic units are presently based on standard geologic correlations and have not been refined with the use of radiocarbon or other more precise forms of dating.

Whether the applicant would encounter buried archaeological deposits during project construction depends on several factors, including the depositional character and the ages of the sedimentary deposits that construction would disturb, the presence of buried land surfaces or buried surfaces of ancient soils (paleosols), the duration or stability of any paleosols, the post-depositional character of geomorphic processes in the project area of analysis, and the nature of past human activities in the area. Absent information on a number of these environmental parameters, staff has almost no factual basis to support a reasonably reliable assessment of whether archaeological deposits may be present in the proposed project area.

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[10] Removal of the clay layer apparently was restricted to the areas surrounding the "main building" and "equipment". The AFC does not report its source(s) of information for removal of the clay and subsequent placement of fill. The AFC is unclear about the identity and location of the "main building" and "equipment". (AES 2012a:5.8-3; AES 2012b:5.3-5; Cardenas et al. 2012:4-3.)

[11] The Holocene Epoch is a geologic time unit that spans the last 10,000 years. It is preceded by the Pleistocene Epoch, and current archaeological evidence shows that humans have resided in California for the past 12,000 years. The bulk of the archaeological record in California, therefore, would be associated with Holocene-age landforms.

[12] "B.P." means "before present", which scientists agree by convention is A.D. 1950, the year in which radiocarbon dating was first accepted as a viable dating method. An age estimate of 4000 B.P. would therefore roughly correspond to the calendar year 2050 B.C.

The AFC does not cite or offer any chronometric data to support the applicant's estimates of the age of the sediments on the project site. Much of the sediment under the engineered fill on the project site is likely to be Holocene in age, although the depth of the contact between Holocene and Pleistocene age sediments is unknown. Geotechnical boring logs for the proposed project indicate a number of stratigraphic breaks or changes within the upper 30 ft of project site sediments. The boring logs and associated geotechnical report (Ninyo & Moore 2011) are not sufficiently detailed to determine whether stratigraphic features such as paleosols are present. The information provided in the AFC and staff analysis do indicate that the proposed project site is in a depositional environment where buried former land surfaces and associated archaeological materials have the potential to be found. Much or all of any such deposition would have occurred within the last 10,000 years. For example, at least one buried prehistoric archaeological site (P-30-1644) has been identified about 11 miles northwest of the project site in a similar, former estuarine setting under 6 ft of fill (Willey 2006). Moreover, between 5450 and 2950 B.P., relatively sedentary (semipermanent) occupations formed around Orange County estuaries (Grenda and Altschul 2002:127). Estuarine and marine sediments, therefore, cannot be taken as indicative of low buried site potential in the project site.

Given the geomorphic context of the proposed project and the known occurrence of at least one prehistoric archaeological site in estuarine sediments such as occur in the project site, knowing the depth of fill on the project site and the planned depths of excavation is critical to staff's analysis of potential impacts on cultural resources. At present, staff cannot develop a reliable analysis of the proposed project's potential effects on archaeological resources, or develop meaningful mitigation measures for any effects that may be found to be significant, absent sound data on the thickness of fill on the project site and the proposed depths of excavation.

References Cited

AES. 2012a. Application for Certification: Huntington Beach Energy Project. June. Vol. 1. Submitted to California Energy Commission, Sacramento. Docket No. 12-AFC-02, TN 66003. Electronic document, http://www.energy.ca.gov/sitingcases/huntington_beach_energy/documents/applicant/AFC/Volume%201/, accessed August 22, 2012.

AES. 2012b. Data Adequacy Supplement in Support of the Application for Certification: Huntington Beach Energy Project. August 6. AES Southland Development. Submitted to California Energy Commission, Sacramento. Docket No. 12-AFC-02, TN 66490. Electronic document, http://www.energy.ca.gov/sitingcases/huntington_beach_energy/documents/applicant/2012-08-06_Applicant_Data_Adequacy_Supplement_TN-66490.pdf, accessed August 28, 2012.

Cardenas, Gloriella, Lori Durio Price, and Natalie Lawson. 2012. *Cultural Resources Inventory Report for the Huntington Beach Energy Project, Orange County, California*. March. CH2M Hill, Santa Ana, California. Prepared for AES-Southland, Huntington Beach, California. Confidential Appendix 5.3B in *Application for Certification: Huntington Beach Energy Project*, by AES. Vol. 2. Submitted to California Energy Commission, Sacramento. Docket No. 12-AFC-02.

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Morton, D.M. (compiler). 2004. *Preliminary Digital Geological Map of the 30' X 60' Santa Ana Quadrangle, Southern California, Version 2.0*. Open-File Report 99-172. U.S. Geological Survey, Department of the Interior. Electronic document, http://pubs.usgs.gov/of/1999/of99-172/sanana2dmu.pdf, accessed August 29, 2012.

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DATA REQUEST

35. Please prepare a written discussion of the sequence of construction at the HBGS and its effects on the sediments underneath the project site. This discussion should include, among other elements:

    a. A chronologically ordered discussion of ground disturbance at the HBGS that was responsible for the removal of the clay layer. The discussion must cite sources of information, such as grading plans, other drawings, or construction memoranda.

    b. The identity of the "main building" and "equipment" referenced in the AFC.

    c. Descriptions of the clay layer, any overlying soil, the underlying compact sand layer, and the placed fill. Limitations in the original sources concerning the requested information should be noted in the discussion.

    d. The depth (thickness) of fill that was placed after the clay layer was removed.

    e. A map showing the extent of clay removal, drawn to scale at 1 inch = 200 to 400 ft.

    f. Any profile drawings or excavation logs filed with the original sources of information.

Response: The following description of the construction of the HBEP was included in the AFC Project Description Section 2.0.

AES's Huntington Beach Generating Station currently has four operating generating units (Units 1, 2, 3 and 4). Existing Units 3 and 4 are currently operational; however, these units will be permanently retired as generating units in November 2012. These four units were originally constructed in the late 1950s and 1960s by SCE, with major upgrades to Units 1 and 2 occurring in 1995 and upgrades to Units 3 and 4 in 2001. The existing Huntington Beach Generating Station has various ancillary facilities that will remain in use to support HBEP. These facilities include the administration/warehouse building and SoCalGas natural gas pipeline interconnection, City of Huntington Beach potable water connection, and the City of Huntington Beach sanitary sewer system.

The owner of Huntington Beach Generation Station Units 3 and 4 has recently submitted a Petition to Amend the site license to convert these units to synchronous condensers. The CEC has provided an assessment of the impacts of this Petition, noting that unless removed sooner as part of the HBEP, Units 3 and 4 could operate through December 31, 2020.[13]

HBEP will reuse existing onsite potable water, natural gas, stormwater, process wastewater, and sanitary pipelines and will connect to the existing Southern California Edison (SCE) switchyard located on a separate parcel owned by SCE within the boundaries of the existing Huntington Beach Generating Station. No offsite linear developments are proposed as part of HBEP. HBEP will continue to use potable water, provided by the City of Huntington Beach, for construction, operational process, and sanitary uses, but at substantially lower volumes than historically used by the existing generating units at the Huntington Beach Generating Station. The new generating units will use air-cooled condensers and will eliminate the use of ocean water for cooling, which is currently used for the existing Huntington Beach Generating Station units. During HBEP operation, stormwater and process wastewater will be discharged to an existing retention basin and then ultimately to the Pacific Ocean via an existing permitted outfall. Sanitary wastewater will be conveyed to the Orange County Sanitation District via the existing City of Huntington Beach sewer connection. Two, 230-kilovolt (kV) transmission interconnections will connect both HBEP power

[13] http://www.energy.ca.gov/sitingcases/huntingtonbeach/compliance/2012-10-25_Staff_Analysis_of_Proposed_Modifications_to_Convert_the_Existing_Units_3_and_4_to_Synchronous_Condensers_TN-68168.pdf

blocks to the existing (SCE 230-kV s that is located on a separate parcel within the existing Huntington Beach Generating Station. See Section 3.0, Transmission System Engineering, for a discussion of the HBEP interconnection to the existing SCE 230-kV switchyard.

The HBEP combined cycle gas turbine (CCGT) Block 1 will be constructed in the area currently occupied by the East Fuel Oil Tank and the Unit 5 Distillate Storage Tank as well as the area just north and west of the existing and decommissioned Unit 5.The following provides an overview of ground disturbance which occurred during construction of the existing Huntington Beach Generating Station.

Description of grading and prior excavations of the Area where HBEP Block 1 CTGs, HRSGs, STG, ACC and the 2 northern transformers will be built:

Drawing 557089 East Fuel Oil Tank Foundation and Dike, Section E shows that the natural grade at the eastern property line, in the vicinity of grid coordinates N 8+73, E18+72 was 5 feet above sea level (FASL) prior to the construction of the East Fuel Oil Tank. This data is also shown on Section B of the same drawing. Drawing 545449 General Plan Utilities provide the overall gridline references. The Huntington Beach Topography map shows the existing grade at the eastern property line of the site is approximately 8 FASL. This topography also shows the progression from existing grade down to the Marsh water level of 4.8 FASL. From the data displayed on the previously mentioned drawings, it can be presumed the site has been previously graded from an eastern property line natural elevation towards the west to the existing predominant elevation of 12 to 13 FASL.

Drawing 546556 Conduit Arrangement Plot Plan-North shows at least one conduit bank in the area which generally traverses the area of the northernmost HBEP Block 1 generator step up transformer. This conduit bank is approximately 2 feet in height. Engineering details required this conduit to be buried to at least 30 inches deep for a bottom of trench depth of approximately 5.5 FASL.

Drawing 557089 East Fuel Oil Tank Foundation and Dike Section A shows that at least an 18.5 feet wide, 6 feet deep circumferential trench was excavated down to at least 4 FASL for the construction of the East Fuel Oil Tank.

Drawing 546539 Station Grounding Outdoors shows typical grounding anodes driven to a depth of 20 feet around the circumference of the East Fuel Oil Tank and it also shows the grounding grid which was buried north of the tank.

South of the East Fuel Oil Tank at grid coordinates N 9+30, E 16+70 lies the smaller Unit 5 Distillate Storage Tank with a smaller diameter but whose excavation preparation characteristics were more than likely similar to those of the East Fuel Oil Tank.

The major foundation excavations for HBEP Block 1 are summarized on Table DR35-1. Figure DR35-1 shows the available HBGS excavation depths.

TABLE DR35-1
Major Excavations In HBEP Block 1 Area

	Foundation Length, Width (ft x ft)	Foundation Thickness (ft)	Existing Grade, Feet Above Sea Level (FASL)	HBEP Top of Final Foundation Elevation (FASL)	Excavation Depth Needed for HBEP(FASL)	Estimate of Previous Excavation Depths (for HBGS) In associated Area (FASL)	Natural Grade On Eastern Property Line (as displayed by HBGS drawings (FASL)
CCGT/HRSG Foundation Slab for CCGT Block 1	50x130	7	10	12.5	5.5	5.5 (existing conduit) 4 (East Fuel Oil Tank Foundation) -10 (grounding anodes) 4 Unit 5 Distillate Tank	5

TABLE DR35-1
Major Excavations In HBEP Block 1 Area

	Foundation Length, Width (ft x ft)	Foundation Thickness (ft)	Existing Grade, Feet Above Sea Level (FASL)	HBEP Top of Final Foundation Elevation (FASL)	Excavation Depth Needed for HBEP(FASL)	Estimate of Previous Excavation Depths (for HBGS) In associated Area (FASL)	Natural Grade On Eastern Property Line (as displayed by HBGS drawings (FASL)
Two Generator Step Up Transformers adjacent to ACC	33x46	5	10	12	7	same as area described above	5
ACC Pile Caps	N/A	3	9 to 15	12	9	same as area described above	5
Steam Turbine Generator Foundation	60x55	7	6 to 15	11	4	same as area described above	5
Two Generator Step Up Transformers west of gas compression building	33x46	5	12	12	7	unknown	5
Gas Compression Building Foundation	144x75	3	12	12.8	9.8	unknown	5

HBGS = Huntington Beach Generating Station

Description of grading and prior excavations of the Area where the two southern transformers and the gas compression enclosure will be built:

Drawing 545452 shows the existing fire main and a drainage pipe are buried to the east and west of the Turbine Shelter building but further site preparation or excavation drawings are not immediately available.

Descriptions of the excavations for the area where the CCGT/HRSG Foundation Slabs for CCGT HBEP Block 2 will be placed:

Drawing 557077 Circulating Water System Dewatering and Excavation Plan shows this area was excavated down to at least 9.5 FASL it is foreseen the excavation necessary for the HBEP Block 2 CCGT/HRSG foundations will be down to approximately 9 feet ASL. The extension of the easternmost HBEP CTG/HRSG foundation into the existing circulating water System return line area will not exceed the excavation performed for during the circulating water system original construction as part of the existing Huntington Beach Generating Station, see drawing 545472.

Descriptions of the excavations for the area where the HBEP GSU Transformer Foundations will be placed:

Drawing 557070 details the excavations in the HBEP Block 2 Transformer area. These excavations range from 9 FASL down to 4.6 FASL in depth. A site preparation plan for this area is not immediately available however Drawing 545438 Site Preparation Plan for existing Huntington Beach Generating Station Units 1 and 2 shows that the area east of the intake screen and south of Units 1 and 2 stack was leveled to 3.6 FASL at one stage of the project. It is possible the area of the Block's two eastern most transformers was leveled in a similar fashion. No other site preparation data exists for the two westernmost transformers. Drawing 557071 also offers details of existing subsurface boiler wash lines and storm drain lines in this area.

Descriptions of the excavations for the area where the Steam Turbine Generator Foundations will be placed:

Drawing 545449 General Plan Utilities, shows trenches for a firemain and a wastewater main have been excavated in this area, however, general site preparation/excavation drawings are not immediately available.

The major foundation excavations for HBEP Block 2 are summarized in Table DR35-2.

TABLE DR35-2
Major Excavations In HBEP Block 2 Area

	Foundation Area (ft^2)	Foundation Thickness (ft)	Existing Grade, (FASL)	Top of Final Foundation Elevation (FASL)	Excavation Depth Needed for HBEP(FASL)	Estimate of Previous Excavation Depths (for HBGS) In Associated Area (FASL)	Presumed Natural Grade On Southern Property Line (as displayed by HBGS drawings) (FASL)
CCGT/HRSG Foundation Slab for CCGT Block 2	50x130	7	14	16	9	9.5	8.5
Two Westernmost Transformer Foundations	33x46	5	10	12	7	3.6	8.5
Two Easternmost Transformer Foundations	33x46	5	10	12	7	unknown	8.5
STG Foundation	60x55	7	12.5	12.5	5.5	unknown	8.5
ACC Pile Caps	N/A	3	12	14.5	11.5	unknown	8.5

Drawings 545466 Drainage Facilities Adjacent to Pacific Coast Highway and 545471 Boiler Wash Disposal System show at grid coordinate 0 +00 the grade is approximately 8.5 feet and that the site has then been graded from that point towards grid north to the predominant existing elevation of 12 to 13 FASL. These excavations occurred in areas where excavations for HBEP utilities are proposed.

DATA REQUEST

36. Please provide the depth and horizontal extent of excavation associated with the following proposed project facilities.
    a. Excavation to expand the foundations of existing HBGS Units 1–4 to support the new combined-cycle gas turbines (CCGT) in Block 2.
    b. New CCGT Block 1.
    c. New control/administrative building.
    d. New maintenance/warehouse building.
    e. Relocated gas metering station.
    f. Floor drains, hub drains, sumps, and piping.
    g. Bare conductors and ground rods.
    h. Ammonia tank, spill containment basin, and refilling station.
    i. Wastewater lift station.
    j. Fire protection systems, if installed below current grade.
    k. A-frame dead-end structures and towers comprising the 230-kilovolt electrical transmission tie-in to the Southern California Edison switchyard north of the project site.

Additionally, please indicate the depth of fill that would underlie the proposed CCGT Block 1 after placement of all fill obtained from on- and off-site sources.

This information will assist staff in determining whether the sediments underlying the proposed project site possess characteristics amenable to the preservation of buried archaeological resources.

Response: The following information relates to the excavations for construction of HBEP. Please note, there is no wastewater lift station required for HBEP because the sanitary sewer system is gravity flow.

HBEP Block 1 Excavations

HBEP Block 1 will be constructed in the area currently occupied by the East Fuel Oil Tank and the Unit 5 Distillate Storage Tank as well as the area just north and west of the existing and decommissioned Unit 5.

Two electrical transformers supporting HBEP Block 1 will be built just east of the area in which existing Huntington Beach Generating Station decommissioned Unit 5 is located. The HBEP gas compression enclosure will be built on the area currently occupied by the existing Turbine Shelter (see drawing 545449 and as well as the HBEP Conceptual Utilities Drawing).

The foundation excavations for HBEP Block 1 are summarized on Table DR35-1.

HBEP Block 2 Excavations

HBEP Block 2 will be constructed in the area of existing Huntington Beach Generating Station Units 3 and 4. It is foreseen that the foundation for the easternmost CTG/HRSG power train will extend into the existing Units 3 and 4 Circulating Water System return/discharge header. The generator step up transformers will be built in the area just west of the Huntington Beach Generating Station ocean water once through cooling (OTC) system existing intake structure and just south of the existing stack. The HBEP STG will be built next to the existing Huntington Beach Generating Station Units 3 and 4 foundation on the northwest corner.

Excavations for the CCGT/HRSG foundation slabs for HBEP CCGT Block 2 will be commensurate with those incurred during the construction of existing Huntington Beach Generating Station Units 3 and 4, as described above. HBEP Block 2 generator step up transformers will be built in the area just west of the OTC existing intake structure and just south of the existing stack. The steam turbine generator foundations will be built next to the existing Units 3 and 4 foundation on the northwest corner.

Utilities

The existing General Plant Utilities Drawing 545449 shows a number of grouped utility service lateral runs, one which runs east to west just north of gridline N 6+00, one which runs north/south just east of gridline E. 14+00 and another which runs east/west just north of gridline N 1+00. Drawing 545449 calls for the minimum design bottom of trench excavation depth to be at least 3 feet from existing grade.

HBEP's Conceptual Utility Plan shows most of the new underground utility laterals will be located in the same area as the existing Huntington Beach Generating Station underground utility corridors.

Table DR36-1, Utility Trench Excavation Quantities, shows HBEP's preliminary depths to the bottom of utility trenches. These utility trench features will be further developed during final design of the project. Table DR36-2 provides the depth of excavation for HBEP electrical structures.

TABLE DR36-1
Utility Trench Excavation Quantities

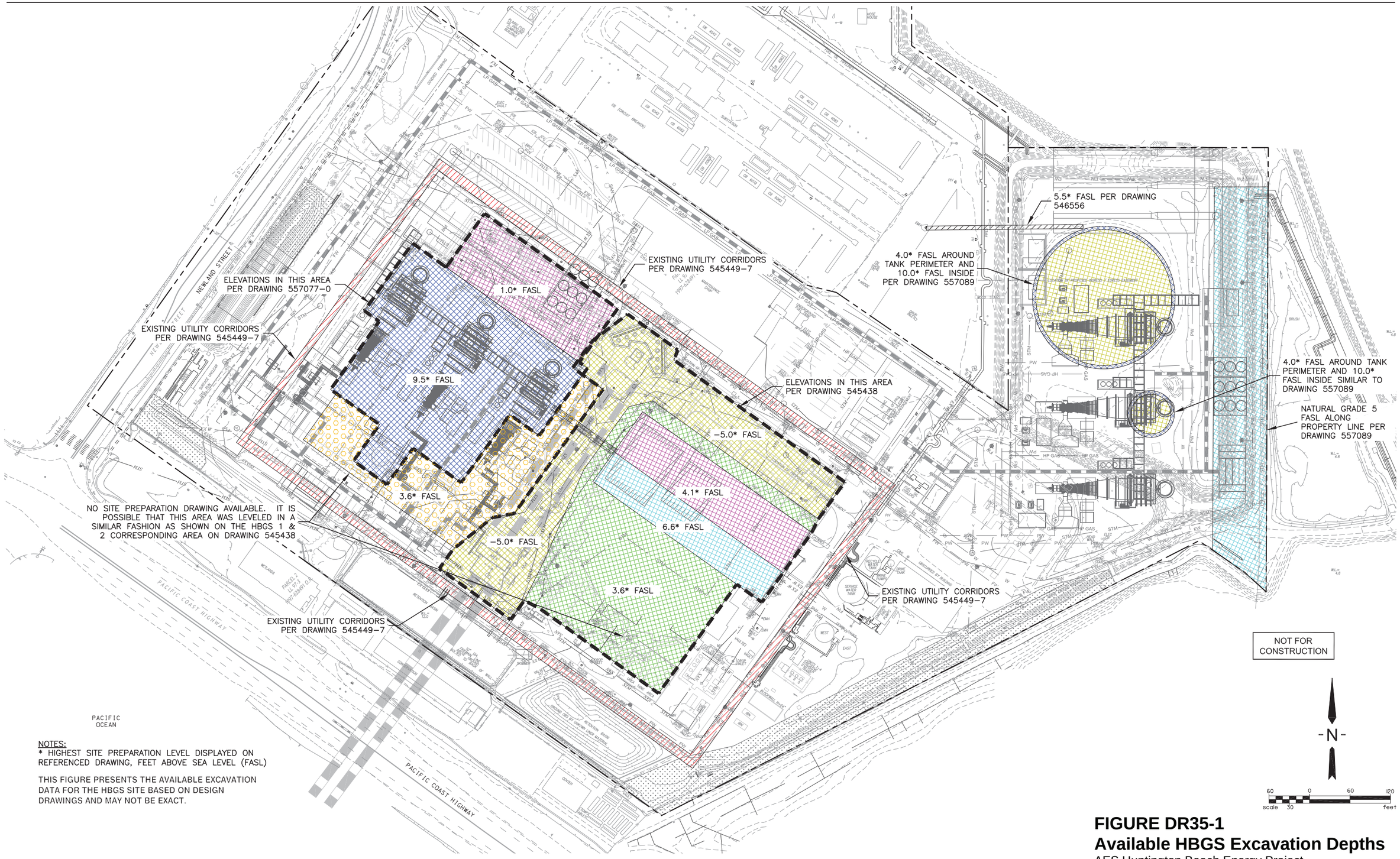
Utility	Length	Preliminary Depth to Bottom of Trench (ft)	Preliminary Trench Bottom Width (ft)
Storm	4,150	7.58	5
Low Pressure Gas	1,209	7.25	5
High Pressure Gas	2,276	6.92	5
Potable Water	2,176	5.75	5
Fire Water	6,092	5.75	5
Process Water One	2,094	5.75	5
Process Water Two	2,637	5.75	5
Sanitary Sewer	1200	8	5
60x 30 Duct Bank	3,486	5.33	6.33

TABLE DR36-2
HBEP Electrical Structure Excavations

	Foundation Diameter (ft)	Foundation Depth	Existing Grade, (FASL)	Top of Final Foundation Elevation (FASL)	Excavation Depth Needed for HBEP(FASL)	Estimate of Previous Excavation Depths (for HBGS) In associated Area (FASL)
Single Circuit Pole East of Gas Compression	6	18	12	12		unknown
Single Circuit Pole West of Gas Compression	6	18	13	12	unknown	unknown
Single Circuit Pole North of Block 2 ACC	6	18	12.5	13	unknown	unknown
Single Circuit Pole next to Intake Structure	6	18	12	12	-6	3.6
Single Circuit Pole next to Pump Well	6	18	12	13	-5	-5

Groundwater

Groundwater levels measured during geotechnical exploration were not stabilized levels as these are influenced by tidal and seasonal variations. For this reason HBEP will develop a dewater plan for excavations deeper than 5 feet after the final design phase is completed. Caving conditions on trenches deeper than four feet will be prevented by using trench boxes or other types of support to prevent soil cavings. Trenches will have a minimum width of 5 feet. Width will be dependent on shoring requirements.



NOTES:
* HIGHEST SITE PREPARATION LEVEL DISPLAYED ON REFERENCED DRAWING, FEET ABOVE SEA LEVEL (FASL)

THIS FIGURE PRESENTS THE AVAILABLE EXCAVATION DATA FOR THE HBGS SITE BASED ON DESIGN DRAWINGS AND MAY NOT BE EXACT.

Source: Power Engineers Collaborative, LLC, 10/31/2012.

FIGURE DR35-1
Available HBGS Excavation Depths
AES Huntington Beach Energy Project
Huntington Beach, California

CH2MHILL

Public Health (37–39)

Potential Health Risk from Asbestos during Demolition

BACKGROUND

In Figure 2.2-2 and Figure 2.2-3 of Application for Certification (AFC), asbestos is listed under the removal of insulation of piping and boiler. Also, page 4 of Appendix 5.14A (Phase I Environmental Site Assessment), Environmental Management Strategies, Inc. (EMS) notes that "the site buildings were constructed prior to 1980; therefore, asbestos-containing building materials and lead based paint may be present on-site."

Exposure to asbestos and Asbestos Containing Materials (ACM) increases workers' and residences' risk of developing lung diseases, including asbestosis, lung cancer, and mesothelioma. Thermal system insulation (formed or spray-on) is the ACM of greatest concern for response and recovery worker exposure. Other materials that may contain asbestos include: vinyl floor tile, home siding and shingles, transite (including cement piping), flame retardant materials (e.g., gloves, curtains) and roof flashing. (Source: http://www.osha.gov/SLTC/etools/hurricane/building-demolition.html#asbestos)

In Table 5.1-38, the applicant stated that they will comply with all requirements outlined in South Coast Air Quality Management District (SCAQMD) Rule 1403, which requires the notification and special handling of asbestos-containing materials during demolition activities. In Table 5.16-1 of Worker Health and Safety section, Asbestos and Lead Program was listed to control the exposure to asbestos and lead for workers in construction/demolition activities. However, considering the potential risk from exposure to Asbestos Containing Materials (ACM), staff believes that it is also important that the applicant explains how they will comply with the rule and implement the control plan to protect the public health.

DATA REQUEST

37. Please discuss how the applicant intends to comply with the requirements in SCAQMD Rule 1403 regarding the handling, removal and disposal of any asbestos containing materials encountered during decommissioning or construction.

Response: The Applicant will comply with SCAQMD Rule 1403 by implementing the following actions:

1. Prior to starting demolition activities, the Applicant will conduct a facility survey to identify and quantify the presence of all friable and non-friable Class I and Class II asbestos-containing material (ACM). The survey will document the contact information and written qualifications[14] for the person conducting the survey, survey dates, a listing of ACM, a sketch of where all samples were collected, contact information and a statement of qualifications for the laboratory conducting the ACM sample analyses, and sample test methods used with sampling protocols and laboratory methods.
2. The Applicant (or its contractor) will notify the SCAQMD and CEC CPM of the intent to conduct demolition activities in a district-approved format by letter no later than 10 working days prior to the start of any demolition activities. The notification will include whether the notification is an original or revised notification, contact information for the Applicant, supervising person, operator, and asbestos removal contractor, facility address and location, a description of the affected parts (square feet/meters, number of floors, age, and present or prior uses) of the facility to be demolished, the specific location of ACM removal at the facility, schedule for starting and completing the demolition activity, a brief description of work practices and engineering controls to be employed to remove and handle ACM, an estimate of the amount of friable,

[14] Certified by Cal/OSHA pursuant to regulations required by subdivision (b) of Section 9021.5 of the Labor Code, and shall have taken and passed an EPA-approved Building Inspector Course and conform to the procedures outlined in the Course.

Class I and Class II non-friable ACM to be removed, name and location of the ACM waste disposal facility, procedures describing the identification of unexpected ACM or Class II non-friable asbestos is discovered, State Contractors License and Cal/OSHA Registration Numbers, procedures used to detect and analyze friable and non-friable asbestos, and certification that a trained person will supervise stripping and removal activities. Notifications will be updated as appropriate to document if the quantity of affected asbestos changes by more than 20 percent and changes in the start and completion dates.

3. Asbestos removal will employ one or more of the following methods: High Efficiency Particulate Air (HEPA) Filtration, Glovebag or Minienclosures, Dray Removal, or an alternative approved method.
4. Collected ACM will be placed in a leak-tight container or wrapped and will be handled and stored to avoid releasing ACM to the atmosphere. Storage containers will be appropriately marked with warning labels.
5. The Applicant will designate an onsite representative to be present during all ACM demolition or handling procedures. The onsite representative will successfully complete the Asbestos Abatement Contractor/Supervisor course pursuant to the Asbestos Hazard Emergency Response Act and Provision of Title 40, Code of Federal Regulations, Parts 61.145 to 61.147, 61.152, and Part 763.
6. The Applicant will dispose of ACM wastes at a licensed waste disposal facility and will maintain copies of the waste shipment records. ACM wastes will be hauled from the site by an appropriately licensed ACM waste transporter and the Applicant will maintain copies of all manifests.

Sensitive Receptors in Health Risk Assessment

BACKGROUND

The Application for Certification (AFC) and appendices to the AFC provided some information on how the applicant conducted their health risk assessment. The potential impacts associated with toxic air emissions from the proposed power plant were addressed in a health risk assessment (Section 5.9 Public Health, Appendix 5.9, and Appendix 5.9A Environmental Data Resources (EDR) Offsite Receptor Report). This health risk assessment was prepared using guidelines developed by OEHHA and ARB, as implemented in the latest version of the HARP (Hotspots Analysis and Reporting Program) model. The EDR Offsite Receptor Report listed all the sensitive receptors including day care centers, nursing homes, schools, hospitals and colleges within 6 miles of the proposed power plant. However, staff was unable to identify these sensitive receptors from discrete grid receptors when using either American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) or HARP. Staff needs the files of AERMOD and HARP which contain the information on grid id and location of both sensitive receptors and residence receptors to review and verify the applicant's health risk assessment.

DATA REQUEST

38. Please provide the input files of data (i.e. the "*.ROU" files) for AERMOD and HARP which contain the information of sensitive receptors and residence receptors, including grid identification numbers and corresponding locations, so that staff can differentiate them from all other grid receptors.

Response: Attachment DR38-1 contains the list of sensitive receptors and the corresponding HARP HRA receptor numbers. The electronic version of the file is also included on the *DR Set1A – Supplemental Files for the Air Quality and Public Health Responses* CD provided herewith.

DATA REQUEST

39. Please provide all other related files to enable staff to replicate the health risk assessment.

Response: Based on a review of the files included on the CEC AFC Dispersion Modeling Files CD, it was determined the .GRF and .SIT files will also be required to replicate the health risk assessment using HARP On-RAMP. Therefore, the .GRF and .SIT files are included the *DR Set1A – Supplemental Files for the Air Quality and Public Health Responses* CD.

Attachment DR38-1
HRA Sensitive Receptors and Corresponding HARP Receptor Numbers

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
410027.05	3723140.07	3602	Daycare	KELLNER, KIM
410472.05	3723021.69	3603	Daycare	EADER PROGRAM CENTER
410472.05	3723021.69	3604	School	JOHN H. EADER ELEMENTARY
409969.52	3724222.87	3605	School	EDISON HIGH
410641.52	3722894.81	3606	Daycare	HIGGINS, GLORIA
410049.38	3724630.19	3607	Hospital	SAV ON PHARMACY #6183
410168.42	3724568.09	3608	Daycare	MACIAS, CHERYL
411136.71	3723187.38	3609	Daycare	PINELL, MARIA
408995.07	3725121.4	3610	Daycare	ARDIS, STACY
409828.47	3725100.21	3611	Hospital	GLENN E MILLER MD
408760.49	3725122.52	3612	Daycare	TAYLOR, RICKI
410516.82	3724837.61	3613	Daycare	STEVENSON, BARBARA
408757.24	3725171.34	3614	Daycare	YMCA PETERSON PROGRAM CENTER
408757.24	3725171.34	3615	School	JOHN R. PETERSON ELEMENTARY
411264.99	3723820.47	3616	Daycare	RESURRECTION LUTHERAN PRESCHOOL
408442.65	3725144.4	3617	Daycare	BURKHART, DIANA
411211.04	3724403.13	3618	School	BRETHREN CHRISTIAN JR/SR HIGH
411211.04	3724403.13	3619	School	ORANGE COAST GAKUEN
408898.84	3725435.02	3620	Daycare	MURRAY, LORIE
410898.52	3724900.59	3621	Daycare	CASTRO, MARIA
410309.8	3725307.49	3622	Daycare	ETHEART, NATHALIE
409887.73	3725485.55	3623	Daycare	JOHNSON, RUTH
409072.72	3725584.17	3624	Daycare	GREER, LESLIE
408582.58	3725524.52	3625	Daycare	MADRID, TENA KAYE
407309.65	3724580.89	3626	Hospital	BERNARD MASON MD
409972.31	3725605.62	3627	School	S S SIMON AND JUDE SCHOOL
410474.17	3725433.48	3628	School	ISAAC L. SOWERS MIDDLE
411139	3725034.75	3629	School	HUNTINGTON CHRISTIAN SCHOOL
410705.07	3725435.76	3630	Hospital	ADULT DAY SERVICES OF ORANGE COUNTY
409674.06	3725835.75	3631	Daycare	YMCA MOFFETT PROGRAM CENTER
409674.06	3725835.75	3632	School	S. A. MOFFETT ELEMENTARY
411058.63	3725267.25	3633	Daycare	ETEMADIEH, MINOO & ATA ESHRAGHIAN
408572.28	3725805.17	3634	Hospital	LAWRENCE J DOMARACKI DC
411585.62	3724699.06	3635	Hospital	REMY R ROSELLINI MD
411585.62	3724699.06	3636	Hospital	FAMILY PRACTICE PHYSICIANS
411687.37	3724570.6	3637	Daycare	FOSTER, JANET
410900.13	3725672.35	3638	Daycare	BONEV, LINDA
409972.14	3726081.33	3639	Daycare	CHRIST PRESBYTERIAN CHURCH PRE SCHOOL
409198.01	3726184	3640	Daycare	REED, LIANA
411445.59	3725300.26	3641	Daycare	KIMBLE, BETH
411846.82	3724868.53	3642	Daycare	MACIAS, AZUCENA
409573.34	3726264.73	3643	Daycare	GOSSETT, TONI & GARY
409020.17	3726299.9	3644	Daycare	ZAKARY, AFAF
412399.56	3723153.59	3645	Daycare	TURNER SHERRI
411072.27	3725837.08	3646	Daycare	YMCA HAWES PROGRAM CENTER
411072.27	3725837.08	3647	School	RALPH E. HAWES ELEMENTARY
410219.53	3726261.97	3648	Hospital	FOUNTAIN VALLEY MEDICAL GROUP INC
410219.53	3726261.97	3649	Hospital	PRIMARY CARE SPECIALISTS
410245.49	3726261.73	3650	Daycare	MICHAEL, NARGES
411808.09	3725193.79	3651	Daycare	WONG, ALICE

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
410818.47	3726063.43	3652	Daycare	MOORMAN, MICHELLE
408368.07	3726460.25	3653	Daycare	LA PETITE ACADEMY
408368.07	3726460.25	3654	Daycare	LA PETITE ACADEMY
408368.07	3726460.25	3655	Daycare	LA PETITE ACADEMY
408368.07	3726460.25	3656	School	LA PETITE ACADEMY
409634.96	3726604.57	3657	Daycare	HOLGUIN, KELLY
408151.81	3726435.71	3658	Daycare	JOYFUL NOISES PRE SCHOOL
409639.42	3726684.37	3659	Daycare	NEWLAND SCHOOL
409639.42	3726684.37	3660	School	NEWLAND (WILLIAM T.) ELEMENTARY
406609.04	3725387.2	3661	Daycare	GALITZEN-TOMPKINS, MELISSA
411921.6	3725538.71	3662	Daycare	RINALDI'S CHILD CARE CONCERNS
412772.07	3722607.96	3663	Daycare	NMUSD WHITTIER PRESCHOOL
411730.04	3725880.9	3664	Daycare	ERICKSON, PAMELA
408191.89	3726651.56	3665	School	CARDEN ACADEMY
412856.2	3724006.58	3666	Daycare	NEW ALTERNATIVES, INC #5
408367.45	3726782.95	3667	Hospital	SAV ON PHARMACY #6124
406777.06	3725883.46	3668	School	ETHEL DWYER MIDDLE
407139.86	3726198.19	3669	Daycare	FIRST CHRISTIAN EARLY CHILDHOOD DEVELOPMENT CTR.
410893.87	3726593.89	3670	Daycare	PEREIRA, BELINDA
408345.71	3726836.38	3671	Hospital	ADVANCED SURGICAL INSTITUTE,THE
408345.71	3726836.38	3672	Hospital	SEACLIFF SURGICAL CENTER
408345.71	3726836.38	3673	Hospital	SEACLIFF SURGICAL CENTER
412770.81	3724712.6	3674	Daycare	WALDORF SCHOOL OF ORANGE
412770.81	3724712.6	3675	Daycare	WALDORF SCHOOL OF ORANGE COUNTY
412770.81	3724712.6	3676	School	THE WALDORF SCH OF ORANGE CO
412770.85	3724717.03	3677	Daycare	COSTA MESA HEAD START
408366.56	3726883.86	3678	Hospital	NEWPORT BEACH OB/GYN MEDICAL GROU INC
408366.56	3726883.86	3679	Hospital	W RAYMOND MENZIES MD A PROF CORP
408366.56	3726883.86	3680	Hospital	PACIFIC SHORES MEDICAL GROUP
408366.56	3726883.86	3681	Hospital	WENDELL C WITTE MD
408366.56	3726883.86	3682	Hospital	MARTIN A STEINFIELD MD INC
408366.56	3726883.86	3683	Hospital	THOMAS A GOODHEART MD INC
408366.56	3726883.86	3684	Hospital	ORANGE COAST UROLOGY
408366.56	3726883.86	3685	Hospital	ALAN BOYAR MD
408366.56	3726883.86	3686	Hospital	T H GAN MD INC
408366.56	3726883.86	3687	Hospital	JULIE R MATSUURA MD
408366.56	3726883.86	3688	Hospital	NEWPORT-HUNTINGTON MEDICAL GROUP LABORATORY
413041.54	3723890.68	3689	Daycare	BURKHART, GLORIA
410960.41	3726670.89	3690	Daycare	BUSH, MELISSA
410150.34	3726990.05	3691	Daycare	MEISINGER, SANDRA
413125.97	3723792.34	3692	Daycare	HALLOCK, ANITA
407746.03	3726755.65	3693	Daycare	OTSUKA, SHERRY
410991.73	3726749.33	3694	Daycare	JAM, HEIDEH
406763.1	3726164.14	3695	Daycare	YMCA SMITH PROGRAM CENTER
406763.1	3726164.14	3696	School	AGNES L. SMITH ELEMENTARY
411908.49	3726230.77	3697	Hospital	SO CALIFORNIA MEDICAL ASSOCIATES INC
411400.83	3726675.67	3698	Daycare	BAUMDRAHER, DONNA & JOHN
410150.2	3727173.02	3699	Daycare	BARAHONA, PATRICIA
410160.43	3727176.25	3700	School	TALBERT (SAMUEL E.) MIDDLE
413180.49	3724488.21	3701	Daycare	KISTLER, TAMI

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
408366.58	3727273.08	3702	Daycare	KINDERCARE LEARNING CENTERS, INC. # 472
408366.58	3727273.08	3703	Daycare	KINDERCARE LEARNING CENTERS, INC. # 472
408366.58	3727273.08	3704	Daycare	KINDERCARE LEARNING CENTERS, INC. # 472
408366.58	3727273.08	3705	Hospital	KINDERCARE OF HUNTINGTON BEACH CA #472
408366.58	3727273.08	3706	School	KINDER-CARE
408914.18	3727438.63	3707	Daycare	YMCA PERRY PROGRAM CENTER
408914.18	3727438.63	3708	Daycare	HBCSD- P.S. ACADEMY ACADEMICS THROUGH THE ARTS
408914.18	3727438.63	3709	School	JOSEPH R. PERRY ELEMENTARY
413172.97	3721506.54	3710	Hospital	ALLERGY IMMUN0 TECHNOLOGIES INC
407138.86	3726860.21	3711	School	HUNTINGTON BEACH HIGH
412175.03	3726381.35	3712	Daycare	MACARTNEY ANN
411866.93	3726651.41	3713	Daycare	LUTZ, JULIE
411272.55	3727039.47	3714	Daycare	FVSD - OKA SCHOOL
411272.55	3727039.47	3715	School	OKA (ISOJIRO) ELEMENTARY
413571.34	3723921.38	3716	Hospital	ALBERT G PIZZO MD
411379.18	3727041.8	3717	Daycare	CHILDTIME CHILDREN'S CENTER INC.
411379.18	3727041.8	3718	Daycare	CHILDTIME CHILDREN'S CENTER INC.
411379.18	3727041.8	3719	Daycare	CHILDTIME CHILDREN'S CENTER INC.
407945.92	3727392.44	3720	Daycare	COASTLINE CHRISTIAN PRE-SCHOOL
413710.47	3722997.55	3721	Hospital	ORANGE COUNTY LATINO MEDICAL GROUP
413570.17	3724409.29	3722	Daycare	NMUSD WILSON PRESCHOOL
412109.18	3726681.35	3723	Daycare	PEGASUS SCHOOL, THE
412109.18	3726681.35	3724	School	THE PEGASUS SCHOOL
413622.13	3724412.15	3725	Daycare	IBAHIM, NAHID
413731.6	3724005.31	3726	Daycare	CHRIST LUTHERAN PRESCHOOL
413731.6	3724005.31	3727	School	CHRIST LUTHERAN SCHOOL
413775.26	3723704.42	3728	Daycare	TORAL, ANGELICA
408345.89	3727630.34	3729	Hospital	SAV ON DRUGS #9427
409961.42	3727701.51	3730	Hospital	TALBERT MEDICAL GROUP-HUNTINGTON BEACH
409961.42	3727701.51	3731	Hospital	MULLIKIN MEDICAL CTR HUNTINGTON BEACH
409961.42	3727701.51	3732	Hospital	TMMC/HUNTINGTON BEACH CENTER
409961.42	3727701.51	3733	Hospital	TALBERT HEALTH SERVICES CORP
413376.77	3721065.59	3734	Hospital	NEWPORT SURGERY CLINIC
413376.77	3721065.59	3735	Hospital	SUPERIOR FAMILY MEDICAL GROUP INC
413420.62	3721092.92	3736	Hospital	JOEL R SHEINER MD
413420.62	3721092.92	3737	Hospital	ORANGE COAST UROLOGY
413420.62	3721092.92	3738	Hospital	DEREK R ALLEN MD
413420.62	3721092.92	3739	Hospital	CHARLES W MONIAK MD
413420.62	3721092.92	3740	Hospital	ROBERT SCHIFFER MD, INC
413420.62	3721092.92	3741	Hospital	NEWPORT PULMONARY ASSOCIATES MED GRP
413420.62	3721092.92	3742	Hospital	PERRY B SHELDAYI DO
413420.62	3721092.92	3743	Hospital	ANTHONY BOHAN MD INC
413420.62	3721092.92	3744	Hospital	ROBERT SKVERSKY MD
413420.62	3721092.92	3745	Hospital	STEPHEN P ANGEL MD
413420.62	3721092.92	3746	Hospital	CHIEN S YU MD
413420.62	3721092.92	3747	Hospital	JOHN R TENCATI MD INC
413420.62	3721092.92	3748	Hospital	MAHNAZ BEHBOODIKHAH MD
413420.62	3721092.92	3749	Hospital	DENNIS R NOVAK MD INC
413420.62	3721092.92	3750	Hospital	ROBERT I HEWLETT MD
413420.62	3721092.92	3751	Hospital	MICHAEL OBRIEN MD

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
413452.71	3721154.72	3752	Hospital	SUPERIOR REHABILITATION CENTER
413452.71	3721154.72	3753	Hospital	HEALTH WEST CHIROPRACTICE CENTER
413465.84	3721170.13	3754	Hospital	PARK SUPERIOR HEALTHCARE LLC
413465.84	3721170.13	3755	Hospital	PARK SUPERIOR HEALTHCARE
413465.84	3721170.13	3756	Nursing	PARK SUPERIOR HEALTHCARE LLC
413973.96	3723007.38	3757	Hospital	SANO MEDICAL CENTER
413974.66	3723499.71	3758	Daycare	HERNANDEZ, LEONOR
413972.8	3723601.74	3759	Daycare	NMUSD POMONA PRESCHOOL
413610.8	3721197.65	3760	Hospital	JOCELYN J WON MD INC
413610.8	3721197.65	3761	Hospital	NEWPORT BREAST CARE
413610.8	3721197.65	3762	Hospital	KRIS V IYER MD
413610.8	3721197.65	3763	Hospital	GEORGE O DETARNOWSKY
413610.8	3721197.65	3764	Hospital	EILEEN SEIBERT MD INC
413610.8	3721197.65	3765	Hospital	DOCTORS DIRECT
413610.8	3721197.65	3766	Hospital	DAVID B BLOOMBERG MD INC
413610.8	3721197.65	3767	Hospital	JOHN HOLLAND MD
413610.8	3721197.65	3768	Hospital	MERLE S ROBBOY MD
413610.8	3721197.65	3769	Hospital	JOHN G MILLER MD
413610.8	3721197.65	3770	Hospital	GENE C LAWRENCE MD
413998.13	3724254.63	3771	Daycare	WEERASEKERA, AMSHI
413807.02	3721562.92	3772	Hospital	NEWPORT NURSING AND REHABILITATION CENTER
413807.02	3721562.92	3773	Hospital	SUNRISE CARE AND REHAB FOR NEWPORT BCH
413807.02	3721562.92	3774	Nursing	NEWPORT NURSING AND REHABILITATION CENTER
413631.73	3721153.11	3775	Hospital	HOAG MEMORIAL HOSPITAL DIALYSIS UNIT
413631.73	3721153.11	3776	Hospital	HOAG CAE AT HOME
408031.97	3727858.46	3777	Hospital	BEACHSIDE NURSING CENTER
408031.97	3727858.46	3778	Hospital	BEACHSIDE NURSING CENTER
408031.97	3727858.46	3779	Nursing	BEACHSIDE NURSING CENTER
412210.31	3727094.03	3780	Daycare	REISINGER, JAMIE
413605.75	3721049.11	3781	Hospital	HOAG MEMORIAL HOSPITAL PRESBYTERIAN
413605.75	3721049.11	3782	Hospital	HOAG MEMORIAL HOSP PRESBYTERIAN DP SNF
413605.75	3721049.11	3783	Hospital	HOAG MEMORIAL HOSPITAL PRESBYTERIAN CLINICAL LAB
413605.75	3721049.11	3784	Hospital	NEWPORT EMERGENCY MEDICAL GROUP INC
413605.75	3721049.11	3785	Hospital	HOAG MEMORIAL HOSPITAL BLOOD GAS LAB
413605.75	3721049.11	3786	Hospital	BONNIE V BOCK, MD ASCP
413647.14	3721113.05	3787	Hospital	ROBERT A HINRICHS MD INC
413647.14	3721113.05	3788	Hospital	NEWPORT CYTOLOGY ASSOCS
413647.14	3721113.05	3789	Hospital	STEPHEN C KOFFLER MD
413647.14	3721113.05	3790	Hospital	NEWPORT BEACH COMPREHENSIVE CARE
413647.14	3721113.05	3791	Hospital	CA PHARMACY AND COMPOUNDING CTR
413647.14	3721113.05	3792	Hospital	K MARK VUCHINICH MD INC
413647.14	3721113.05	3793	Hospital	PAUL R KUHN MD
413647.14	3721113.05	3794	Hospital	NEPHROLOGY SPECIALISTS MED GRP INC
413647.14	3721113.05	3795	Hospital	LESLIE K MESERVE
413647.14	3721113.05	3796	Hospital	HUNG V ONG MD INC
413647.14	3721113.05	3797	Hospital	RONALD S SOLOMON MD
414134.41	3722800.8	3798	Hospital	MESA VERDE CONVALESCENT HOSP
414134.41	3722800.8	3799	Hospital	MESA VERDE CONVALESCENT HOSPITAL
414134.41	3722800.8	3800	Nursing	MESA VERDE CONV. HOSPITAL
411949.14	3727323.75	3801	Daycare	MACIAS, MARIA

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
408794.1	3728067.4	3802	Daycare	HARWARD, KIERSTY
414162.9	3723807.39	3803	Daycare	MATT KLINE HEADSTART
413674.42	3721051.82	3804	Hospital	HOAG FERTILITY SERVICES
413674.42	3721051.82	3805	Hospital	JOHN J S YU MD INC
413674.42	3721051.82	3806	Hospital	PREMIER HEART AND VASCULAR CARE
413674.42	3721051.82	3807	Hospital	ATEF E KHOUZAM, MD INC
413674.42	3721051.82	3808	Hospital	JONATHAN H WHEELER MD
413674.42	3721051.82	3809	Hospital	MARK A NEWMAN MD
413674.42	3721051.82	3810	Hospital	MARK RETTENMAIER, MD
413674.42	3721051.82	3811	Hospital	JOHN PAUL MICHA, MD
413674.42	3721051.82	3812	Hospital	NAQVI AND NAQVI MD INC
413674.42	3721051.82	3813	Hospital	DORIS FOSLER TUNNEY, M D
413674.42	3721051.82	3814	Hospital	JOHN V BROWN, MD
413674.42	3721051.82	3815	Hospital	SHELLEY R COE
413674.42	3721051.82	3816	Hospital	DALE E BRAITHWAITE MD INC
413674.42	3721051.82	3817	Hospital	GREGORY C DIROCCO MD
413674.42	3721051.82	3818	Hospital	WARREN H FONG MD INC
413674.42	3721051.82	3819	Hospital	WEATHERFORD T CLATON MD
413674.42	3721051.82	3820	Hospital	NEWPORT BEACH OB GYN MED GROUP
413674.42	3721051.82	3821	Hospital	ALICE WALLACK MD
413674.42	3721051.82	3822	Hospital	RICHARD AGNEW MD
413969.17	3721749.97	3823	Hospital	RUSSELL E BROWER MD
413969.17	3721749.97	3824	Hospital	ALAN J TOBIAS DPM
413969.17	3721749.97	3825	Hospital	VINCENT C HUNG MD
413969.17	3721749.97	3826	Hospital	DONALD E WILLIAMS MD
413969.17	3721749.97	3827	Hospital	JOSPEH F CHOW MD, INC
413969.17	3721749.97	3828	Hospital	NEWPORT FAMILY MEDICINE LABORATORY
413969.17	3721749.97	3829	Hospital	ADVANCED DERMATOLOGY CARE CENTER, INC
413969.17	3721749.97	3830	Hospital	HARBOR MULTI-SPECIALTY SURGICAL CENTER
413969.17	3721749.97	3831	Hospital	JOSEPH F CHOW MD INC
413431.09	3720608.25	3832	Hospital	LOUIS VANDERMOLEN MD
413431.09	3720608.25	3833	Hospital	LOUIS A VANDERMOLEN AND ASSOCIATES
413431.09	3720608.25	3834	Hospital	NEIL M BARTH MD
413431.09	3720608.25	3835	Hospital	NEWPORT DOCTORS MEDICAL GROUP INC
413431.09	3720608.25	3836	Hospital	KHOSROW MAHDAVI MD INC
414177.76	3723810.59	3837	Daycare	HAPPY CHILD PRE SCHOOL
414177.76	3723810.59	3838	School	PORT MESA CHRISTIAN SCHOOL
413993.52	3721776.37	3839	Hospital	MEDICAL ARTS PHYSICAL THERAPY
413993.52	3721776.37	3840	Hospital	NEWPORT BEACH ORANGE COAST ENDOSCOPY
413993.52	3721776.37	3841	Hospital	DONALD R ABRAHM MD
413993.52	3721776.37	3842	Hospital	NEWPORT BEACH ORANGE COAST ENDOSCOPY
413699.45	3721050.49	3843	Hospital	CALIFORNIA REHABILITATION INC
413699.45	3721050.49	3844	Hospital	JAMES CAILLOUTE MD
413699.45	3721050.49	3845	Hospital	NEWPORT MUSCULOSKELTAL INSTITUTE
413699.45	3721050.49	3846	Hospital	RICHARD J HASKELL MD
413699.45	3721050.49	3847	Hospital	NEWPORT BEACH SURGERY CENTER
413699.45	3721050.49	3848	Hospital	JEANNE M SPUDICK DO APC
413699.45	3721050.49	3849	Hospital	CARDIOLOGY CONSULTANTS OF NEWPORT INC
413699.45	3721050.49	3850	Hospital	SOUTHERN CALIFORNIA INSTITUTE FOR RE-
413699.45	3721050.49	3851	Hospital	GASTROENTERLOGY ALLIANCE OF NEWPORT

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
413699.45	3721050.49	3852	Hospital	GASTROETEROLOGY ALLIANCE OF NEWPORT
413699.45	3721050.49	3853	Hospital	WESTCLIFF MEDICAL LABORATORIES INC
413699.45	3721050.49	3854	Hospital	CHARLES A ROBERTSON MD
413699.45	3721050.49	3855	Hospital	JORGE E RODRIGUEZ MD INC
413699.45	3721050.49	3856	Hospital	TONIA M MARRALLE MD
413699.45	3721050.49	3857	Hospital	MAGELLA MEDICAL GROUP INC
413699.45	3721050.49	3858	Hospital	NEWPORT BEACH SURGERY CENTER
413699.45	3721050.49	3859	Hospital	NEWPORT BEACH MEDICAL ASSOCIATES
413699.45	3721050.49	3860	Hospital	SOUTHERN CALIFORNIA CENTER FOR
413699.45	3721050.49	3861	Hospital	J R BETSON MD INC
413699.45	3721050.49	3862	Hospital	DESMOND D LEVIN MD
406749.24	3727406.24	3863	Daycare	PATTI'S PRESCHOOL
414166.55	3724008.06	3864	Daycare	PAGE SCHOOL OF COSTA MESA
414166.55	3724008.06	3865	School	PAGE PRIVATE SCHOOL
414025.4	3721813.78	3866	Hospital	SHARE OURSELVES FREE MEDICAL CLINIC
414083.7	3724490.05	3867	Daycare	WORTHING, KATHY
413854.9	3721316.33	3868	Hospital	FLAGSHIP HEALTHCARE CENTER
413854.9	3721316.33	3869	Hospital	SSC NEWPORT BEACH OPERATING COMPANY LP
413854.9	3721316.33	3870	Nursing	FLAGSHIP HEALTHCARE CTR
410791.9	3727988.7	3871	Hospital	ENRICHING, INC
413576.7	3725852.97	3872	Hospital	GRACE MEDICAL SCREENINGS LLC/MOBILE
413576.7	3725852.97	3873	Hospital	GRACE MEDICAL SCREENIONGS LLC
407944.9	3728057.79	3874	Hospital	HOSPITAL CIRCLE MEDICAL LABORATORY
407944.9	3728057.79	3875	Hospital	PAUL D ROSENBLIT MD PHD
407944.9	3728057.79	3876	Hospital	CENTER FOR PRIMARY CARE
407944.9	3728057.79	3877	Hospital	ALLERGY-PEDIATRICS GROUP INC
407944.9	3728057.79	3878	Hospital	SOBHA SUNDERRAJAN MD
407944.9	3728057.79	3879	Hospital	RUTH DEERFIELD MD
408146.57	3728112.4	3880	Hospital	SEA CLIFF HEALTHCARE
408146.57	3728112.4	3881	Hospital	SEA CLIFF HEALTHCARE CENTR
408146.57	3728112.4	3882	Hospital	HUNTINGTON BEACH CONVALESCENT HOSPITAL
408146.57	3728112.4	3883	Hospital	HUNTINGTON BEACH CONV HOSP
408146.57	3728112.4	3884	Nursing	SEA CLIFF HEALTHCARE CENTR
407948.12	3728104.33	3885	Hospital	SOUTHWEST PRIMARY CARE
407948.12	3728104.33	3886	Hospital	LABORATORY SERVICES BASSAM ASSASSA MD
407948.12	3728104.33	3887	Hospital	ORANGE COUNTY SURGERY CENTER
407948.12	3728104.33	3888	Hospital	ORANGE COUNTY IMMUNE INSTITUTE LLC
407948.12	3728104.33	3889	Hospital	DELMAPACIFIACA HOSP CLINICAL LAB
407948.12	3728104.33	3890	Hospital	JAY P DILIBERTO MD
407948.12	3728104.33	3891	Hospital	NOVA CARE OUTPATIENT REHAB HB
407948.12	3728104.33	3892	Hospital	PACIFICA HOSPITAL D/P SNF
407948.12	3728104.33	3893	Hospital	PACIFICA HOME CARE
407948.12	3728104.33	3894	Hospital	PACIFICA HOSPITAL HOME HEALTH
407948.12	3728104.33	3895	Hospital	ORANGE COUNTY SURGERY CENTER
407948.12	3728104.33	3896	Hospital	PACIFICA HOSPITAL
407948.12	3728104.33	3897	Hospital	PACIFICA REHABILITATION CENTER
414373.58	3722996.04	3898	Hospital	PLANNED PARENTHOOD/O&SBC
414380	3722779.75	3899	Daycare	CHILDS-PACE
414400.3	3723807.49	3900	Hospital	H E L P CLINIC
407859.92	3728186.13	3901	Hospital	LESTER L LEE MD

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
407859.92	3728186.13	3902	Hospital	TONY M HSU MD INC
407859.92	3728186.13	3903	Hospital	JOSETTE TAGLIERI
407859.92	3728186.13	3904	Hospital	HUNTINGTON BEACH PHYSICAL THERAPY SPEC
407743.83	3728162.85	3905	Hospital	CALIFORNIA COAST MEDICAL CENTER
413997.73	3721003.45	3906	Hospital	OFFICE OF JOHN STORCH MD
413997.73	3721003.45	3907	Hospital	TINA A SUGIMOTO MD
414062.81	3721123.74	3908	Hospital	NEWPORY HEART A MEDICAL GROUP
414038.19	3721067.41	3909	Hospital	ALAN FREEDMAN MD
408365.84	3728358.69	3910	Hospital	HUNTINGTON MEDICAL GROUP
413912.22	3720778.01	3911	Hospital	HOAG MEMORIAL HOSPITAL PRESBYTERIAN
413912.22	3720778.01	3912	Hospital	HOAG MEMORIAL HOSP HEMODYLASIS
413912.22	3720778.01	3913	Hospital	HOAG MEMORIAL HOSPITAL NURSING SERVICE
413912.22	3720778.01	3914	Hospital	HOAG MEMORIAL HOSPITAL RADIOLOGY
413914.06	3720776.89	3915	Hospital	ORANGE COAST ONCOLOGY HEMATOLOGY MED
408366.16	3728391.96	3916	Hospital	EDINGER MEDICAL GROUP INC
414269.36	3721504.45	3917	Daycare	NOBIS PRESCHOOL
414269.36	3721504.45	3918	Daycare	NOBIS PRESCHOOL
408748.66	3728454.84	3919	Daycare	ST. WILFRID'S PRESCHOOL
408150.05	3728378.5	3920	Hospital	HUNTINGTON BCH HEALTHCARE CNT
408150.05	3728378.5	3921	Hospital	ALAMITOS DERMATOLOGICAL MEDICAL CLINIC
408023.71	3728349.78	3922	Hospital	AVALON REHAB INC
408023.71	3728349.78	3923	Hospital	FRANK R LAW MD
408023.71	3728349.78	3924	Hospital	JOHN P RABER MD
414559.59	3722221.51	3925	Hospital	FAMILY CARE CENTERS INC - COSTA MESA
408365.51	3728517.27	3926	Hospital	FAMILY CARE MEDICAL WALKIN
413997.43	3720556.59	3927	Hospital	PACIFIC COAST CARDIOLOGY
408193.11	3728518.92	3928	Hospital	A-1 HOME HEALTH CARE
414660.41	3724065.75	3929	Daycare	CORONA, ROSAURA
412074.95	3727901.42	3930	Daycare	GREELEY, SANDRA
408343.69	3728561.83	3931	Hospital	MEMORIAL PROMPT CARE MED GRP INC
414021.38	3720537.52	3932	Hospital	NEWPORT BEACH DIALYSIS
414021.38	3720537.52	3933	Hospital	NEWPORT BEACH DIALYSIS
414677.25	3722206.04	3934	Hospital	LIFESTYLES HEALTH AND FITNESS CONSUL
408664.4	3728658.57	3935	Daycare	FAITH LUTHERAN CHURCH EARLY LEARNING CENTER
414778.53	3723687.69	3936	Hospital	IMAN ABDEL BAR MD INC
414772.83	3722733.01	3937	Hospital	SAV ON EXPRESS #9508
414099.14	3720519.08	3938	Hospital	PERSONAL HEALTH CARE
406304.08	3727861.91	3939	Daycare	YMCA SEACLIFF PROGRAM CENTER
406304.08	3727861.91	3940	School	HUNTINGTON SEACLIFF ELEMENTARY
414742.68	3722158.89	3941	Hospital	SAVES THE DAY DERMATOLOGY
414781.08	3724183.33	3942	Hospital	FAMILY DOCTORS
411706.57	3728262.98	3943	Daycare	BLISS, LORI
411314.28	3728441.81	3944	School	MOIOLA (FRED) ELEMENTARY
414415.4	3725498.37	3945	Hospital	INDEPENDENT OPTIONS, INC - HARBOR VILLAGE IV
414415.4	3725498.37	3946	Hospital	INDEPENDENT OPTIONS, INC - HARBOR VILLAGE III
411559.15	3728358.6	3947	Hospital	PRIORITYCARE MEDICAL GROUP INC
414443.97	3725478.15	3948	Hospital	INDEPENDENT OPTIONS, INC - HARBOR VILLAGE II
414443.97	3725478.15	3949	Hospital	INDEPENDENT OPTIONS, INC - HARBOR VILLAGE I
414479.99	3725462.31	3950	Hospital	INDEPENDENT OPTIONS, INC - HARBOR VILLAGE V
414479.99	3725462.31	3951	Hospital	INDEPENDENT OPTIONS, INC - HARBOR VILLAGE VI

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
411894.59	3728246.83	3952	Daycare	HERR, VALENTINE
408342.18	3728791.39	3953	Hospital	PHYSIOTHERAPY ASSOCIATES
414920.76	3723935.92	3954	Daycare	OLSON, MARISA
409213.52	3728895.08	3955	Daycare	TREWARTHA, TINA
409674.31	3728908.46	3956	School	COURREGES (ROCH) ELEMENTARY
413689.21	3719602.41	3957	Daycare	28TH STREET HOUSE
414993.58	3722735.49	3958	Hospital	MESA CHIROPRACTIC
414619.85	3725342.41	3959	Hospital	PURE JOY #4
414624.54	3725347.92	3960	Hospital	JOY CHALET #3
414624.54	3725347.92	3961	Hospital	PURE JOY #3
414628.23	3725345.66	3962	Hospital	ENRICHING, INC III
414661.77	3725259.98	3963	Hospital	INDEPENDENT OPTIONS, INC - MARK LANE I
414636.63	3725352.24	3964	Hospital	INDEPENDENT OPTIONS, INC - CHRISTOPHER HOUSE
414637.54	3725350.02	3965	Hospital	ENRICHING, INC II
415042.76	3723052.18	3966	Hospital	NEWPORT PLAZA SURGICAL CENTER
415042.76	3723052.18	3967	Hospital	NEWPORT PLAZA SURGICAL CENTER LP
415042.76	3723052.18	3968	Hospital	HOAG DIABETES EDUCATION CENTER
414638.59	3725364.42	3969	Hospital	JOY CHALET #5
414638.59	3725364.42	3970	Hospital	PURE JOY #5
414657.7	3725323.22	3971	Hospital	INDEPENDENT OPTIONS, INC - MARK LANE II
414192.3	3726262.15	3972	Hospital	JOEL E LEWIS MD
411558.79	3728520.5	3973	Hospital	SAV ON PHARMACY #6170
411971.59	3728354.79	3974	School	GISLER (ROBERT) ELEMENTARY
414769.74	3725202.47	3975	Hospital	FAIRVIEW DEVELOPMENTAL CENTER
414769.74	3725202.47	3976	Hospital	FAIRVIEW DEVELOPMENTAL CENTER CLINICAL
414769.74	3725202.47	3977	Hospital	FAIRVIEW DEVELOPMENTAL CENTER D/P ICFDD
414769.74	3725202.47	3978	Hospital	FAIRVIEW DEVELOPMENTAL CENTER
414769.74	3725202.47	3979	Nursing	FAIRVIEW DEVELOPMENTAL CENTER
407742.13	3728852.6	3980	Daycare	STOVER, LINDA
415043.68	3721898.96	3981	College	JAMES ALBERT SCHOOL OF COSMETOLOGY
415197.63	3723050.81	3982	Daycare	A CHILD'S PLACE
414537.55	3725990.72	3983	Hospital	HARBOR NEWPORT MED CLINIC
414537.55	3725990.72	3984	Hospital	HARBOR DRUG CO INC DBA STEVENS PHARMCY
414365.05	3726296.09	3985	Hospital	CARLES H ANDREWS/DBA WEST COAST FAMILY
408096.76	3729006.65	3986	Daycare	SELWANES, MARY
415212.77	3723609.54	3987	Hospital	STARTING POINT OF ORANGE COUNTY
414906.94	3725199.03	3988	Hospital	YUNG J KEE MD
414906.94	3725199.03	3989	Hospital	JEFF P DELEON DO INC
413827.9	3727082.66	3990	Daycare	PRINCE OF PEACE PRESCHOOL
413827.9	3727082.66	3991	School	PRINCE OF PEACE LUTHERAN SCHOO
414488.81	3720316.01	3992	Hospital	ALAN V ANDREWS MD
413961.34	3726972.79	3993	Daycare	MONTESSORI HARBOR MESA
411576.85	3728769.83	3994	Daycare	FOUNTAIN VALLEY MONTESSORI CENTER
411576.85	3728769.83	3995	School	FOUNTAIN VALLEY MONTESSORI CEN
415287.74	3724012.51	3996	Hospital	VICTORIA HEALTHCARE CENTER
415287.74	3724012.51	3997	Hospital	BEVERLY HEALTHCARE
415287.74	3724012.51	3998	Nursing	VICTORIA HEALTHCARE CENTER
408557.67	3729226.23	3999	Daycare	LA CAILLE, CLAUDETTE
412293.73	3728509.3	4000	Daycare	DAHLEN, MARLENE
410759.78	3729116.73	4001	Daycare	FOUNTAIN VALLEY UNITED METHODIST PRESCHOOL

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
412066.99	3728648.88	4002	Daycare	SHORELINE CHRISTIAN PRESCHOOL
412066.99	3728648.88	4003	Daycare	SHORELINE CHRISTIAN PRESCHOOL
412066.99	3728648.88	4004	School	SHORELINE CHRISTIAN SCHOOL
409961.79	3729318.26	4005	Daycare	FOUNTAIN VALLEY CHRISTIAN PRESCHOOL
409961.79	3729318.26	4006	School	FOUNTAIN VLY CHRISTIAN PRESCH
414773.22	3726010.8	4007	Hospital	SAV-ON DRUNS #9404
408346.8	3729273.71	4008	Hospital	BEACH SURGICAL MEDICAL CENTER
415364.53	3724412.13	4009	Daycare	CLIFT, ANA
415391.74	3722135.4	4010	Daycare	UNDER THE RAINBOW
412218.53	3728698.5	4011	Daycare	ROBERGE, CATHERINE
410759.17	3729249.8	4012	Hospital	FISHER CHIROPRACTIC CLINIC
414679.57	3726322.12	4013	College	PAUL MITCHELL THE SCHOOL
415493.34	3722929.55	4014	Daycare	ST. JOACHIM SCHOOL
415493.34	3722929.55	4015	School	ST JOACHIM ELEMENTARY SCHOOL
410542.76	3729300.61	4016	Daycare	MARIN, SANDRA
415431.54	3722231.52	4017	Daycare	LIL' LIGHTHOUSE PRESCHOOL
409780.14	3729417.55	4018	Daycare	CHEN, TZU-YEN
415426.73	3722106.26	4019	School	KLINE SCHOOL
408323.74	3729382.6	4020	Hospital	KAISER PERMANENTE HUNTINGTON BEACH MED
408323.74	3729382.6	4021	Hospital	SO CAL PERMANENTE MED GROUP LABORATORY
408909.25	3729452.42	4022	Daycare	TRAN, KIM-HIEN
411556.35	3729059.43	4023	Hospital	START PHYSICAL THERAPY HUNTINGTON
415513.07	3724010.52	4024	Hospital	COLLEGE HOSPITAL COSTA MESA
415513.07	3724010.52	4025	Hospital	COLLEGE HOSPITAL COSTA MESA
409468.73	3729515.86	4026	Daycare	KHALIL, IMAN
415573.34	3724009.99	4027	Hospital	DAVID HUANG MD
415573.34	3724009.99	4028	Hospital	DANIEL C DWYER MD
415573.34	3724009.99	4029	Hospital	MARGARET SHANNON MD
415573.34	3724009.99	4030	Hospital	RAUL MIRANDA MD
415573.34	3724009.99	4031	Hospital	NAZLI AHMED MD INC
415573.34	3724009.99	4032	Hospital	NEWPORT MESA MEDICAL GROUP INC
415573.34	3724009.99	4033	Hospital	GEORGE N HADDAD, MD INC DBA NEWPORT
408183.68	3729468.22	4034	Hospital	HUNTINGTON BEACH CTR FOR MAXIL
414917.8	3720255.65	4035	Hospital	DAVID PORZIO MD A PROFESSIONAL MEDICAL CORPORATION
412401.97	3728789.96	4036	Hospital	INTENSIVE HOME HEALTH CARE INC
415668.57	3723134.26	4037	Daycare	WESTCLIFF EARLY CHILDHOOD CENTER
415566.79	3724424.76	4038	Daycare	LEYVA, MARIA
414083.45	3727460.71	4039	Daycare	WALKER, LISA
410198.46	3729550.01	4040	Daycare	SHEHADEH, EVA TEREZINHA
415564.38	3724571.15	4041	Daycare	NILES, WANDA
414956.67	3720244.21	4042	Hospital	GARY S MC CARTER DPM
414611.06	3726852.76	4043	Daycare	SULLIVAN, MAUREEN
415385.67	3725335.62	4044	Daycare	ROUINTREE, FERN
415604.25	3724570.8	4045	Daycare	CHILDHELP-JOANN
414441.25	3727145.91	4046	Daycare	CHILDHELP - BAKER
415542.27	3725009.34	4047	Daycare	BEES, EMILY
411554.08	3729314.5	4048	Hospital	SOUTH COUNTIES PEDIATRIC
411554.08	3729314.5	4049	Hospital	RAMESH R PATEL MD FCCP INC
411554.08	3729314.5	4050	Hospital	DINESH KANTILAL PATEL MD A CA MED CORP
413838.97	3727899.8	4051	Daycare	BOLTER, TAMMY

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
409897.78	3729705.86	4052	Daycare	TENORIO, REBECA
411552.79	3729375.5	4053	Hospital	ORANGE COAST HEALTHTECH REGIONAL LAB
415663.86	3724812	4054	Daycare	SMITH, CAROL
408345.35	3729702.87	4055	Hospital	PEDIATRIC CARE MED GROUP
408345.35	3729702.87	4056	Hospital	CENTRAL COUNTY CHEST MEDICAL GROUP INC
408345.35	3729702.87	4057	Hospital	L MICHAEL FEINGOLD MD
408345.35	3729702.87	4058	Hospital	JAMES G GITLIN MD INC
408345.35	3729702.87	4059	Hospital	WALTER MUTUCUMARANA MD INC
408345.35	3729702.87	4060	Hospital	SIRUS FARIVAR MD
408345.35	3729702.87	4061	Hospital	DAVID E TSONG MD INC
408345.35	3729702.87	4062	Hospital	CHIN-CHA CHENG MD
408345.35	3729702.87	4063	Hospital	HUNTINGTON BEACH INTERNAL MEDICINE GRP
408345.35	3729702.87	4064	Hospital	A GARY ANDERSON MD
408345.35	3729702.87	4065	Hospital	WESTCLIFF MEDICAL LABORATORIES INC
408345.35	3729702.87	4066	Hospital	COMPREHENSIVE EAR NOSE THROAT
408345.35	3729702.87	4067	Hospital	PHILIP B KAPLAN MD
408345.35	3729702.87	4068	Hospital	PRIVATE MEDICAL CONSULTING
408345.35	3729702.87	4069	Hospital	SYRUS RAYHAN MD INC
408345.35	3729702.87	4070	Hospital	C F CHIN MD
408345.35	3729702.87	4071	Hospital	CENTRAL COUNTY CHEST MEDICAL GROUP INC
408345.35	3729702.87	4072	Hospital	PREM P MAHATO MD INC
408345.35	3729702.87	4073	Hospital	SHIRIN AFRASIABI MD
408345.35	3729702.87	4074	Hospital	H MOAYERI MD
408345.35	3729702.87	4075	Hospital	PAUL J LEPORE MD
408345.35	3729702.87	4076	Hospital	JOSEPH NASSIR MD
408345.35	3729702.87	4077	Hospital	BHARAT B MAROLIA MD
408345.35	3729702.87	4078	Hospital	KIM THU TANG MD
408345.35	3729702.87	4079	Hospital	NEWPORT CHILDRENS MEDICAL GROUP
415268.04	3720522	4080	Daycare	ST. ANDREW'S PRESBYTERIAN CHURCH PRE-SCHOOL
415268.04	3720522	4081	Daycare	ST. ANDREW'S CHURCH EXTENDED DAY WATCH PROGRAM
415268.04	3720522	4082	School	ST ANDREWS PRESBYTERIAN PRE
407317.05	3729464.38	4083	Daycare	CSP HUNTINGTON BEACH YOUTH CENTER
409676.98	3729780.02	4084	Daycare	ZUBAIRI NUZHAT
414639.97	3727079.82	4085	Hospital	MEDICAL OFFICE JOHN D GRANZELLA MD
411385.12	3729485.72	4086	Hospital	EDINGER MEDICAL GROUP, PEDIATRICS DEPT
411385.12	3729485.72	4087	Hospital	BREASTLINK MEDICAL GROUP
411385.12	3729485.72	4088	Hospital	RAND & BUSTILLO MEDICAL CORP INC
411385.12	3729485.72	4089	Hospital	EDINGER MEDICAL GROUP
415746.17	3721831.78	4090	Daycare	NMUSD HARPER PRESCHOOL
411399.95	3729485.58	4091	Hospital	ORANGE COAST MEMORIAL MEDICAL CENTER
411399.95	3729485.58	4092	Hospital	FHP HOSPITAL FV BLOOD GAS LABORATORY
411399.95	3729485.58	4093	Hospital	FHP HOSPITAL
411399.95	3729485.58	4094	Hospital	ORANGE COAST MEMORIAL MEDICAL CENTER
411410.14	3729485.49	4095	Hospital	FHP FOUNTAIN VALLEY MEDICAL CENTER
411410.14	3729485.49	4096	Hospital	TALBERT MEDICAL GROUP-FOUNTAIN VALLEY
414001	3727879.49	4097	Daycare	SECREST, ANKE
411428.68	3729485.32	4098	Hospital	TALBERT MEDICAL GROUP- FOUNTAIN VALLEY
411428.68	3729485.32	4099	Hospital	THOMAS T QUACH, MD
411428.68	3729485.32	4100	Hospital	WOMEN'S HEALTH CENTER
408346.19	3729790.46	4101	Hospital	HUNTINGTON BEACH HOSP D/P SNF

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
408346.19	3729790.46	4102	Hospital	HUNTINGTON BEACH HOSP PULMONARY LAB
408346.19	3729790.46	4103	Hospital	HUNTINGTON BEACH HOSPITAL
408346.19	3729790.46	4104	Hospital	HUNTINGTON BEACH HOSPITAL TCU
408346.19	3729790.46	4105	Hospital	HUNTINGTON BEACH HOSP
408346.19	3729790.46	4106	Nursing	HUNTINGTON BEACH HOSP D/P SNF
414661.25	3727179.43	4107	Daycare	MESA VERDE PRE-SCHOOL
408910.38	3729863.8	4108	Hospital	HUNTINGTON VALLEY HEALTHCARE CENTER
408910.38	3729863.8	4109	Hospital	HUNTINGTON VALLEY HEALTHCARE CENTER
408910.38	3729863.8	4110	Nursing	HUNTINGTON VALLEY HEALTHCARE
414661.36	3727191.63	4111	School	MONTESSORI HARBOR-MESA SCHOOL
415171.61	3726397.58	4112	College	COAST COMMUNITY COLLEGE DISTRICT OFFICE
415640.65	3725335.59	4113	Daycare	LIEBEL, CATHY
412312.92	3729187.75	4114	Daycare	JOHNS, ALLISON
408654.6	3729865.13	4115	Hospital	DR VEENA B DESAI MD
408346.58	3729831.49	4116	Hospital	HUNTINGTON FAMILY MED
408346.58	3729831.49	4117	Hospital	JOSEPH A MANZINI MD
408346.58	3729831.49	4118	Hospital	OUT-PATIENT SURGERY CENTER
408346.58	3729831.49	4119	Hospital	MANISH B MAROLIA, MD INC
408346.58	3729831.49	4120	Hospital	MATTHEW W SZAWLOWSKI MD
408346.58	3729831.49	4121	Hospital	OUTPATIENT SURGERY CENTER
408346.58	3729831.49	4122	Hospital	FOUR SEASONS SURGERY CENTERS OF HUNTINGTON BEACH
409794.96	3729907.54	4123	Daycare	CASUM, CYNTHIA MARIE
408446.08	3729866.02	4124	Hospital	JAN DAVID VANDERSLOOT MD
408446.08	3729866.02	4125	Hospital	HUNTINGTON BEACH DERMATOLOGY
408345.85	3729852.56	4126	Hospital	BURR J DALTON MD
408345.85	3729852.56	4127	Hospital	CAO VAN PHAM MD
408345.85	3729852.56	4128	Hospital	BEACH PHYSICIANS MEDICAL GROUP, INC
408345.85	3729852.56	4129	Hospital	THOMAS E ANGELOVIC MD
408345.85	3729852.56	4130	Hospital	AUGUST D ACCETTA MD
408345.85	3729852.56	4131	Hospital	WILLIAM I HAN MD
408345.85	3729852.56	4132	Hospital	HSIN CHANG MD
408345.85	3729852.56	4133	Hospital	RODERICK M MCDONALD MD
408345.85	3729852.56	4134	Hospital	ORANGE COAST UROLOGY
408345.85	3729852.56	4135	Hospital	BEACH PEDIATRICS
408384.9	3729865.49	4136	Hospital	HUNTINGTON BEACH COMMUNITY CLINIC
411944.39	3729427.33	4137	Daycare	ESPINOSA, GUADALUPE
409305.21	3729963.18	4138	Daycare	WICKSTROM, VANESSA
415979.3	3724302.48	4139	Hospital	ELHAM TAEED MD
409549.25	3729994.14	4140	School	FULTON (HARRY C.) MIDDLE
408345.11	3729967.89	4141	Hospital	NEWPORT CHILDREN'S MEDICAL GROUP
408345.11	3729967.89	4142	Hospital	DAVID LING MD
408345.11	3729967.89	4143	Hospital	MOHAN P KUMARATNE, MD
415820.7	3721235.67	4144	Hospital	JULIE G DUQUETTE, MD, A MEDICAL CORPORATION
410759.58	3729889.62	4145	School	FOUNTAIN VALLEY HIGH
409210.52	3730043.92	4146	Daycare	JABEEN, ISHRAT
415837.27	3721221.11	4147	Hospital	WILLIAM N SOKOL MD
415837.27	3721221.11	4148	Hospital	JOSEPH B HART MD FACS INC
415837.27	3721221.11	4149	Hospital	JULIE RALLS MD
408345.49	3730007.81	4150	Hospital	DAI T PHAM, MD
408345.49	3730007.81	4151	Hospital	BEACH CITIES REHABILITATION CENTER

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
413619.83	3728577.08	4152	Daycare	SOUTH COAST CHILDREN'S SOCIETY-NEVADA
415837.51	3725368.23	4153	Daycare	STEP BY STEP EARLY LEARNING ENRICHMENT CTR
415837.51	3725368.23	4154	Daycare	STEP BY STEP EARLY LEARNING ENRICHMENT CTR
415893.45	3721174.05	4155	Hospital	CHRISTINE CHAI MD
415893.45	3721174.05	4156	Hospital	NEWPORT PATHOLOGY
416214.01	3723783.7	4157	Daycare	COASTAL CHILDREN'S LEARNING CENTER
416214.01	3723783.7	4158	Daycare	COASTAL CHILDREN'S LEARNING CENTER
414736.41	3718946.59	4159	Daycare	CHRIST CHURCH BY THE SEA CHILDREN'S CENTER
414736.41	3718946.59	4160	Daycare	CHRIST CHURCH BY THE SEA CHILDREN'S CENTER
409457.17	3730155.8	4161	Daycare	TIZIANI, SHELLY
416226.95	3722717.98	4162	Daycare	WOODLAND CDC
416226.95	3722717.98	4163	Daycare	WOODLAND CDC
409146.84	3730169.83	4164	Daycare	GREAT ADVENTURES LEARNING CENTER
408344.65	3730114.27	4165	Hospital	CLINCORP
415809.73	3720724.59	4166	Hospital	NEWPORT BAY HOSPITAL
415809.73	3720724.59	4167	Hospital	NEWPORT BAY HOSPITAL
415809.73	3720724.59	4168	Hospital	NEWPORT HARBOR PSYCHIATRIC INSTITUTE
415129.56	3727092.11	4169	Daycare	KELLY, KELLY
416082.31	3721556.06	4170	Daycare	CENTRAL ORANGE COAST YMCA - MARINERS SCHOOL
411829.73	3729758.83	4171	Daycare	SOUTH COAST CHILDRENS SOCIETY-SAN RAFAEL
408347.3	3730197.41	4172	Hospital	CHARLES YANG MD
408347.71	3730239.55	4173	Hospital	BARRY M SCHWARTZ MD
416043.53	3721046.32	4174	Hospital	JAMES E FULTON JR, MD INC
416043.53	3721046.32	4175	Hospital	BUILDING BLOCKS PEDI HOME HLTH SVCS
416043.53	3721046.32	4176	Hospital	NEWPORT BLUFFS SURGERY CENTER
408512.03	3730269.02	4177	School	PYRAMID AUTISM CENTER
416319.61	3724301.72	4178	Daycare	GILMER, PHYLLIS
415932.34	3720637.02	4179	Daycare	NEWPORT HARBOR LUTHERAN CHURCH
416002.53	3720813.82	4180	Hospital	FRED J GALLUCCIO MD
416002.53	3720813.82	4181	Hospital	C DAMIRCHI MD INC NEWPORT BEACH OFFICE
416002.53	3720813.82	4182	Hospital	NURSE 24, INC
409057.73	3730350.31	4183	School	LAKE VIEW ELEMENTARY
416087.71	3721007.13	4184	Hospital	HEALTHSOUTH SPORTS MED & REHAB CENTER
416424.58	3723897.19	4185	Daycare	LINDBERGH CHILD DEVELOPMENT CENTER
415816.07	3720284.32	4186	Hospital	HARBOR PEDIATRIC MEDICAL GROUP APC
415816.07	3720284.32	4187	Hospital	JANINE K JENSEN, MD
415842.65	3726164.35	4188	Daycare	HARRY & GRACE STEELE CHILDRENS CTR-ORANGE COAST CO
415842.65	3726164.35	4189	Daycare	ORANGE COAST COLLEGE EARLY CHILDHOOD LAB SCHOOL
415842.65	3726164.35	4190	Daycare	HARRY & GRACE STEELE CHILDRENS CTR ORANGE COAST CO
415842.65	3726164.35	4191	Daycare	HARRY & GRACE STEELE CHILDRENS CTR-ORANGE COAST CO
415842.65	3726164.35	4192	College	ORANGE COAST COLLEGE
408354.14	3730330.42	4193	Hospital	PRAFUL SARODE MD INC
408354.14	3730330.42	4194	Hospital	JULIA MARIE HENG MD
409942.28	3730396.28	4195	Daycare	FIRST BAPTIST CHURCH VALLEY DAY PRESCHOOL
409942.28	3730396.28	4196	Daycare	FIRST BAPTIST CHURCH VALLEY DAY PRE SCHOOL
412589.63	3729648.73	4197	Daycare	PALERMO, DIANE
405812.65	3729545.6	4198	Daycare	POLIZZO, ELENA
410907.85	3730286.33	4199	School	VALLEY VISTA HIGH (CONTINUATION)
415480.45	3727145.55	4200	Daycare	LACROSSE, LORA
415859.68	3726520.14	4201	Daycare	SUNSHINE COMMUNITY NURSERY SCHOOL

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
414281.07	3728617.7	4202	Hospital	STATE FARM INSURANCE/ROBERT BUSTER MD
409548.04	3730551.92	4203	School	TAMURA (HISAMATSU) ELEMENTARY
411258.58	3730331.86	4204	Daycare	HUNTINGTON VALLEY PRE-SCHOOL
411258.58	3730331.86	4205	School	HUNTINGTON VALLEY CHRISTIAN
411434.42	3730305.84	4206	Daycare	KINDERCARE LEARNING CENTERS, INC. #1583
411434.42	3730305.84	4207	Daycare	KINDERCARE LEARNING CENTERS, INC. #1583
411434.42	3730305.84	4208	Daycare	KINDERCARE LEARNING CENTERS, INC. #1583
411434.42	3730305.84	4209	School	KINDERCARE LEARNING CENTERS, I
415686.76	3726992.93	4210	School	CHRISTIAN MONTESSORI
416640.35	3724288.95	4211	Daycare	WEBSTER, BABETTE
415676.27	3727063.99	4212	Daycare	HARBOR TRINITY PRESCHOOL
414713.3	3728338.84	4213	Hospital	DARIUSH LAVI MD INC
409202.5	3730663.86	4214	Daycare	ADKINS, DENISE MARIE
411972.75	3730193.31	4215	Daycare	FOUNTAIN VALLEY CHILD DEVELOPMENT CENTER
411972.75	3730193.31	4216	Daycare	FOUNTAIN VALLEY CHILD DEVELOPMENT CENTER
416497.59	3725251.57	4217	College	VANGUARD UNIVERSITY OF SOUTHERN CALIFORNIA
406330.31	3730068.36	4218	School	MESA VIEW MIDDLE
414774.61	3728353.82	4219	Hospital	US LABS - FOUNTAIN VALLEY
414774.61	3728353.82	4220	Hospital	ALLSTATE HOME HEALTH CARE INC
414774.61	3728353.82	4221	Hospital	AIDS SERVICES FOUNDATION / OA C&T PROGRAM
416749.07	3724101.72	4222	Daycare	BECK, LINDA
412657.2	3729944.19	4223	Daycare	STRONG, TERRI
414052.78	3729103.22	4224	Hospital	WEST COAST CLINICAL TRIALS INC
414052.78	3729103.22	4225	Hospital	ALLERGY, ASTHMA & RESPIRATORY CARE
411977.38	3730293.06	4226	Daycare	KING OF GLORY LUTHERAN CHURCH
412035.77	3730293.63	4227	Daycare	SLATER MONTESSORI ACADEMY
412035.77	3730293.63	4228	School	SLATER MONTESSORI ACADEMY
410398.58	3730729.1	4229	Hospital	FOUNTAIN VALLEY SCHOOL DISTRICT
407939.64	3730690.35	4230	School	OAK VIEW ELEMENTARY
413398.08	3729680.19	4231	Hospital	COSTO PHARMACY #411
415922.84	3727061.82	4232	Hospital	START PHYSICAL THERAPY AT COSTA MESA
415922.84	3727061.82	4233	Hospital	BARRY BEHRSTOCK MD
415922.84	3727061.82	4234	Hospital	URGIKIDS
415543.35	3727655.08	4235	Daycare	FISHER, IRMA
409298.06	3730870.32	4236	Daycare	ROCK, VICTORIA
408366.26	3730821.54	4237	Hospital	NEW LIFE PHYSICAL THERAPY
408366.26	3730821.54	4238	Hospital	CHARLES JACKSON MD
412257.38	3730307.12	4239	Daycare	LEGER, TAMMY
414211.53	3729131.73	4240	Hospital	CRITICAL CARE AMERICA
414211.53	3729131.73	4241	Hospital	CRITICAL CARE AMERICA, INC
416767.57	3725057.39	4242	Hospital	NEWPORT SUBACUTE HEALTHCARE CENTER
416767.57	3725057.39	4243	Hospital	PORT MESA CONV HOSP
416767.57	3725057.39	4244	Hospital	PORT BAY CARE CENTER
416767.57	3725057.39	4245	Hospital	MILESTONE HEALTH CARE
416767.57	3725057.39	4246	Hospital	PORT BAY CONVALESCENT HOSPITAL
416767.57	3725057.39	4247	Hospital	UNITY VILLA CONVALESCENT HOSPITAL
416767.57	3725057.39	4248	Nursing	MILESTONE HEALTH CARE CENTER
409958.85	3730876.27	4249	Hospital	SAV ON DRUGS #9569
415975.65	3727058.03	4250	Hospital	SAV ON EXPRESS #9494
410963.03	3730738.24	4251	Daycare	JOZWIAK, EVELYN

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
413028.21	3729977.4	4252	School	COX (JAMES H.) ELEMENTARY
409629.43	3730927.06	4253	Daycare	TAYLOR, JOELAINE
411570.63	3730603.97	4254	Hospital	COMFORT CARE, INC
411570.63	3730603.97	4255	Hospital	ADDUS HEALTHCARE
414211.2	3729198.27	4256	Hospital	ABBEY INFUSION SERVICE
406270.67	3730318.45	4257	Daycare	PEREZ, MARIA
415819.42	3727424.22	4258	Daycare	CONNELL, LESLIE
407841.8	3730827.69	4259	Daycare	JEANNE HARDY HEAD START
414247.41	3729205.71	4260	Hospital	COSTA MESA DIALYSIS
414247.41	3729205.71	4261	Hospital	COSTA MESA DIALYSIS
406171.55	3730322.74	4262	Hospital	HOWARD H FRANKEL MD PH D
407844.02	3730865.37	4263	Daycare	OAK VIEW PRESCHOOL
405530.38	3730056.26	4264	School	HOPE VIEW ELEMENTARY
417057.77	3724411.74	4265	School	PARK PRIVATE DAY SCHOOL
409481.51	3731062.64	4266	Hospital	DOCTORS OF OBGYN A MEDICAL CORPORATION
409481.51	3731062.64	4267	Hospital	YOUR FAMILY MED GROUP FOUNTAIN VALLEY
409481.51	3731062.64	4268	Hospital	CTR FOR PRIMARY CARE MEDICAL GROUP INC
409714.1	3731061.55	4269	Hospital	TRI THERAPY REHAB
409895.72	3731060.94	4270	Hospital	MED ONE FAMILY MEDICAL GROUP
413520.25	3729866.49	4271	Hospital	PACIFIC ENDOSCOPY CENTER
415724.26	3727776.57	4272	Daycare	ECKERT, CAROLYN, DAVID & MEGAN
414872.18	3728797.61	4273	College	ART INSTITUTE OF CALIFORNIA-ORANGE COUNTY
408343.24	3731030.23	4274	Hospital	GOLDENWEST HOME HEALTH CARE
404745.67	3729619.37	4275	Daycare	ALLEN, CYNTHIA
416219.46	3727058.11	4276	Daycare	ROSAS, MARCIA
415925.3	3727553.03	4277	Daycare	MOLTER, RONDA
413163.25	3730151.38	4278	Daycare	COMMUNITY CHRISTIAN PRESCHOOL
413163.25	3730151.38	4279	Daycare	COMMUNITY CHRISTIAN PRESCHOOL
405447.76	3730136.92	4280	Daycare	DAVID, LINDA
412554.51	3730470.73	4281	School	MASUDA (KAZUO) MIDDLE
416715.44	3726100.17	4282	School	COASTLINE ROP
410576.04	3731075.63	4283	Hospital	JOHN M DICK & ASSOCIATES
416149.37	3727311.55	4284	Daycare	JUNCKER, CORI
416995.25	3725329.3	4285	Hospital	JOHN F LA LONDE DO
406734.66	3730760.8	4286	School	PATTI S PRESCHOOL INC.
417301.91	3723688.87	4287	School	THE SUSAN PHILLIPS DAY SCHOOL
406329.55	3730652.76	4288	School	GOLDEN VIEW ELEMENTARY
407336.43	3730986.71	4289	School	OCEAN VIEW HIGH
407741.41	3731083.7	4290	Daycare	LIBERTY CHRISTIAN PRESCHOOL
407741.41	3731083.7	4291	School	LIBERTY CHRISTIAN SCHOOL
416098.31	3727514.92	4292	Daycare	KEYES, MYRNA
405180.45	3730096.32	4293	Daycare	HARRIS, VICTORIA
412295.32	3730704.86	4294	Daycare	SCOWN, JOCELYN
414792.95	3729164.24	4295	Hospital	HOSPICE TOUCH
407390.96	3731067.13	4296	School	WARNER AVENUE CHRISTIAN ACADEM
411115.65	3731106.08	4297	School	PLAVAN (URBAIN H.) ELEMENTARY
417304.71	3724443.98	4298	Daycare	RUANO, GRACIE
408740.9	3731333.59	4299	Daycare	THIEBERT, TINA
411212.5	3731158.41	4300	Daycare	JANULEWICZ, JULIE
408982.63	3731417.78	4301	Daycare	CORONADO,ALICIA

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
417470.23	3724066.65	4302	School	EARLY COLLEGE HIGH
409501.7	3731432.82	4303	Daycare	WENTWORTH, CAROL ANN
416582.8	3727051.61	4304	School	ST JOHN THE BAPTIST CATHOLIC S
416261.38	3727611.07	4305	Daycare	TAFT, BARBARA, JEANANNE, JENNIFER
408343.95	3731395.05	4306	Hospital	HEALTHFAX
416877.93	3726555.61	4307	Daycare	NMUSD SONORA PRESCHOOL
409588.7	3731618.29	4308	Daycare	A CHILD'S VIEW
409588.7	3731618.29	4309	Daycare	MAKING A DIFFERENCE
409588.7	3731618.29	4310	Daycare	MAKING A DIFFERENCE
409588.7	3731618.29	4311	Daycare	A CHILD'S VIEW PRESCHOOL
409588.7	3731618.29	4312	Daycare	A CHILD'S VIEW PRESCHOOL
409588.7	3731618.29	4313	School	MONTESSORI CHILD DEVELOPMENT C
409059.68	3731626.63	4314	Daycare	MCNEILL, MARY
408901.29	3731633.68	4315	Daycare	FRANZETTI, ELDA
409058.01	3731646.61	4316	Daycare	FRANZETTI, KARLA
417652.66	3724468.7	4317	Daycare	ZAPATA, MICHELLE & RABE, OPALINE
416610.22	3719007.76	4318	Daycare	ZOELLE, LINDA
409203.74	3731672.94	4319	Daycare	HARRIS, BEVERLY
417693.8	3724292.04	4320	Daycare	INT'L CHRISTIAN MONTESSORI ACADEMY OF NEWPORT
417693.8	3724292.04	4321	School	INT'L CHRISTIAN MONTESSORI ACA
416627.22	3727468.16	4322	Daycare	CHILDHELP-JOHNSON
416765.97	3727220.79	4323	Hospital	PULMO TEST
417626.1	3724831.53	4324	Daycare	BREEN, JAMES & VALERIE
405339.47	3730713.51	4325	Hospital	OCEANVIEW SCHOOL DISTRICT HEALTH SERV
417748.13	3724355.89	4326	Daycare	BACK BAY MONTESSORI
417699.1	3724909.63	4327	Daycare	YOUNG LIFE ENRICHMENT, INC.-NEWPORT HOUSE
410427.42	3731730.15	4328	School	MONTESSORI CHILDREN'S CENTER
413181.15	3730898.6	4329	Hospital	MANORAMA SHARMA MD
413181.15	3730898.6	4330	Hospital	SENIOR HEALTH CTR OF FOUNTAIN VALLEY
413181.15	3730898.6	4331	Hospital	EUCLID OUTPATIENT SURGERY CENTER
414774.15	3729863	4332	Hospital	HOSPICE TOUCH
414774.15	3729863	4333	Hospital	CARE DIMENSIONS, LLC HOME HEALTH CARE
409589.63	3731814.55	4334	Daycare	COOK, STAYCE
414774.39	3729890.72	4335	Hospital	ULTRA MEDICAL CARE
412830.8	3731094.73	4336	Hospital	MILE DQUARE SURGERY CENTER, INC
412830.8	3731094.73	4337	Hospital	MILE SQUARE SURGERY CENTER
408886.7	3731852.27	4338	Daycare	TRUJILLO, DAWN
415866.55	3728884.18	4339	School	MARANATHA CHRISTIAN ACADEMY
404657.24	3730511.82	4340	School	MARINE VIEW MIDDLE
408756.29	3731877.91	4341	School	WESTMONT ELEMENTARY
413181.18	3731003.94	4342	Hospital	FOUNTAIN VALLEY REG'L HOSP CLNCL LAB
413181.18	3731003.94	4343	Hospital	FOUNTAIN VALLEY REGIONAL HOSPITAL
413181.18	3731003.94	4344	Hospital	FOUNTAIN VALLEY REGIONAL HOSP/OPER RM
413181.18	3731003.94	4345	Hospital	FOUNTAIN VALLEY REG HOSP & MED CTR
413181.18	3731003.94	4346	Hospital	EMERGENCY PHYSICIANS FOUNTAIN VALLEY
413181.18	3731003.94	4347	Hospital	FOUNTAIN VALLEY REGIONAL HOSPITAL
413014.27	3731094.17	4348	Hospital	MCS MEDICAL CLINIC, INC DR ALBERT K
413014.27	3731094.17	4349	Hospital	M PESHIMAM MD
413014.27	3731094.17	4350	Hospital	DOCTORS SURGERY CENTER
413014.27	3731094.17	4351	Hospital	WESTCLIFF MEDICAL LABORATORIES, INC

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
413014.27	3731094.17	4352	Hospital	PAUL M EISMAN MD
413014.27	3731094.17	4353	Hospital	DOCTORS SURGERY CENTER
413014.27	3731094.17	4354	Hospital	ROBERT M ROANEY, MD INC
413014.27	3731094.17	4355	Hospital	AMERICA OUTPATIENT SURGERY CENTER
413014.27	3731094.17	4356	Hospital	FOUNTAIN VALLEY HEALTHCARE CTR
417864.95	3724786.23	4357	Daycare	LUSK, ELIZABETH
405611.89	3731084.52	4358	Daycare	CONIGLIO, THERESE
417422.91	3726431.14	4359	Daycare	WOLFE, ESPERANZA
406932.2	3731633.79	4360	School	COAST HIGH
413150.49	3731094.04	4361	Hospital	METTA HOME CARE CORPORATION
413150.49	3731094.04	4362	Hospital	EUCLID FOOT & ANKLE CLNC
413181.98	3731092.64	4363	Hospital	EMERGENCY PHYSICIANS FOUNTAIN VALLEY
405123.12	3730950.75	4364	Hospital	MORRIS SILVER MD
405123.12	3730950.75	4365	Hospital	ARMANDO HOOL MD
413978.07	3730689.58	4366	Hospital	SHARE DIAGNOSTIC LABORATORIES INC
416466.4	3728373.28	4367	Daycare	NGUYEN, NGOC-LONG/KIEM
417398.66	3726736.28	4368	Daycare	JARA, TERRY
405304.97	3731066.49	4369	Hospital	DR KEN D LACROIX
416417.96	3728451.33	4370	Daycare	SOUTH COAST CHILDRENS SOCIETY-SANTA CRUZ
413311.73	3731093.68	4371	Hospital	ANDREW C KO
413311.73	3731093.68	4372	Hospital	CLEMENT Y CHU MD
413311.73	3731093.68	4373	Hospital	MIKIO TACHIBANA MD
413311.73	3731093.68	4374	Hospital	PRATIBHA DESAI MD FAGOG
413311.73	3731093.68	4375	Hospital	ANDREW A CEAVATTA MD INC
413311.73	3731093.68	4376	Hospital	SU-YONG KUO MD
413311.73	3731093.68	4377	Hospital	KATHRYN R RIGONAN MD
413311.73	3731093.68	4378	Hospital	SOUTHLAND CLINICAL RESEARCH CENTER
413311.73	3731093.68	4379	Hospital	ROBERT A DEVEREAUX MD
413311.73	3731093.68	4380	Hospital	AMERICAN BLOOD INSTITUTE
413311.73	3731093.68	4381	Hospital	GEORGE C SANTORO, MD PROFESSIONAL CORP
413311.73	3731093.68	4382	Hospital	MICHAEL M ROSENBLATT MD INC
413311.73	3731093.68	4383	Hospital	SANG P CUNG, MD, INC
413311.73	3731093.68	4384	Hospital	QUYNH KIEU MD TRUST
413311.73	3731093.68	4385	Hospital	WILLIAM WEISSMAN MD
413311.73	3731093.68	4386	Hospital	BERNARD TURBOW MD INC
413311.73	3731093.68	4387	Hospital	FOUNTAIN VALLEY CARDIO
413311.73	3731093.68	4388	Hospital	FRANK M O'KELLY MD
413311.73	3731093.68	4389	Hospital	YOUR FAMILY MEDICAL GROUP FOUNTAIN
413311.73	3731093.68	4390	Hospital	GREGORY L LOUVIAUX MD INC
413311.73	3731093.68	4391	Hospital	WINSTON CHEN MD
413311.73	3731093.68	4392	Hospital	RICHARD R REED MD
413311.73	3731093.68	4393	Hospital	ROBERT A MOSS MD
413311.73	3731093.68	4394	Hospital	MICHAEL WAN MD INC
413311.73	3731093.68	4395	Hospital	R BOB SANKARAM MD INC
413311.73	3731093.68	4396	Hospital	SAMUEL E GENDLER MD
413311.73	3731093.68	4397	Hospital	T M KALRA MD
413311.73	3731093.68	4398	Hospital	JOHN J JERRYTONE MD
413311.73	3731093.68	4399	Hospital	SMITA TANDON MD
413311.73	3731093.68	4400	Hospital	MIRIAM S WYSOCKI MD
413311.73	3731093.68	4401	Hospital	SMITA TANDON, MD

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description
413311.73	3731093.68	4402	Hospital DRS M MOK & T NGUYEN MOK
413311.73	3731093.68	4403	Hospital JAMES R RYBA MD
413311.73	3731093.68	4404	Hospital CHRISTOS TSIMEREKIS MD
413311.73	3731093.68	4405	Hospital FARID SHAKIBAI, MD
407471.76	3731851.45	4406	Hospital WEISENTHAL CANCER GROUP
417582.55	3726343.27	4407	Hospital HYGEIA INC
416956.27	3727678.2	4408	Daycare GOMEZ, YASMIN
413388.64	3731094.09	4409	Hospital LALITHA ANANTH MD
413388.64	3731094.09	4410	Hospital LEDUC MEDICAL GROUP, INC
413388.64	3731094.09	4411	Hospital ATP CLINICAL RESEARCH
413388.64	3731094.09	4412	Hospital CU NGOC PHAN, M D
413388.64	3731094.09	4413	Hospital HAE YOUNG CHO, MD
413388.64	3731094.09	4414	Hospital KEA JA PAI MD
413388.64	3731094.09	4415	Hospital OHEANY GYNECOLOGY MEDICAL GROUP INC
413388.64	3731094.09	4416	Hospital FOUNTAIN VALLEY OUTPATIENT SUR
413388.64	3731094.09	4417	Hospital MELVYN NOVEGROD MD
413388.64	3731094.09	4418	Hospital GREENFIELD TURBOW SCHIFF MD'S
413388.64	3731094.09	4419	Hospital LEDUC MEDICAL GROUP INC
413388.64	3731094.09	4420	Hospital NARGES JELODARI MD
413388.64	3731094.09	4421	Hospital STEPHEN I TORDAY MD
413388.64	3731094.09	4422	Hospital N BORAMANAND MD
413388.64	3731094.09	4423	Hospital CHARLES H CHEN MD INC
413388.64	3731094.09	4424	Hospital PETRIKIN CHIRO CLINIC
413388.64	3731094.09	4425	Hospital QUAN H NGUYEN MD
413388.64	3731094.09	4426	Hospital TENET HOME CARE AT FOUNTAIN VALLEY
413388.64	3731094.09	4427	Hospital CORA I OCA MD
413388.64	3731094.09	4428	Hospital XUANTO LEDUC MD
413388.64	3731094.09	4429	Hospital LALITA PANDIT MD, INC
413388.64	3731094.09	4430	Hospital JULIO C VEGA MD INC
413388.64	3731094.09	4431	Hospital CIRCLEMED HEALTHCARE
413388.64	3731094.09	4432	Hospital COAST MEDICAL
413388.64	3731094.09	4433	Hospital ROYA RAKHSHANI, MD
413388.64	3731094.09	4434	Hospital PHUC HUY TRUONG MD
413388.64	3731094.09	4435	Hospital TENET HOMECARE AT FOUNTAIN VALLEY
413388.64	3731094.09	4436	Hospital DAVID G DIAZ MD, INC
416982.48	3718817.14	4437	Daycare CARNEY, ELAINE
413977.82	3730764.99	4438	Hospital RESTOR PHYSICAL THERAPY
417100.94	3727470.7	4439	Daycare FAULSTICK, MICHELLE
407312.64	3731878.49	4440	Hospital IMPERIAL CLINICAL LABORATORY
411553.26	3731831.67	4441	Hospital THUY A NGUYEN
415867.09	3729262.3	4442	Hospital ADDUS HEALTHCARE
415867.09	3729262.3	4443	Hospital ADDUS HEALTHCARE
413501.7	3731094.18	4444	Hospital DONALD E MURPHY MD
413501.7	3731094.18	4445	Hospital WOMEN'S URGENT CARE MEDICAL GROUP
413501.7	3731094.18	4446	Hospital CRISTINA RIZZA MD
413501.7	3731094.18	4447	Hospital CARDIOLOGY MED GROUP OF ORANGE COUNTY
413501.7	3731094.18	4448	Hospital CHARLES W MONIAK MD
413501.7	3731094.18	4449	Hospital PACIFIC SLEEP MEDICINE SERVICES INC
413501.7	3731094.18	4450	Hospital FARROKH SHADAB MD
413501.7	3731094.18	4451	Hospital JOSEPH N GREGURICH MD

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
413501.7	3731094.18	4452	Hospital	DR ELLEN FRASER
413501.7	3731094.18	4453	Hospital	ORANGE COAST OB-GYN MEDICAL GROUP
413501.7	3731094.18	4454	Hospital	FOUNTAIN VLY PODIATRY
413501.7	3731094.18	4455	Hospital	M CRISTINA RIZZA, MD
413501.7	3731094.18	4456	Hospital	MASSERMAN/CORK
413501.7	3731094.18	4457	Hospital	COMPASSIONATE CANCER CARE MED GRP INC
413501.7	3731094.18	4458	Hospital	MAURICE S GHATTAS MD
413501.7	3731094.18	4459	Hospital	BRUCE F FRIEDMAN MD INC
413501.7	3731094.18	4460	Hospital	GHAROON PANAHI MD
413501.7	3731094.18	4461	Hospital	SHAHNAZ Q SHAIKH MD INC
413978.36	3730824.86	4462	Hospital	VICTOR B SIEW MD INC SENIOR MED CENTER
406044.28	3731518.28	4463	Daycare	PENA, LUCIA
413541.54	3731093.82	4464	Hospital	PACIFIC COAST HEMATOLOGY/ONCOLOGY
413541.54	3731093.82	4465	Hospital	BICHLIEN NGUYEN MD INC
413541.54	3731093.82	4466	Hospital	INSTITUTE OF COSMETIC AND
413541.54	3731093.82	4467	Hospital	AFSHAN A ALI-NAZIR MD INC
413541.54	3731093.82	4468	Hospital	FOUNTAIN VALLEY OUTPATIENT SURGERY CTR
413541.54	3731093.82	4469	Hospital	RICHARD R REED MD
413541.54	3731093.82	4470	Hospital	ORANGE COUNTY CENTER FOR SPECIAL IMMUNOLOGY
413541.54	3731093.82	4471	Hospital	FOUNTAIN VALLEY MEDICAL LABORATORY INC
413541.54	3731093.82	4472	Hospital	CALIFORNIA HEART ASSOCIATES
413541.54	3731093.82	4473	Hospital	RANJAN SAPRA MD
417103.88	3727595.98	4474	Daycare	SIMMONS, PAMELA & MICHAEL
413636.07	3731095.18	4475	Hospital	HOSPICE FAMILY CARE, INC
413636.07	3731095.18	4476	Hospital	CHARTER HOSPITAL OF FOUNTAIN VALLEY
413636.07	3731095.18	4477	Hospital	FOUNTAIN VALLEY REG HOSPMED CTR DP/SNF
413977.24	3730906.93	4478	Hospital	BIO-PATH MEDICAL GROUP INC
413977.24	3730906.93	4479	Hospital	MEDIGENE INC
413977.24	3730906.93	4480	Hospital	NEW IMAGE NURSING
407874.36	3732090.41	4481	School	SUN VIEW ELEMENTARY
407846.53	3732087.35	4482	Daycare	MEIER, LINDA
416334.32	3728850.14	4483	Daycare	KINDERCARE LEARNING CENTERS, INC. # 579
416334.32	3728850.14	4484	Daycare	KINDERCARE LEARNING CENTERS, INC. # 579
416334.32	3728850.14	4485	Daycare	KINDERCARE LEARNING CENTERS, INC. # 579
413975.52	3730921.36	4486	Hospital	RAI - NEWHOPE - FOUNTAIN VALLEY
413975.52	3730921.36	4487	Hospital	VIVRA RENAL CENTER OF FOUNTAIN VALLEY
413975.52	3730921.36	4488	Hospital	RAI CARE CENTERS OF SOUTHERN CALIFORNIA I, LLC
416338.95	3728850.1	4489	Daycare	PALEO, ADELA
410057.58	3732210.45	4490	School	VISTA VIEW MIDDLE
409779.89	3732239.68	4491	Daycare	VIDAL, REBECCA
413974.01	3730960.18	4492	Hospital	HEALTH FORCE OR ORANGE COUNTY
413974.01	3730960.18	4493	Hospital	HEALTH FORCE OF ORANGE COUNTY
417443.4	3719330.99	4494	Hospital	CORONA DEL MAR PLASTIC SURGERY
417443.4	3719330.99	4495	Hospital	CORONA DEL MAR SURGERY CENTER
416830.39	3728232.62	4496	Daycare	TABOADA, NORMA
416188.16	3729094.26	4497	Daycare	GOBLER, JAMIE
417654.49	3726731.86	4498	Daycare	GIANT STEP LEARNING CENTER
417654.49	3726731.86	4499	School	GIANT STEP LEARNING CENTER
414770.32	3730474.02	4500	Hospital	LAGUNA MEDICAL LABORATORY
417714.04	3726649.29	4501	Hospital	COMPETENT CARE INC

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description	
417714.04	3726649.29	4502	Hospital	EDDIE J SCALES, MD
413848.27	3731094.38	4503	Hospital	BRISTOL PARK MEDICAL INC
413848.27	3731094.38	4504	Hospital	SMITHKLINE BEECHAM CLINICAL LABS
413910.35	3731093.82	4505	College	COASTLINE COMMUNITY COLLEGE
413817.8	3731209.98	4506	Daycare	SHAKIBAI, TAHEREH
407589.34	3732225.12	4507	Daycare	ASHMORE, SHARON
413698.96	3731286.45	4508	School	MAMIE L. NORTHCUTT ELEMENTARY
406427.3	3731929.26	4509	Daycare	LICERIO DE VALLE, VERONICA
409295.1	3732413.93	4510	Daycare	ISMAIL, SAEEDA
406209.05	3731878.17	4511	Daycare	COMMUNITY METHODIST NURSERY SCHOOL
417568.45	3727290.35	4512	Daycare	PLAY MATES PAULARINO PRE SCHOOL
413450.3	3731456.14	4513	Daycare	RODRIGUEZ, IRMA
409226.76	3732437.86	4514	Daycare	PHAM, VAN LOAN
417051.06	3728240.68	4515	Daycare	SOUTH COAST CHILDRENS SOCIETY - DAHLIA
407683.06	3732335.1	4516	Daycare	BARDOUKAH, GHADA
410119.29	3732466.02	4517	Daycare	SOUTH COAST CHILDRENS SOCIETY-CALADIUM
409707.26	3732496.52	4518	Daycare	SALERNO, CHRISTY
414263.31	3731082.89	4519	Hospital	MANORCARE HEALTH SERVICES
414263.31	3731082.89	4520	Hospital	MANOR CARE NURSING CTR OF FOUNTAIN VLY
414263.31	3731082.89	4521	Nursing	MANORCARE HEALTH SERVICES
414395.23	3731017.39	4522	Hospital	FOUNTAIN VALLEY HOME HLTH SERV INC
417799.92	3727042.2	4523	Hospital	BRISTOL PARK MEDICAL INC
405524.79	3731741.85	4524	School	SPRING VIEW MIDDLE
417571	3727586.4	4525	Daycare	NAYLOR, KATIE
418641.25	3722732.68	4526	Daycare	CHILDTIME CHILDRENS CENTER, INC.
418641.25	3722732.68	4527	Daycare	CHILDTIME CHILDRENS CENTER, INC.
415891.29	3729906.34	4528	Daycare	GONZALEZ, ANGELICA
408283.64	3732545.56	4529	Daycare	MONTESSORI SCHOOL OF HUNTINGTON BEACH
418551.8	3721591.33	4530	School	OUR LADY QUEEN OF ANGELS SCHOO
418370.72	3725706.69	4531	School	OCCS:CHEP/PCHS
410755.53	3732534.35	4532	School	ETHAN B. ALLEN ELEMENTARY
417820.62	3727293.73	4533	Hospital	PAULARINO BIRTH CENTER A MED CORP
417820.62	3727293.73	4534	Hospital	PAULARINO SURGERY CENTER
417820.62	3727293.73	4535	Hospital	ADOBE MEDICAL GROUP INC
417820.62	3727293.73	4536	Hospital	ADVANCED OB/GYN INFERTILITY MEDICAL GROUP INC
417820.62	3727293.73	4537	Hospital	PAULARINO SURGERY CENTER A MED CORP
417000.38	3728702.41	4538	Daycare	SIEFERT, CELINE
417753.85	3727506.1	4539	Daycare	RAMIREZ DE HERNANDEZ,YADHIRA
410092.64	3732686.94	4540	Hospital	HAU DUC VUONG MD
410092.64	3732686.94	4541	Hospital	NHUAN NGUYEN TONG MD
415892.02	3730094.84	4542	Daycare	GARDEZI, SHAMIM
403969.82	3731088.67	4543	Hospital	HARBOUR PHYSICAL THERAPY
418818.65	3722543.78	4544	Hospital	SAV-ON DRUGS #9540
416368.19	3729650.44	4545	School	JIM THORPE FUNDAMENTAL
410625.38	3732686.38	4546	Hospital	UNITECH CLINICAL LABORATORY
410640.21	3732686.24	4547	Hospital	LA VANG MEDICAL CENTER
416742.74	3729239.11	4548	School	GREENVILLE FUNDAMENTAL
416753.14	3729262.31	4549	School	SEGERSTROM HIGH
409506.36	3732806.69	4550	Daycare	BADROS, LAILA
418619.8	3725559.31	4551	Hospital	COONAN CLINICAL LABORATORIES

Attachment DR38-1

Huntington Beach HRA Sensitive Receptors and Corresponding HARP Receptor Numbers
November 2012

Easting(m)*	Northing (m)*	HARP Receptor #	Description
407648.34	3732673.65	4552	Hospital SAV-ON DRUGS #9514
418820.04	3724679.41	4553	Hospital NEIL M BARTH MD INC
408700.61	3732839.86	4554	Daycare ISRAEL, SOHEIR
410954.69	3732728.77	4555	Daycare MONTANO, LAURA

* Coordinates are in UTM NAD 83 Zone 11

Socioeconomics (40–41)

Construction Workforce and Schedule

BACKGROUND

The Socioeconomics section of the Huntington Beach Energy Project (HBEP) Application For Certification (AFC) discusses the construction schedule for the proposed project and Appendix 5.10B presents the construction and demolition personnel by month for the HBEP. When comparing the construction details on page 5.10-9 in the Socioeconomics section of the AFC with the construction schedule presented in Table 5.10B in Appendix 5.10B, several discrepancies were observed. The following data request addresses the discrepancies.

DATA REQUEST

40. The table below presents the project construction details compiled from the two sections of the AFC. Please confirm which are the correct project details (discrepancies shown in bolded text):

	Socioeconomics section, Page 5.10-9	**Appendix 5.10B, Table 5.10B**
Demolition of Unit 5 (peaker)	Fourth quarter 2014 to end of 2015	Fourth quarter (Nov.) 2014 to fourth quarter (Dec.) 2015
	Not identified	14 months
Construction of Block 1	First quarter 2015 to second quarter 2018	First quarter (Feb.) 2015 to second quarter (June) 2018
	42 months	**41** months
Construction of Block 2	First quarter **2018** to second quarter **2020**	First quarter (March) **2020** to second quarter (June) **2022**
	30 months	**28** months
Demolition of Unit 1 & 2	Fourth quarter **2020** to third quarter **2022**	Fourth quarter (Oct.) **2022** to fourth quarter (Sept.) **2024**
Construction of Building 33 & 34 control building and maintenance	Not identified	Third quarter (Aug.) 2023 to third quarter (Aug.) 2024.
	Not identified	13 months

Response: Although not explicitly identified, the duration of the demolition of Unit 5 (peaker) is assumed in the overall schedule used to estimate the socioeconomic and regional economic effects associated with the demolition and construction of HBEP. Thus, the duration in the text and that shown explicitly in Table 5.10B are the same: 14 months.

The construction duration of Block 1 is 42 months as shown in the text. The corrected duration of 41 months is shown in Table 5.10BR1.

The construction duration of Block 2 is 28 months as shown in Table 5.10B and also in Table 5.10BR1.

The corrected demolition schedule for Unit 1 and 2 are is shown in Table 5.10BR1. Instead of demolition of Units 1 and 2 occurring between the fourth quarter (October) 2022 and fourth quarter (September) 2024, the revised schedule shows demolition of these two units taking place between October 2020 and September 2022.

The construction of Building 33 and 34 and Control Building and Maintenance is expected to occur between August 2021 and September 2022, or over 13 months. Table 5.10BR1 shows the revised schedule and duration for the construction of Building 33 and 34 and Control Building and Maintenance.

Cumulative Impacts

BACKGROUND

The demolition of existing Huntington Beach Generating Station Units 3 and 4 is identified on page 5.10-9 of the Socioeconomics section of the AFC as part of the cumulative impact assessment. The schedule for the planned demolition is identified as occurring between the third quarter of 2015 through the second quarter of 2017, in advance of the construction of Block 2. The following data request would assist Energy Commission staff's analysis of labor requirements of projects in the cumulative impact assessment.

DATA REQUEST

41. Please confirm the demolition schedule for Units 3 and 4 and provide an estimate of the number of workers needed. If available, please report the number of workers needed by month and trade.

Response: As noted in the Section 2.0 of the AFC, the demolition of HBGS Units 3 and 4 is authorized under existing CEC license 00-AFC-13C and is therefore not part of the HBEP project definition. Notwithstanding the foregoing demolition of Units 3 and 4 is expected to occur between July 2015 and July 2017, or over 25 months. Table SOCIO-1 shows the schedule and the estimated workforce numbers for the demolition of Units 3 and 4.

TABLE DR40-1
Estimated Personnel Requirements for Demolition of Units 3 and 4
Huntington Beach Energy Project Data Responses Set 1A

	2015						2016												2017							Man Months	Days Per Month	Man Days	Hours per Day	Man Hours
	JLY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JLY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JLY				
Carpenters																											23		10	
Laborers	4	4	8	10	14	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	10	8	4	4	386	23	8878	10	88780
Teamsters	2	2	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	6	6	4	4	2	2	164	23	3772	10	37720
Electricians																										0	23	0	10	0
Iron Workers			2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2			59	23	1357	10	13570
Millwrights				3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3					54	23	1242	10	12420
Boilermakers				4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4					72	23	1656	10	16560
Plumbers																											23		10	
Pipefitters																											23		10	
Insulation Workers				2	2	2																				6	23	138	10	1380
Operating Engineers	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	70	23	1610	10	16100
Oilers / Mechanics			2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	46	23	1058	10	10580
Cement Finishers																														
Roofers																														
Sheetmetal Workers																														
Sprinkler Fitters																														
Painters																														
Total Craft Labor	**8**	**8**	**23**	**35**	**39**	**45**	**43**	**43**	**43**	**43**	**43**	**43**	**43**	**43**	**43**	**43**	**43**	**43**	**43**	**41**	**40**	**21**	**18**	**10**	**10**	**857**	**23**	**19711**	**10**	**197110**
Total Supervision	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**		**120**	**23**	**2760**	**10**	**27600**
Total Manpower	**13**	**13**	**28**	**40**	**44**	**50**	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**46**	**45**	**26**	**23**	**15**		**967**	**23**	**22241**	**10**	**222410**

Soil and Water Resources (42–45)

BACKGROUND

State water use policy encourages all feasible means of water conservation (California Public Resources Code, Division 15, Section 25000 et seq.). Staff believes that extended use of freshwater for the Huntington Beach Energy Project operation would not be consistent with the current state water policy that promotes all feasible means of water conservation. In several recent cases project applicants have committed to and funded water use conservation programs that benefit the local water users.

Staff has reviewed the water supply alternatives analysis in the AFC and notes that a somewhat qualitative analysis of recycled water availability and utilization is provided. The AFC indicates supplies from Orange County Water District are currently subscribed and would not be available for project use. The AFC also indicates the treatment and delivery of the OCSD secondary treated wastewater supply that may not be currently economically feasible or environmentally desirable.

Drawing from state law that requires water conservation, and the evolving science and policy decisions at the state and federal level that are limiting the availability of strained supplies from the Delta and Colorado River, staff believes the applicant should address the proposed project freshwater use and evaluate the use of an alternative supply such as recycled water. Staff believes the applicant could fund an existing water conservation program in the region or develop and fund a plan to address project water use if and until an alternative supply becomes feasible.

DATA REQUEST

42. Please provide a discussion of options or programs that could be developed or supported in the City of Huntington Beach service area that provide water conservation.

Response: Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's October 22, 2012, correspondence to the Siting Committee. Notwithstanding such objections, Applicant provides the following response.

The funding of a water conservation program or programs is unreasonable mitigation as the project will not have a significant impact on water resources. In fact, as noted in the AFC, HBEP has a significant positive impact on water resources as HBEP operating continuously at maximum proposed capacity will use at least 60 percent less potable water than is currently used by Huntington Beach Generating Station operating at less than 20 percent capacity on an annual basis. (AFC Section 2.1.9.1.and Section 6.6.3; note that the percent reduction stated in AFC Section 6.6.3 was erroneously reported; 115 acre-feet/yr compared to 290 acre-feet/yr is a 60 percent reduction). HBEP complies with all LORS and State Water Policy and, thus, there is no basis under California law for the mitigation Staff appears to be contemplating for HBEP. Further, the Applicant has demonstrated that recycled water is not currently available for project use and the costs associated with construction of miles of pipelines and/or additional treatment systems for HBEP to even consider using recycled water are economically unsound and environmentally undesirable. (AFC pages 6-8 and 6-9; see also Attachment DR42-1).

DATA REQUEST

43. Please provide a discussion of the funding that would be needed to implement a water conservation plan or program.

Response: Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's October 22, 2012 correspondence to the Siting Committee. Also, see Applicant's response to Data Request #42.

DATA REQUEST

44. Please discuss what, if any, approvals may be needed by other agencies to implement a proposed water conservation program.

Response: Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's October 22, 2012, correspondence to the Siting Committee. Also, see Applicant's response to Data Request #42.

DATA REQUEST

45. Please discuss under what circumstances the applicant would be willing to convert to an alternative water supply if and when it becomes feasible.

Response: The Applicant notes that its use of potable water is a positive attribute of the project. Applicant has also demonstrated that recycled water is not currently available for use by HBEP. (See Attachment DR42-1) Notwithstanding the foregoing, Applicant recognizes the value of a general policy of utilizing non-potable sources for process and water needs where such non-potable water sources can be so used. Thus, Applicant notes that the project could potentially convert to an alternative water source (such as reclaimed water, or a degraded source of groundwater) if such alternative water supply would become available, and if such alternative water supply would:

- Be readily available to HBEP at the same cost as water provided by the City of Huntington Beach that the project will reduce the use of;
- Meet the reliability standards necessary for use in a electrical power generation facility;
- Meet the necessary water quality requirements for the relevant proposed use;
- Not require infrastructure construction and/or permitting or project amendments that would burden the project or the operational facility with uncertainty or costs; and
- Not add impacts attributable to the project nor new mitigation or conditions of certification.

Attachment DR42-1
Reclaimed Water Study

AES Huntington Beach Energy Project—Reclaimed Water Study

PREPARED FOR: AES of North America Development, LLC

PREPARED BY: CH2M HILL

DATE: October 30, 2012

PROJECT NUMBER: 458993.01.01

1.0 Introduction and Key Findings

The AES Huntington Beach Energy Project (HBEP) will replace the existing AES Huntington Beach Generating Station (HBGS). HBEP will be a natural gas-fired, combined-cycle, air-cooled electrical generating facility. The use of air-cooled condensers will significantly reduce the volume of fresh water used by HBEP as compared to the existing HBGS and eliminates the use of ocean water for the once-through cooling system (OTC) used by the existing HBGS. In addition to potable water for human use, HBEP also requires water for industrial uses. This technical memorandum provides information regarding the potential availability of reclaimed water (California Code of Regulations [CCR] Title 22 reclaimed water) to meet the industrial water requirements of HBEP.

This Reclaimed Water Study performed by CH2M HILL identifies the existing public wastewater treatment facilities (WWTF) within a 20-mile radius of the HBEP site, the level of wastewater treatment provided at the WWTFs and the flow of reclaimed water potentially available from each WWTF for use as an industrial water source for HBEP. Figure 1 is a map showing the location of the HBEP site and the wastewater treatment facilities. Table 1 is a summary of the WWTFs within the study area, the level of treatment provided by each plant, as well as plant capacities and current flow information.

2.0 Detailed Technical Analysis

2.1 Assumptions

The following general assumptions were used for this analysis:

WWTF Information – Treatment processes and flow data for the WWTFs were obtained from publicly available information and/or were provided directly by the water district, as noted.

Quality of Water – This analysis is focused on disinfected tertiary recycled water use (CCR, Title 22) as these requirements will produce water with a quality suitable for industrial use.

Estimated AES Plant Flow – An estimate of flow rate to HBEP to meet its industrial water requirements was determined to identify a pipeline size to transport flow from the WWTF to the HBEP site. Based on the parameters below, and for the sole purpose of this analysis, the estimated maximum volume of reclaimed water required to meet the industrial water requirement for the HBEP is 190 gallons per minute [gpm] (0.3 million gallons per day [mgd]).

Availability of Water – The available water from each WWTF was derived from published documents and reports and/or from data provided directly by the owning agency, as noted. This investigation did not include review of interagency agreements or memoranda of understanding between agencies, which could result in less water being available for use than what was identified in the researched documents.

2.2 Details for AES Huntington Beach Energy Project

As discussed in Section 5.15 Water Resources of the Application for Certification (AFC) for HBEP (Section 5.15.1.4.1, Process Water, Table 15.5-5), the estimated daily and annual industrial water use for HBEP operations are as follows (based on the operating assumptions noted in Section 5.15.1.4.1 of the AFC):

- Average Daily Use Rate = 94 gpm
- Maximum Daily Use Rate = 190 gpm
- Average Annual Use = 115 acre-feet per year

As shown in Figure 1 and Table 1, there are four public WWTFs located within 20 miles of the HBEP site, including:

- Orange County Sanitation District (OCSD) Plant 1
- OCSD Plant 2
- Orange County Water District (OCWD) Green Acres Project (GAP)
- Irvine Ranch Water District (IRWD) Michelson Water Reclamation Plant (WRP)

Neither OCSD Plant 1 nor OCSD Plant 2 produces tertiary effluent, or recycled water. Therefore, neither of these plants is a potential source of reclaimed water for HBEP without further treatment. The OCWD GAP receives secondary effluent from OCSD Plant 1 and treats it further to produce tertiary treated recycled water. However, since the reclaimed product water is fully committed, the OCWD GAP is not a potential source of reclaimed water for HBEP.

IRWD Michelson WRP produces tertiary treated recycled water and currently sends all reclaimed water to existing recycled water users. However, IRWD may have available reclaimed water following a 10-mgd expansion in 2013. As shown in Figure 2, this would require construction of 10.9 miles of pipeline between the WWTF and the HBEP site through a dense urban area and therefore is not a reasonable source of reclaimed water for HBEP. In addition, construction of the pipeline alone would likely have environmental consequences.

As noted in the AFC, HBEP has a significant positive impact on water resources; operating continuously at the maximum proposed capacity, HBEP will use 48 percent less potable water than is currently used by HBGS, operating at less than 20 percent capacity on an annual basis (see AFC Section 6.6.3). HBEP complies with all applicable laws, ordinances, regulations and standards and State Water Policy without the use of reclaimed water. Further, reclaimed water availability is limited and the costs associated with construction of a pipeline and/or additional treatment system to allow HBEP to use recycled water are economically impractical and environmentally undesirable (See AFC pages 6-8 and 6-9).

TABLE 1

Availability of Reclaimed Water from Local Wastewater Treatment Facilities

AES Huntington Beach Energy Project—Reclaimed Water Study

Treatment Facility	Effluent Level of Treatment			2012 Treatment Capacity (mgd)	2020 Planned Treatment Capacity (mgd)	2012 Average Daily Flows (mgd)	2012 Reclaimed Water Production (mgd)	2012 Committed Reuse (mgd)	Potentially Available Reclaimed Water Now or in the Near Future (mgd)	Length of Proposed Pipeline Alignment (miles)	Notes/Potential Limitations or Opportunities
	Secondary	Tertiary (Title 22)	Advanced								
Orange County Sanitation District (OCSD) Plant 1	✓			182[b,c]	182[b,c]	96[b]	0	0	0	n/a	60-mgd capacity expansion completed in 2012. No additional facility expansions planned through 2020.
OCSD Plant 2	✓			150[b,c]	150[b,c]	105[b]	0	0	0	n/a	60-mgd capacity expansion completed in 2012. No additional facility expansions planned through 2020.
Orange County Water District (OCWD) Green Acres Project (GAP)		✓		7.5[c,d]	7.5[c,d]	7.4[c,d]	7.4[c,d]	7.4[c,d]	0	n/a	Source water is OCSD Plant 1.
Irvine Ranch Water District (IRWD) Michelson Water Reclamation Plant		✓		18.0[a, e]	28.0[e]	18.0[e]	18.0[e]	18.0[f]	8.0[f]	10.9	10-mgd expansion to be complete by 2013[e]. IRWD currently sends all reclaimed water to existing recycled water users, but IRWD may have up to 8 mgd of available reclaimed water following the expansion in 2013[f].

Notes:

n/a = not applicable

mgd = million gallons per day

Sources:

[a]United States Bureau of Reclamation Southern California Regional Brine-Concentrate Management Study – Phase 1 Lower Colorado Region, CH2M HILL 2009

[b]Data provided and/or confirmed by Jim Burror of OCSD in October 2012.

[c]OCSD Facilities Master Plan, OCSD 2009.

[d]Data confirmed by Greg Woodside of OCWD in October 2012.

[e]Michelson WRP flow data, IRWD 2012 http://www.irwd.com/your-water/facilities-construction/michelson-water-recycling-plant.html.

[f]Data and/or information provided by Mike Hoolihan of IRWD in October 2012.

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CH2MHILL

Figure 2
Proposed Pipeline Alignment
Reclaimed Water Study
AES Huntington Beach Energy Project

CH2MHILL

Traffic and Transportation (46–58)

Heavy Haul Route

BACKGROUND

The AFC Traffic and Transportation analysis states the Huntington Beach Energy Project (HBEP) would require both onsite and offsite laydown and construction parking areas. Approximately 6 acres would be located at the Huntington Beach Generating Station (laydown and construction parking) and 16 acres at the AES Alamitos Generating Station (AGS) in Long Beach for construction laydown (component storage only). Heavy/oversized components would be transported by truck from the Port of Long Beach to the AGS offsite construction laydown area and then from the offsite area to HBEP as depicted on AFC Figure 5.12-3 (Heavy Haul Route). (See AFC Pages 5.12-1, 2 and 5.12-13).

The Heavy Haul Transportation Survey (Appendix 5.12B) lists several transportation routes:

- Long Beach to Huntington Beach
- Vanco rail siding to Huntington Beach
- Long Beach to Alamitos
- Vanco rail siding to Alamitos

Within these transportation routes, several additional roads have been identified that are not listed in AFC Section 5.12.1.3.1, Existing Roadway Conditions. The AFC states that since the volume of the heavy/oversize trips for HBEP would be low enough and conducted at night, that a traffic analysis was not conducted for the heavy/oversized routes (AFC Page 5.12-7).

DATA REQUEST

46. Please specify the number of oversize trips that would occur from AGS to the project site and the hours they would occur.

Response: It is anticipated that a total of approximately 112 oversize trips would occur from offsite construction laydown area for HBEP that is located at the AES Alamitos Generating Station (AGS) to the HBEP site between the hours of 10 p.m. and 4 a.m. Approximately three oversize trips are anticipated on any given night, although this number may vary. These trips will use oversize routes that have been used previously. Oversize permits will be acquired from the appropriate jurisdiction (County of Los Angeles, City of Huntington Beach, and Caltrans), so these oversize permits will govern the route, the number of oversize loads on any given night, and the late night hours of these trips. Oversize route permits from the County of Los Angeles, City of Huntington Beach, and Caltrans will be submitted to the CEC CPM.

DATA REQUEST

47. Please submit existing traffic conditions and Level of Service (LOS) and construction LOS for the roads identified in Appendix 5.12B that are not contained in Section 5.12.1.3.1.

Response: Appendix 5.12B lists several heavy haul transportation routes to be used by the oversize trips generated by the project. AFC Section 5.12.1.3.1 did not include an analysis of all of the local streets along these routes because the volume of the heavy/oversize trips for HBEP would be minimal and would occur at night.

Based on a review of 24-hour traffic counts on selected locations in the area, traffic volumes between the hours of 10 p.m. and 4 a.m. equate to approximately 15 percent of peak hour volumes. The volume to capacity (V/C) ratio during the peak hour varies by location. However, some locations operate at LOS F. A conservative estimate of the

maximum v/c ratio during the peak hour is 1.5. During the overnight periods (10 p.m. to 4 a.m.), the maximum V/C ratios will only be 0.23 or LOS A. With the additional project trips, the roadways will still operate at LOS A.

DATA REQUEST

48. Please identify any structures such as overhead power lines that would have to be addressed during transport of the heavy/oversized equipment.

Response: At this stage of the proceedings, the requested information is not available. As is standard industry practice, the identification of the heavy haul route is based on professional judgment and on preliminary discussions with the Counties of Los Angeles and Orange. Because the project falls under the exclusive jurisdiction of the California Energy Commission, no permits are required for compliance with traffic LORS. Should the CEC CPM determine that a oversize load permit is required for the route from the offsite construction laydown area at AGS to HBEP, the Applicant would submit the required documentation to the CEC CPM. Such documentation would, if requested by the CEC CPM, include information on potential overhead obstructions, landscape barriers, etc. and that appropriate measures to address such obstructions are implemented.

DATA REQUEST

49. Please address any turning radius or centerline landscape barriers that may be problematic along these routes.

Response: See the response to Data Request #48 above.

Truck Routes and Transport of Hazardous Materials

BACKGROUND

The AFC Traffic and Transportation analysis identifies the following truck routes for construction, demolition, and operations:

- Huntington Beach: north/south truck routes near the project site include Golden West Street, Beach Boulevard, Newland Street from Pacific Coast Highway (PCH) to Atlanta Avenue, Magnolia Street from PCH to Garfield Avenue, and Brookhurst Street from PCH to Garfield Avenue. East/west truck routes near the project site include Adams Avenue from Brookhurst Street to Beach Boulevard, Atlanta Street from Newland Street to Beach Boulevard, Hamilton Avenue from Brookhurst Street to Newland Street and PCH (Page 5.12-13).

For transporting hazardous materials, the truck route would be I-405 to Beach Boulevard, south onto PCH and then north to Newland Street (see AFC page 5.12-18).

DATA REQUEST

50. Please clarify if construction trucks would also use I-405. If so, submit the existing traffic conditions and LOS for I-405 and construction LOS for I-405.

Response: The greatest number of truck trips expected during Project construction in the peak construction month is approximately 48 daily one-way truck trips; it was assumed that six deliveries would be made during each peak hour. It is likely that a portion of the truck trips will use I-405 as part of their trip to reach existing designated truck routes and access the site. Within the City of Huntington Beach, designated north/south truck routes between I-405 and the Project site include Golden West Street, Beach Boulevard, Magnolia Street and Brookhurst Street.

Based on the Caltrans Guide for the Preparation of Traffic Impact Studies, Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State Highway Facilities, although, Caltrans acknowledges this

may not always be feasible. If an existing State highway facility is operating at less than the appropriate target LOS, Caltrans' guidance is that existing LOS should be maintained. Depending on the time of day and location, I-405 operates from LOS D to LOS F during peak hours. Given the small number of Project related peak hour truck trips, there would be a negligible effect on the LOS on I-405.

Construction Traffic Distribution and Shuttle Routes

BACKGROUND

The AFC Traffic and Transportation analysis identifies the following distribution of construction traffic over the study area network:

- 33 percent of trips would come from Long Beach and communities located northwest of the HBEP site;
- 33 percent would come from Garden Grove, Anaheim, and communities located to the north of the HBEP site and;
- 33 percent would come from Irvine and communities located southeast of the HBEP site (Page 5.12-16).

In addition to the personal vehicles of the construction workers, shuttle buses would likely be used to transport the construction workers between the parking areas and HBEP site. The discussion of parking impacts and these shuttle routes is provided in Section 5.12.2.6. Approximately 72 shuttle trips per work day (13 round trips from both the City of Huntington Beach parking site and the parking site located at the corner of PCH and Beach Boulevard, and 10 round trips from the All American Tank Farm parking site) are proposed to and from three of the offsite parking areas (Page 5.12-19).

DATA REQUEST

51. Please remedy the construction traffic distribution percentages identified above to reflect a 100 percent traffic distribution for the study area network.

Response: All (100 percent) of construction traffic was accounted for in the AFC Traffic and Transportation Section's traffic distribution as the trip distribution percentage of 33 percent equates to 1/3 of the project traffic. CEC could restate the distribution as 33.33% if desired.

DATA REQUEST

52. Please provide the construction worker traffic routes to the HBEP site. Would the construction traffic utilize I-405, State Route 55 or State Route 73?

Response: Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's October 22, 2012, correspondence to the Siting Committee. Notwithstanding such objections, the Applicant provides the following response.

It is not feasible nor industry practice for traffic analyses to attempt to identify all potential specific routes that may be used by individual construction workers to reach a construction site. As is typical for many drivers in urbanized areas such as Southern California, drivers make personal decisions on a daily basis about the route they will use to travel from point A to point B. The routes individuals may select are based on personal preference, and may reflect occasional intermediate stops, daily traffic conditions, traffic incidents (accidents, construction), day of the week, or a variety of other personal reasons and decisions. The traffic analysis makes general assumptions as to major roads in the proximity of the HBEP site on which construction worker traffic will converge as construction workers near the designated offsite construction parking areas. The traffic analysis has adequately addressed the major roads in the vicinity of HBEP offsite construction worker parker areas. There will be traffic

distributed to regional freeways (I-405, SR 55, SR 73, I-605, SR 22) but the low volume of trips on each has not been quantified.

It is beyond the authority of AES to dictate or enforce the requirement for private individuals to take specific routes to access the offsite construction worker parking areas. It is within the purview of AES and its EPC to require construction workers to park at one of the designated offsite construction worker parking areas and take a shuttle to and from HBEP.

DATA REQUEST

53. Please provide a figure depicting the project trip distribution from the communities located northwest, north and southeast of the HBEP site.

Response: See the response to Data Request #52 above.

DATA REQUEST

54. Please include the shuttle trips in AFC Table 5.12-6 – Construction Trip Generation Estimate and discuss any traffic impacts and proposed mitigation.

Response: As noted in the Background discussion for these Data Requests, approximately 72 shuttle trips will be generated per work day, including 13 round trips from the City of Huntington Beach parking site, 13 round trips from the parking site located at the corner of PCH and Beach Boulevard, and 10 round trips from the Plains All American Tank Farm parking site. (See AFC page 5.12-19.)

Based on the limited number of shuttle trips from each of the identified offsite construction parking areas, the impact to local roads will be minimal.

Demolition Activities

BACKGROUND

Construction of HBEP would require the removal of the existing Huntington Beach Generating Station Units 1, 2, and 5. Demolition of Unit 5, scheduled to occur between the fourth quarter of 2014 and the end of 2015, would provide adequate space for the construction of HBEP Block 1. Construction of Blocks 1 and 2 are each expected to take approximately 42 and 30 months, respectively, with Block 1 construction scheduled to occur from the first quarter of 2015 through the second quarter of 2018, and Block 2 construction scheduled to occur from the first quarter of 2018 through the second quarter of 2020. Removal/demolition of existing Huntington Beach Generating Station Units 1 and 2 is scheduled to occur from the fourth quarter of 2020 through the third quarter of 2022 (Page 1-2).

During peak demolition activities at the site, an estimated maximum of 15 tractor-trailer units would leave the site each day to transport waste and debris offsite for salvage, recycling or disposal. It is anticipated that the maximum number of demolition personnel during any specific demolition activity would be approximately 50, with an overall average demolition workforce of 40 personnel (Page 2-36).

DATA REQUEST

55. Please clarify if the 15-tractor trailer units are identified in the Delivery/Haul Trucks ADT as stated in AFC Table 5.12-6- Construction Trip Generation Estimate? If not, please include these trips and discuss any traffic impacts and proposed mitigation.

Response: The potential traffic impacts have been analyzed during the peak construction month as a conservative analysis. This month represents the greatest number of combined construction trucks and personnel arriving and departing the site at one time. As such, Table 5.12-6, Construction Trip Generation Estimate, does not include the trips associated with the 15-tractor trailer units because the peak demolition activities do not coincide with the peak construction month.

DATA REQUEST

56. Please clarify if the 50 demolition personnel are identified in the Worker counts as stated in AFC Table 5.12-6- Construction Trip Generation Estimate? If not, please update Table 5.12-6 to reflect these construction personnel and discuss any traffic impacts and proposed mitigation.

Response: See the response to Data Request #55 above.

Table 5.12-6, Construction Trip Generation Estimate, does not include the trips associated with the 50 demolition personnel because the peak demolition activities do not coincide with the peak construction month.

Peak Construction Month

BACKGROUND

The AFC Traffic and Transportation analysis states that during the peak construction month for HBEP, construction would require up to 331 workers (Page 5.12-15). However, Section 5.10 – Socioeconomics – states construction personnel would peak at approximately 236 workers in months 82 and 83 of the HBEP construction and demolition period. Average workforce over the 90-month HBEP construction and demolition period would be 192 workers (Page 5.10-9).

DATA REQUEST

57. Please clarify the peak construction month(s) and peak construction workers for both the demolition and construction periods.

Response: Please see Appendix 5-10B for the estimated Construction and Demolition Personnel by Month.

The demolition workforce would peak during month 9 (2nd Quarter of 2015) when 51 personnel are required. The construction workforce would peak during months 82 and 83 (3rd Quarter of 2021) when 236 workers will be required. The traffic analysis assumed a conservative estimate of 331 workers at peak construction, which provides a worst-case analysis of the potential traffic impacts of the project.

Construction Parking Areas

BACKGROUND

The AFC Traffic and Transportation analysis states that construction worker parking for HBEP and the demolition of the existing units at the Huntington Beach Generating Station would be provided by a combination of onsite and offsite parking. Construction/demolition worker parking would be provided at the following locations:

- Approximately 1.5 acres onsite at the Huntington Beach Generating Station (approximately 130 parking spaces);
- Approximately 3 acres of existing paved/graveled parking located adjacent to HBEP across Newland Street (approximately 300 parking spaces);

- Approximately 2.5 acres of existing paved parking located at the corner of Pacific Coast Highway and Beach Boulevard (approximately 215 parking spaces);
- Approximately 225 parking spaces at the City of Huntington Beach shore parking west of the project site and;
- Approximately 1.9 acres at the Plains All American Tank Farm located on Magnolia Street (approximately 170 parking spaces) (Page 5.12-2 and Figure 5.12-4).

In addition, the Applicant submitted a letter dated March 16, 2012, from the City of Huntington Beach approving parking for up to 225 personal vehicle spaces within the City's South Beach Parking Lot for HBEP (Appendix 5.12D).

DATA REQUEST

58. To determine the feasibility of the applicant's parking proposal, please submit documentation allowing construction worker parking at the three other private off-site parking areas.

Response: The Applicant included a letter from the City of Huntington Beach regarding using the City's South Beach Parking Lot for construction worker parking in Appendix 5.12D of the AFC. Letters from each of the entities that owns or controls the other three private offsite construction parking areas indicating a willingness to allow construction worker parking are included in Attachment DR58-1. As stated in the March 16, 2012, letter from the City of Huntington Beach, the City has expressed a willingness to allow parking for up to 225 construction and demolition workers personal vehicles for HBEP within the City's South Beach Parking Lot. The Applicant is proposing to use the parking lot during the week, Monday through Saturday, from approximately 5:00 am to 7:00 pm. HBEP construction and demolition work schedule is typically 6:00 am to 6:00 pm; however, certain construction operations, such as large concrete pours, and generation units commissioning activities may extend beyond 6.00 pm into the early morning. As a condition of approval, the City would prohibit the use of the City's South Beach Parking lot by the Applicant on weekends, from Memorial Day to Labor Day, and on holidays during the summer (Memorial Day, 4th of July and Labor Day).

Parking data from the City for the South Beach Parking Lot (see Attachment DR58-2) were reviewed to determine whether the parking lot can accommodate both the existing beach users parking requirements and the applicant's request for 225 parking spaces. The City's South Beach parking lot has a total of 1,158 spaces.

Two types of parking data from the City were reviewed:

- Monthly total vehicles entering the South Beach Parking Lot in 2011
- South Beach Parking Lot counts collected on a Saturday, Sunday, and Wednesday in June 2012, as part of the Parking Study for the Proposed Russo and Steele Automobile Auction Event (Kimley-Horne Associates, Inc., July 2012).

A summary of the parking data is provided below.

Entering Vehicle Counts

The City of Huntington Beach provided data on the total number of vehicles entering the South Beach Parking Lot for each month of 2011. These data were converted into a daily average, presented in Table DR58-1.

TABLE DR58-1
City of Huntington Beach—2011 South Beach Parking Lot Entering Vehicles by Month

	Entering Vehicles			
Month	**Gate 3 By Month**	**Gate 4 By Month**	**Monthly Total**	**Daily Average**
Jan		5388	5388	174
Feb		5259	5259	188
March	564	6359	6923	223
April	3930	11888	15818	527
May	3881	12062	15943	514
June*	4389	10281	14670	667
July*	10864	17580	28444	1354
Aug*	9422	13481	22903	995
Sept	2625	10280	12905	430
Oct	166	6464	6630	214
Nov	108	4452	4560	152
Dec		4674	4674	151

*Counts are based on weekday only

Because the data only includes the number of entering vehicles, the parking space utilization data cannot be determined directly as the total number of entries include multiple use of the same parking space throughout the day (e.g. people arriving and departing at different times of the day). The City noted there are typically three waves entering throughout the day, so each parking space may be occupied an average of three times per day. In other words, the number of occupied parking spaces at any given time could be approximately one-third of the number of entries.

While the data do not provide parking space utilization directly, based on the data provided some observations can be made regarding use of the South Beach Parking Lot:

- The number of entering vehicles is highest during the summer and lowest during the winter. July is the busiest month of the year.
- With the exception of July and August, the total entries were less than the number of spaces by 491 or more. These calculations are based on the weekend and weekday data. Based on the summer daily counts, the weekday entries are about 45% to 55% less than on the weekend. Therefore, the average weekday number of vehicles entering the lot would be lower than shown in DR-58 Table 1 and the availability of parking spaces would be greater
- In July, the total number of weekday entries is approximately 115 percent of the number of spaces. In August, it is approximately 86 percent of the number of spaces. However, since vehicles do not stay all day, the data indicate that the parking lot is not at capacity on weekdays. The City has estimated that each parking space turns over three times. Even using a much more conservative value that each parking space turns over two times per day, the utilization in July/August is 43/58 percent. Using the more conservative turn-over rate of twice per day results in 481 available parking spaces in July (the busiest month) which is approximately twice the number of parking spaces (225 parking spaces) the City has approved to be used by HBEP construction/demolition workers.
- Each June there is a Junior Lifeguard program with approximately 1,000 participants. Many of the participants either ride bikes or carpool to the beach each weekday. The number of cars that remain in the lot is estimated

by the City to be 50 to 100 cars per day. Approximately 400 vehicles drop participants off and then leave the parking lot immediately.

Parking Utilization Counts

As part of the Parking Study for the Proposed Russo and Steele Automobile Auction Event (Kimley-Horn Associates, Inc., July 2012), parking counts were collected at all of the beach parking lots from Huntington Street to Magnolia Street on a Saturday, Sunday, and Wednesday in June, 2012. The purpose of the study was to evaluate the existing parking demand in the area to determine the adequacy of the available parking supply to meet the needs of the proposed Russo and Steele Automobile Auction Event.

The parking counts were collected from approximately 11:00 AM to 6:00 PM and were analyzed in four different "Parking subareas". The South Beach parking lot included Parking Area 1 (Huntington Street to the Pedestrian Bridge at the Hyatt Hotel) and Parking Area 2 (Pedestrian Bridge to Beach Boulevard). There are a combined total of 1,405 parking spaces in Parking Areas 1 and 2. For the purpose of evaluating the available parking supply for HBEP, the weekday parking data collected for Parking Areas 1 and 2 were reviewed and are summarized in Table DR58-2.

TABLE DR58-2
City of Huntington Beach South Beach Parking Lot—Weekday Peak Parking Demand Observations

Parking Area	Total No. of Parking Spaces	Peak Parking Demand	Spaces Available	Parking Occupancy
Parking Area 1 (Huntington St to Ped Bridge)	740 spaces	253 spaces	487 spaces	34%
Parking Area 2 (Ped Bridge to Beach Blvd)	665 spaces	232 spaces	433 spaces	35%
Combined (Parking Areas 1 and 2)	1405 spaces	485 spaces	920 spaces	35%

Source: Parking Study for the Proposed Russo and Steele Automobile Auction Event (Kimley-Horn Associates, Inc., July 2012)

As shown in the table, on a typical weekday, the South Beach Parking lot had a peak parking occupancy rate of 35 percent, with more than 900 spaces available during this time. The parking study also noted in the study area in general, the parking demand during the week was substantially less than on the weekend. The parking counts showed a 90 percent increase in parking demand on Saturday.

Conclusions

Based on the South Beach Parking Lot data provided by the City and the Kimley-Horn study, it is anticipated that sufficient parking exists in the South Beach Parking lot to accommodate both the existing weekday parking demand and the Applicant's request for 225 construction/demolition worker parking spaces at the City's South Beach Parking Lot. The entering vehicle counts provide a conservative estimate of the parking lot usage and even with multiple entries into and out of the parking lot, the total entries were less than the number of spaces except in July. The City's general observations of the lot indicate that a parking space may turn over three or more times per day, so it is expected that there will be sufficient capacity, even in July. The parking utilization counts collected for the proposed Russo and Steele Automobile Auction Event showed more than 900 spaces were available during a typical day weekday in June.

As noted in the CEC staff's Background section of this Traffic Data Request, in addition to the agreement with the City of Huntington Beach for the use of the City's South Beach Parking Lot, the Applicant has agreements for up to 685 parking spaces for HBEP construction/demolition workers at three additional off-site parking lots, and an additional 130 parking spaces for HBEP construction/demolition workers on the existing Huntington Beach Generating Station. Combined, the five parking lots provide 1,040 parking spaces that exceed the number of spaces required to meet the parking needs for the assumed maximum of 330 HBEP construction/demolition construction workers at any given time. The Applicant has entered into agreements for this number of parking

spaces to ensure adequate construction/demolition workers parking is available even if parking may not be available at a specific parking area for an unknown reason (see Attachment DR58-1 for the agreements from the two private owners of the other three offsite construction workers parking areas.

Attachment DR58-1
Offsite Construction Parking Agreements

CONFIDENTIAL

October 17, 2012

Steve Kane
Charles, Kane & Dye, LLP
1920 Main Street
Suite 1070
Irvine, California 92614

Re: Letter of Intent

Dear Mr. Kane:

Reference is made to our recent discussions and correspondence regarding the possible land lease agreement (the "Proposed Transaction") between AES Southland Development LLC ("AES") and the Mills Land & Water Company and Beachfront Village, LLC (collectively, "Mills"). This letter of intent sets forth our preliminary understanding with respect to certain aspects of the Proposed Transaction as currently contemplated.

1. ***Transaction Structure***. AES is tentatively planning to build new electricity generating facilities at our existing AES Huntington Beach Generating Station ("AESHB") located in Huntington Beach, CA. AES requests the use of available Mills' property located adjacent to AESHB on Newland Street and the property located at the corner of Pacific Coast Highway and Beach Boulevard, as shown in Figure 1, to be used as parking areas during the construction period from 2016 up to 2020, to the extent that use of the available Mills' property does not interfere with Mills' activities.

2. ***Pursue Proposed Transaction in Good Faith***. Subject to the provisions of Section 3 below, the parties agree to prepare and negotiate in good faith a definitive agreement (the "Land Lease Agreement") with respect to the Proposed Transaction within 180 days period prior to the beginning of any construction activities (the "Applicable Period"). Such definitive agreement shall contain such representations and warranties, covenants, conditions (including regulatory) and indemnification provisions as are customary and appropriate for a transaction such as the Proposed Transaction and are negotiated between the parties, including, but not limited to, that subject to Mills' prior written approval, AES will be responsible at its sole cost and expense for obtaining all permits and approvals for such parking. The negotiation and finalization of the Land Lease Agreement and any related documentation shall be subject to the parties reaching mutually acceptable terms. If the parties do not execute and deliver the Land Lease

Agreement by the end of the Applicable Period, either party may terminate this letter of intent at any time upon written notice to the other party (including electronic notice).

3. ***Relationship of the Parties***. The parties acknowledge and agree that nothing in this letter of intent shall be construed as creating any partnership, joint venture or any such similar relationship between AES and Mills and any liability of AES or Mills arising hereunder shall be borne by that party alone and that there shall be no joint or several liability of AES or Mills. Each party reserves the right, in its sole discretion, to reject any and all proposals made by the other party with regard to the Proposed Transaction, and to terminate discussions and negotiations with the other party at any time after the Applicable Period.

4. ***Costs and Expenses***. Except as otherwise provided in Section 2, AES and Mills shall each bear their respective costs and expenses in connection with the activities contemplated by this letter of intent.

5. ***Effect; Miscellaneous***. This letter of intent is non-binding. This letter of intent may be executed in counterparts and shall be governed by and construed in accordance with the laws of the State of California without regards to principles of conflict of laws thereof. Mills or AES may assign this letter of intent to one of its affiliates without the prior written consent of the other party. No waiver or amendment to this letter of intent shall be effective unless it is in writing and executed by the parties hereto or the party making the proposed waiver. This letter of intent shall terminate upon the execution of the Land Lease Agreement or as otherwise set forth herein.

We look forward to working with you on the Proposed Transaction. If Mills is agreeable to the foregoing, please countersign both copies of this letter of intent and return one originally executed version to us. Thank you.

Very truly yours,

AES Southland Development, LLC
By:_____
Name: Stephen O'Kane
Title: Vice-President

AGREED & ACCEPTED:

Mills Land & Water Company
By: Joan R. Wynn, President
Name: Joan R. Wynn
Title: President

Beachfront Village, LLC
By: Joan R. Wynn, Manager
Name: Joan R. Wynn
Title: Manager

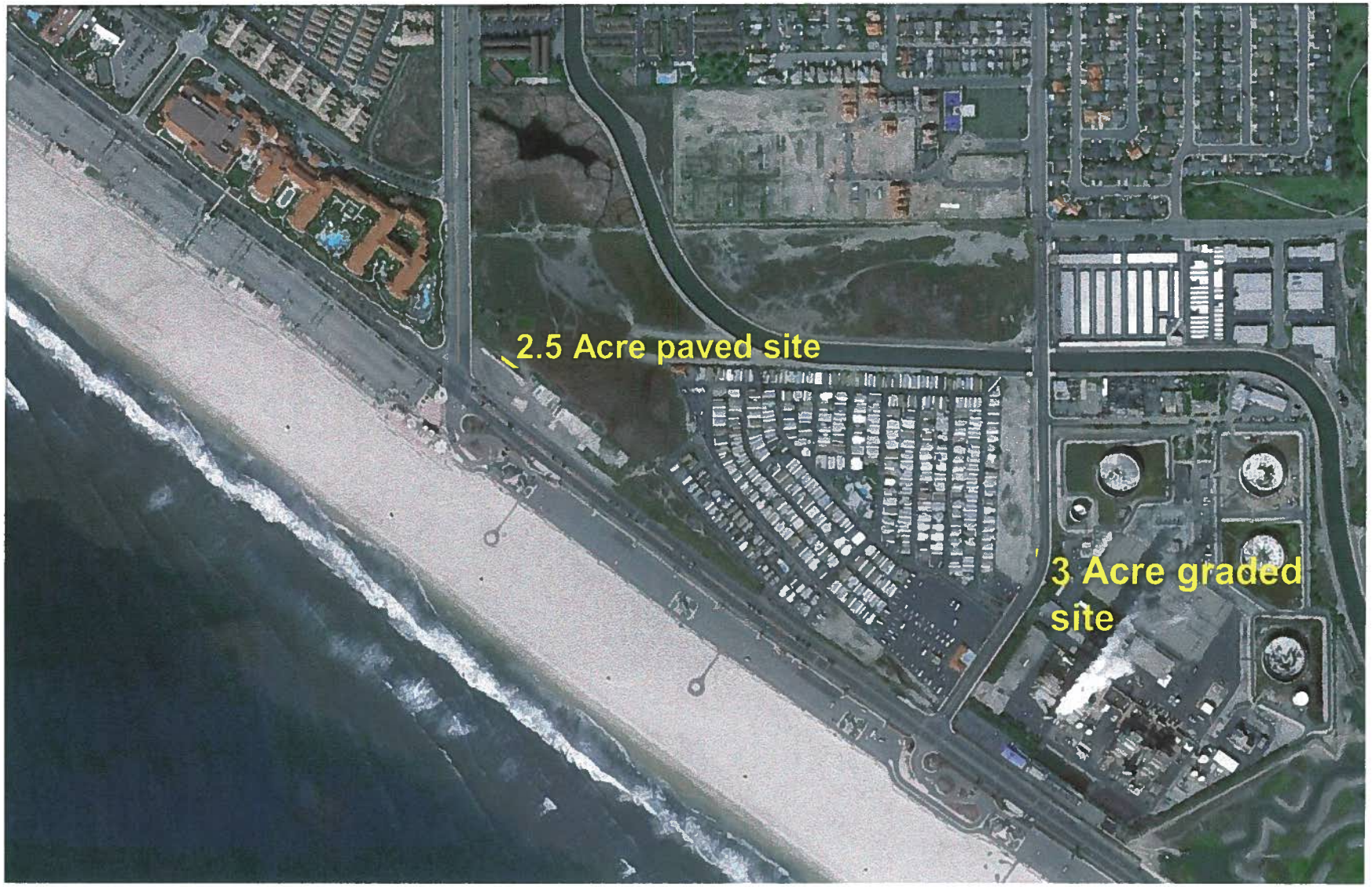

Figure 1

CONFIDENTIAL

The AES Corporation
690 North Studebaker Road
Long Beach, CA 90803
tel 562 493 7842
fax 562 493 7320

April 30, 2012

John R. Keffer
V.P. Terminals
Plains West Coast Terminals LLC
5900 Cherry Ave
Long Beach, CA 90805

Re: Letter of Intent

Dear Mr.Keffer:

Reference is made to our recent discussions and correspondence regarding the possible land use (the "Proposed Transaction") between AES North America Development LLC (AES") and Plains West Coast Terminals LLC (the "PWCT"). This letter of intent sets forth our preliminary understanding with respect to certain aspects of the Proposed Transaction as currently contemplated.

1. ***Transaction Structure***. AES is tentatively planning to build new electricity generating facilities at our existing AES Alamitos generating station ("AESAL") located in Long Beach, CA and the AES Huntington Beach generating station ("AESHB") located in Huntington Beach, CA. AES requests the use of available PWCT property adjacent to AESAL and AES HB, as shown in Figure 1 and 2, for equipment staging (laydown) and/or parking area during the construction period from 2016 up to 2024 at PWCT property in Long Beach (see Exhibit I) and from 2016 up to 2022 at PWCT property in Huntington Beach see Exhibit II) to the extent that (i) use of the available PWCT property does not interfere with PWCT activities, and (ii) such PWCT property continues to be owned by PWCT and continues to be available, as determined by PWCT in PWCT's sole discretion, for AES's proposed activities.

2. ***Pursue Proposed Transaction in Good Faith***. The parties agree to prepare and negotiate in good faith a definitive agreement (the "Land Lease Agreement") with respect to the Proposed Transaction within 180 days period to the beginning of any construction activities (the "Applicable Period"). Such definitive agreement shall contain such representations and warranties, covenants, conditions (including regulatory) and indemnification provisions as are customary and appropriate for a transaction such as the Proposed Transaction, including with respect to conditions then-existing at such PWCT property, and are negotiated between the parties. The negotiation and finalization of the Land Lease Agreement and any related documentation shall be subject to the parties

reaching mutually acceptable terms. If the parties do not execute and deliver the Land Lease Agreement by the end of the Applicable Period, either party may terminate this letter of intent at any time upon written notice to the other party (including electronic notice).

3. ***Relationship of the Parties***. The parties acknowledge and agree that nothing in this letter of intent shall be construed as creating any partnership, joint venture or any such similar relationship between AES, AESAL, AESHB and PWCT and any liability of AES, AESAL, AESHB or PWCT arising hereunder shall be borne by that party alone and that there shall be no joint or several liability of AES or PWCT. Each party reserves the right, in its sole discretion, to reject any and all proposals made by the other party with regard to the Proposed Transaction, and to terminate discussions and negotiations with the other party at any time after the Applicable Period.

4. ***Costs and Expenses***. AES and PWCT shall each bear their respective costs and expenses in connection with the activities contemplated by this letter of intent.

5. ***Effect; Miscellaneous***. This letter of intent is non-binding. This letter of intent may be executed in counterparts and shall be governed by and construed in accordance with the laws of the Sate of New York without regards to principles of conflict of laws thereof. PWCT or AES may assign this letter of intent to one of its affiliates without the prior written consent of the other party. No waiver or amendment to this letter of intent shall be effective unless it is in writing and executed by the parties hereto or the party making waiver. This letter of intent shall terminate upon the execution of the Land Lease Agreement or as otherwise set forth herein. It is hereby understood and agreed that nothing set forth herein shall limit or prohibit PWCT from pursuing any course of action with respect to the PWCT properties described herein, including selling, leasing or otherwise handling or utilizing the PWCT properties in any manner that PWCT desires, and, in the event PWCT desires to sell or lease the PWCT properties, or exercise any rights with respect to the PWCT properties in a manner that will not accommodate AES's use requirements, then PWCT shall have the right to terminate this letter of intent (and it is hereby contemplated that the Land Lease Agreement, if mutually agree upon and executed, would also include such termination right).

We look forward to working with you on the Proposed Transaction. If PAAP is agreeable to the foregoing, please countersign both copies of this letter of intent and return one originally executed version to us.

Very truly yours,

AES North America Development, LLC

By:_____
Name: MINH HOANG
Title: VICE PRESIDENT

AGREED & ACCEPTED:

Plains West Coast Terminals LLC

By: _____
Name: JOHN R. KEFFER
Title: VP TERMINALS

Attachment DR58-2
Parking Data for Huntington Beach South Beach Parking Lot

From: James, Jane [mailto:jjames@surfcity-hb.org]
Sent: Friday, October 19, 2012 11:16 AM
To: Stephen O'Kane
Cc: Dominguez, David; Cole, Chris; Hughes, Dottie
Subject: Beach Parking Lot

Stephen:

The parking lot between Huntington Street and Beach Boulevard holds 1,158 vehicles. See below for use during calendar year 2011. We are still compiling data for use of the lot during special events, such as the marathon, and should have more information to share with you early next week.

Also, the City recently processed a CUP/CDP to utilize the beach parking lots on a temporary basis for an auto auction. You can find the staff report and associated parking and traffic studies on the City website as part of the September 25, 2012 Planning Commission Agenda and Staff Report.

2011

Month	Gate 3	Gate 4	Total
Jan		5388	5388
Feb		5259	5259
March	564	6359	6923
April	3930	11888	15818
May	3881	12062	15943
June	8083	17277	25360
July	19623	32450	52073
Aug	15350	25157	40507
Sept	2625	10280	12905
Oct	166	6464	6630
Nov	108	4452	4560
Dec		4674	4674
	54330	141710	196040

Please let me know if you have any other questions.

Jane James, Senior Planner
City of Huntington Beach - Planning & Building Department
2000 Main Street
Huntington Beach, CA 92648
Office - 714.536.5596
Fax - 714.374.1540
jjames@surfcity-hb.org

Summer Parking Behavior

The attendance at the Huntington Beach City Beaches depends completely on the weather conditions. Other factors that will affect parking numbers are events, programs and holidays.

1. Starting in June we have a Jr. Lifeguard program with around 1,000 participants. Many of the youth either ride bikes or carpool to the beach each day Monday – Friday. The number of cars that remain in the lot is estimated to be 50-100 cars per day. Around 400 drop participants off and then leave immediately.
2. When holidays fall close to weekends we usually see a peak in numbers on the days surrounding the holiday.
3. Events such as the 4th of July and the US Open of Surfing will cause the lots to be full all day.
4. We typically see 3 waves of customers so each space may be filled 3 times or more during a day. This is less likely to happen during the events listed above.
5. Hours documented are from 7am to 9pm.

Below in Yellow are days that we are busy but do not end up closing the parking lots due to full conditions. In Red are days that we would have been full at some point during the day. We will consider the lot to be full when there are no additional spaces. We reopen the lot when we find that 30-50 spaces have been vacated.

Jun-11

Date	Day of wk	Gate 3	Gate 4	Total	Column1
1	Wed	56	176	232	
2	Thurs		269	269	
3	Fri	264	331	595	
4	Sat	424	589	1013	
5	Sun	181	388	569	
6	Mon	64	247	311	
7	Tues	74	381	455	
8	Wed	47	231	278	
9	Thurs	71	346	417	
10	Fri	123	251	374	
11	Sat	281	572	853	
12	Sun	209	337	546	
13	Mon	104	381	485	
14	Tues	122	430	552	
15	Wed	177	514	691	
16	Thurs	124	392	516	
17	Fri	168	516	684	
18	Sat	466	1026	1492	
19	Sun	181	347	528	
20	Mon	207	453	660	
21	Tues	85	741	826	
22	Wed	369	715	1084	Local Schools out
23	Thurs	290	590	880	
24	Fri	308	633	941	
25	Sat	995	1885	2880	
26	Sun	957	1852	2809	
27	Mon	480	740	1220	
28	Tues	375	718	1093	
29	Wed	322	553	875	
30	Thurs	559	673	1232	
31				0	
				0	
				25360	

Jul-11

Date	Day of wk	Gate 3	Gate 4	Total	Column1
1	Fri	707	1131	1838	
2	Sat	828	1520	2348	
3	Sun	925	1314	2239	
4	Mon	170	3062	3232	
5	Tues	474	653	1127	
6	Wed	462	704	1166	
7	Thurs	387	639	1026	
8	Fri	981	1050	2031	
9	Sat	778	1967	2745	
10	Sun	1137	1254	2391	
11	Mon	412	740	1152	
12	Tues	451	664	1115	
13	Wed	473	438	911	
14	Thurs	384	444	828	
15	Fri	662	572	1234	
16	Sat	761	1526	2287	
17	Sun	825	1322	2147	
18	Mon	480	682	1162	
19	Tues	424	914	1338	
20	Wed	500	626	1126	
21	Thurs	426	691	1117	
22	Fri	644	968	1612	
23	Sat	988	1587	2575	
24	Sun	823	1711	2534	
25	Mon	582	765	1347	
26	Tues	412	711	1123	
27	Wed	491	547	1038	
28	Thurs	485	658	1143	
29	Fri	857	921	1778	
30	Sat	842	1664	2506	
31	Sun	852	1005	1857	
				0	
				52073	

Aug-11

Date	Day of wk	Gate 3	Gate 4	Total	Column1
1	Mon	788	760	1548	US Open
2	Tues	797	831	1628	US Open
3	Wed	844	1047	1891	US Open
4	Thurs	686	1161	1847	US Open
5	Fri	1180	1253	2433	US Open
6	Sat	1064	1536	2600	US Open
7	Sun	1126	1360	2486	US Open
8	Mon	273	530	803	
9	Tues	334	566	900	
10	Wed	412	445	857	
11	Thurs	331	654	985	
12	Fri	683	504	1187	
13	Sat	616	1656	2272	
14	Sun	624	1116	1740	
15	Mon	214	472	686	
16	Tues	378	449	827	
17	Wed	281	469	750	
18	Thurs	446	569	1015	
19	Fri	304	595	899	
20	Sat	701	1769	2470	
21	Sun	468	1039	1507	
22	Mon	143	361	504	
23	Tues	190	366	556	
24	Wed	241	430	671	
25	Thurs	212	462	674	
26	Fri	332	592	924	
27	Sat	653	1874	2527	
28	Sun	676	1326	2002	
29	Mon	84	413	497	
30	Tues	128	261	389	
31	Wed	141	291	432	
				0	
				40507	

PARKING STUDY
FOR THE PROPOSED
RUSSO AND STEELE AUTOMOBILE AUCTION EVENT
IN THE CITY OF HUNTINGTON BEACH

Prepared for:

Russo and Steele

Prepared by:

Kimley-Horn and Associates, Inc.
765 The City Drive, Suite 400
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(714) 939-1030

July, 2012

PARKING STUDY
FOR THE PROPOSED
RUSSO AND STEELE AUTOMOBILE AUCTION EVENT

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ATTACHMENTS

PARKING STUDY
FOR THE PROPOSED
RUSSO AND STEELE AUTOMOBILE AUCTION EVENT
IN THE CITY OF HUNTINGTON BEACH

INTRODUCTION

Russo and Steele, a firm specializing in collector automobile auctions, wishes to establish an annual Auto Auction event on a portion of the City Beach parking lot, between Huntington Street and the pedestrian overpass that connects the Hyatt Regency Hotel with the beach.

The Auto Auction event would result in the temporary loss of 348 to 588 beach parking spaces over the course of a week and a half in late June, starting in 2013. In addition to the loss of beach parking, the event itself will generate some level of additional parking demand. The applicant intends to address the temporary loss of parking and to accommodate the event parking demand through implementation of parking management measures, to be discussed later in this report.

This parking study has been prepared to:

- Determine the current parking demand in the event site lot, i.e., the number of vehicles that would be temporarily displaced by the Auto Auction event;
- Identify the number of available parking spaces in other beach parking lots where the displaced beach-goers would likely go;
- Identify other potential remote lots and the number of parking spaces available for beach and event parking;
- Identify other feasible measures to increase the parking supply during the temporary loss of parking.

PROJECT DESCRIPTION

Existing Operations

The Auto Auction event is proposed to be held on a portion of the City Beach parking lot across Pacific Coast Highway (PCH) from the Hyatt Regency Huntington Beach Resort & Spa, and the Waterfront Hilton Hotel. The project site is shown on **Figure 1.** This parking lot is owned by the City of Huntington Beach, and is part of the City Beach parking lot, which extends down to Beach Boulevard. The portion of the City Beach parking lot between Huntington Street and the pedestrian overpass provides a total of 740 surface parking spaces, including 12 handicap accessible spaces.

The City Beach parking lot is open to beach-goers for a flat rate of $15.00 per day. Because it offers easy accessibility to the beach, and is close to downtown, the pier, and the hotels, this parking area is well-used on weekends and summer days, and often has a "Parking Full" sign posted by late morning on weekends.

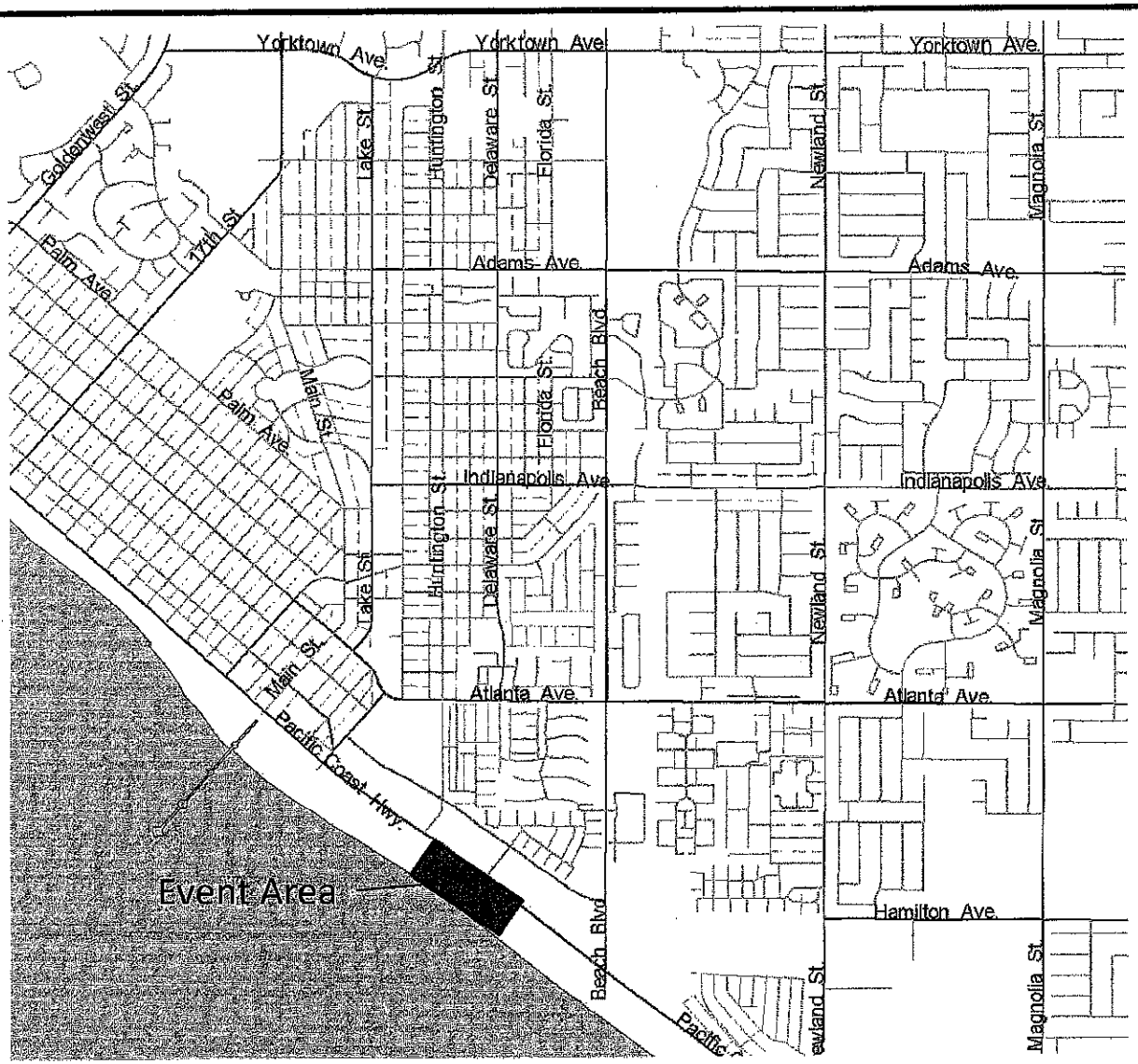


FIGURE 1

AUTO AUCTION EVENT LOCATION

Kimley-Horn and Associates, Inc.

The beach parking lots south of Beach Boulevard are part of the Huntington State Beach, operated by the California Department of Parks and Recreation. State Beach is open from 6:00 AM to 10:00 PM, with entries to the park not allowed after 9:00 PM.

Proposed Project

Russo and Steele proposes to occupy a portion of the City Beach parking lot to conduct an Automobile Auction event. The event is proposed to be an annual occurrence, taking place in June.

The entire event, including set-up and take-down, will last 11 days, from Monday to the following Thursday. During the event set-up and break-down, a total of seven days, the operation will occupy 348 parking spaces. During the main part of the event, when the auction vehicles are on display for preview, the Auto Auction operation will occupy an additional 240 spaces, for a total of 588 spaces.

The proposed layout for the event is provided on **Figure 2**. Of the approximately 740 spaces that are located in the portion of the parking lot between Huntington Street and the pedestrian overcrossing, the event would occupy 348 to 588 spaces, depending on the phase of the event. The 62-space area closest to Huntington Street would be available to the public throughout the entire event. In addition, a single row of parking (90 spaces) and the drive aisle along the edge of the parking lot closest to the ocean would also be open throughout the event, providing vehicular and pedestrian access through this part of the parking lot to the parking immediately adjacent, to the south.

The applicant will implement parking management measures, in order to offset the temporary loss of parking during the event, and to accommodate the additional parking demand that would be generated by the event.

PARKING ANALYSIS

Observed Existing Parking Demand

The existing parking demand in the beach parking lots was surveyed to:

- Determine the current parking demand in the event site lot, i.e., the number of vehicles that would be temporarily displaced by the Auto Auction event;
- Identify the number of available parking spaces in other beach parking lots where the displaced vehicles and event-goers vehicles may go;
- Determine the adequacy of the available beach parking and the remote lot parking to accommodate the parking needs of the Auto Auction event, and offset the temporary loss of beach parking.

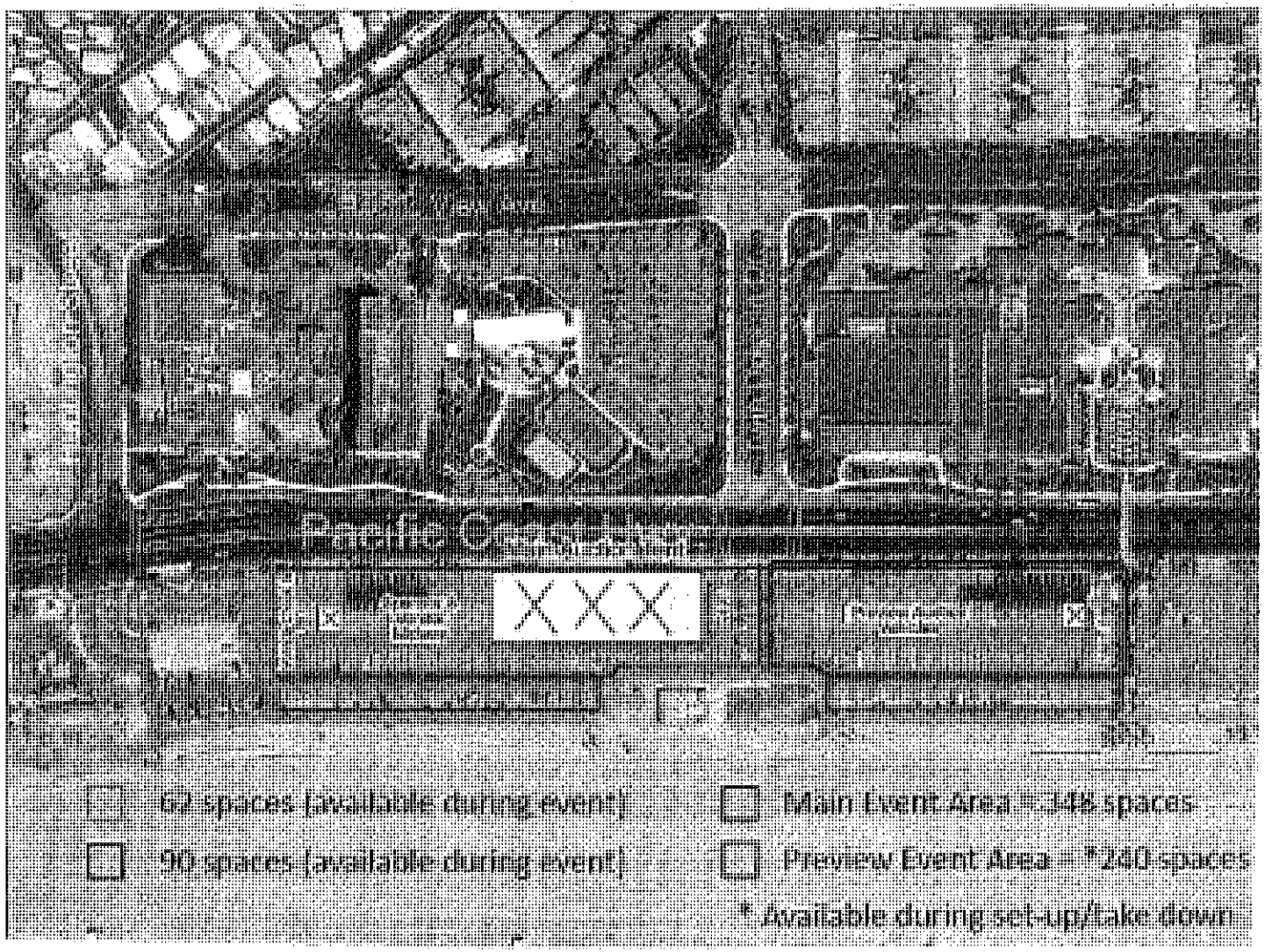


FIGURE 2

AUTO AUCTION SITE LAYOUT

Kimley–Horn and Associates, Inc.

ATTACHMENT NO. 5.5

Parking data was collected in all of the beach parking lots from Huntington Street to Magnolia Street. There are a total of 2,816 parking spaces in this area, broken down into sub-areas as follows:

- *The City Beach parking area where the Auto Auction event would be held:*
  - Parking Area 1 – From Huntington Street to the pedestrian bridge at the Hyatt Hotel – 740 spaces.
  - The event will occupy 348 spaces during the 3 days prior to and the 4 days after the event for set-up and take-down.
  - The event will occupy 588 spaces during the 4 days of vehicle preview and auction.

- *City and State Beach parking areas south of the event site:*
  - Parking Area 2 – From the pedestrian bridge to Beach Boulevard – 665 spaces
  - Parking Area 3 – From Beach Boulevard to Newland Street – 714 spaces
  - Parking Area 4 – From Newland Street to Magnolia Street – 697 spaces

- *Sub-total three non-event areas – 2,076 spaces*
- *Total all areas – 2,816 spaces*

Aerial maps depicting the parking data collection areas are provided in ***Attachment A***.

Parking data was collected on a Saturday, Sunday, and Wednesday in June, 2012. The weekend data collection times were designed to coincide with the times when the beach parking would be most impacted by the proposed project – specifically, at the times when:

- the beach parking demand would be at its peak; and
- the greatest number of parking spaces would be unavailable for beach parking;

Data was also collected on a typical weekday to determine what level of parking management measures, if any, would be needed for the weekday operation. It should be noted that the weather on all three data collection days was excellent beach-going weather. The results of the parking data collection are summarized on Tables 1 through 4.

Parking Area 1 – The Event Site

Table 1 provides a summary of the number of vehicles parked in Parking Area 1– the parking area where the event would be held, between Huntington Street and the pedestrian overcrossing. Review of Table 1 indicates that, on Saturday, Parking Area 1 was virtually full by 12:00 noon and remained so through 2:00 PM. Parking demand in the lot remained high (over 700 vehicles) until 5:00 PM. On Sunday, the parking demand was over 700 vehicles until 2:00 PM, when the demand started to steadily decrease. These results indicate that, on Saturday and Sunday of the event weekend, when the event would take up 588 parking spaces, 588 vehicles would be displaced.

On Wednesday (a typical weekday), the peak parking demand in Parking Area 1 was 253 cars at 3:00 PM, leaving 487 spaces available.

- On the weekdays during set-up and take-down, the event would occupy 348 spaces in Parking Area 1, leaving 392 spaces available for beach parking. This would be enough available parking in Parking Area 1 outside the Auto Auction event to accommodate the typical weekday parking demand on the weekdays during set-up and take-down.

- On the Thursday and Friday following set-up, the preview and auction portion of the event would occupy 588 spaces, leaving roughly 150 spaces in Parking Area 1 available for beach parking. Since the typical weekday demand exceeds this number, some beach parking in Parking Area 1 would be displaced to adjacent beach parking lots as discussed in the next section.

Parking Areas 2, 3, and 4 – Non-Event Parking Areas

Parking data for the remaining Parking Areas (from Huntington Street to Magnolia Street) is summarized on **Table 2** for Saturday, **Table 3** for Sunday, and **Table 4** for Wednesday. The numbers in these three tables reflect the number of **available (unoccupied)** parking spaces, by area, for the beach parking areas outside the lot where the Auto Auction event would be held.

Review of these tables indicates that the highest beach parking demand occurred on Saturday, between 2:00 and 3:00 PM, when there were a total of 83 spaces available in Parking Areas 2, 3, and 4 – less than 5% of the total parking supply.

Parking patterns on Sunday were similar to Saturday, with the overall Sunday demand roughly 20% less than Saturday. The peak parking demand on Sunday occurred between 1:00 and 2:00 PM, when there were a total of 445 parking spaces available from Huntington Street to Magnolia Street.

Review of the weekend data indicates that the parking areas closest to the pier and downtown fill first, and the demand then grows to the south as the day goes on. Parking Area 2 (from the pedestrian overcrossing to Beach Boulevard) was virtually full until 4:00 PM, when the demand started to steadily decline. Parking Area 3 (from Beach Boulevard to Newland Street) was also virtually full until about 3:00 PM. The parking demand in Parking Area 4 (from Newland Street to Magnolia Street) grew throughout the day, and peaked mid-afternoon, with 100 or more spaces available in this area for much of the day.

Although formal parking data was not collected in the lots between Magnolia Street and the Santa Ana River (further south of the four areas studied), an informal observation of this parking on the following weekend indicated that there were several hundred parking spaces available during the peak afternoon period on both Saturday and Sunday.

On Wednesday (a typical weekday), parking demand was substantially less than on the weekend, with 1,200 or more parking spaces available in Parking Areas 2, 3, and 4 at all times.

Table 1
Summary of Parking Demand
In Parking Area 1 - Event Site

TIME	Saturday 6/23/2012	Sunday 6/24/2012	Wednesday 6/27/2012
Spaces	740	740	740
11:00 AM	--	***723***	--
12:00 PM	***739***	704	149
1:00 PM	738	715	199
2:00 PM	712	645	241
3:00 PM	733	624	***253***
4:00 PM	711	522	226
5:00 PM	585	--	--
6:00 PM	466	--	--

XXX = Peak parking demand in Parking Area 1 (the Event Site parking lot).

-- = Data collection was not conducted during this hour.

Attachment No. 5.9

Table 2
Summary of Available Parking
Parking Areas 2, 3, and 4 - Saturday

Location: Beach Parking South of Event Site
City: Huntington Beach

Day: Saturday
Date: 6/23/2012

TIME	Parking Area 2 Pedestrian Bridge to Beach Boulevard	Parking Area 3 Beach Boulevard to Newland Street	Parking Area 4 Newland Street to Magnolia Street	TOTAL
Spaces	665	714	697	2,076
12:00 PM	9	***1***	203	213
1:00 PM	8	3	164	175
2:00 PM	8	15	60	***83***
3:00 PM	***7***	56	***40***	103
4:00 PM	50	121	112	283
5:00 PM	74	152	98	324
6:00 PM	126	154	167	447

XXX = Lowest level of parking availability.

ATTACHMENT NO. 5.10

Table 3
Summary of Available Parking
Parking Areas 2, 3, and 4 - Sunday

Location: Beach Parking South of Event Site
City: Huntington Beach

Day: Sunday
Date: 6/24/2012

TIME	Parking Area 2 Pedestrian Bridge to Beach Boulevard	Parking Area 3 Beach Boulevard to Newland Street	Parking Area 4 Newland Street to Magnolia Street	TOTAL
Spaces	665	714	697	2,076
11:00 AM	***14***	127	521	662
12:00 PM	16	***10***	459	485
1:00 PM	24	27	394	***445***
2:00 PM	138	87	269	494
3:00 PM	164	148	139	451
4:00 PM	210	176	***74***	460

XXX = Lowest level of parking availability.

Table 4
Summary of Available Parking
Parking Areas 2, 3, and 4 - Wednesday

Location: Beach Parking South of Event Site
City: Huntington Beach

Day: Wednesday
Date: 6/27/2012

TIME	Parking Area 2 Pedestrian Bridge to Beach Boulevard	Parking Area 3 Beach Boulevard to Newland Street	Parking Area 4 Newland Street to Magnolia Street	TOTAL
Spaces	**665**	**714**	**697**	**2,076**
12:00 PM	497	598	564	1,659
1:00 PM	465	534	543	1,542
2:00 PM	436	492	554	1,482
3:00 PM	***433***	483	***365***	***1,281***
4:00 PM	453	***478***	555	1,486

XXX = Lowest level of parking availability.

ATTACHMENT NO. 5.13

Event Parking

In addition to offsetting the impact of the temporary loss of beach parking in Parking Area 1, event organizers will minimize the impact on beach parking of the additional parking demand generated by the event itself. Event participants, attendees, and staff will consist of the following:

Individual	Number
Vehicle owners / sellers	200
Registered Auction bidders	200
Spectators	Varies
Sponsors / Vendors	70
Russo & Steele Event Staff	32

Individuals associated with the event are not expected to have a noticeable impact on beach parking, based on the following:

- The Hyatt and Hilton hotels will be prominently featured in the Russo and Steele promotional materials, and it is expected that the majority (estimated to be 90%) of the vehicle owners / sellers and auction bidders will stay as guests at the Hilton or Hyatt hotel. The hotel parking supply would already accommodate parking demand generated by its own hotel guests.

- Any Auto Auction vehicle owners / sellers, and registered Auction bidders who are not staying at the hotels (estimated to be 10%) will be informed through the Auto Auction event promotional materials and event packets, and through the Russo and Steele website itself to park in the hotel parking.

  - This represents 40 additional event vehicles in the hotel parking, above and beyond event hotel guests.

- In addition, 90% of the event sponsors, vendors and staff will stay at the hotel. The hotel parking supply would already accommodate parking demand generated by its own hotel guests.

- Russo and Steele will require the remaining sponsors and vendors and their own support staff who are not staying at the hotels to use the hotel parking.

  - This represents 10 event vehicles in the hotel parking, above and beyond event hotel guests.

- Event spectators (individuals not participating as a seller or a bidder) will consist of local individuals interested in viewing the vehicles and visiting the sponsor / vendor tent. The number of spectators on site any one time will vary throughout the event and is estimated to peak at 300 on Saturday and Sunday.

    - Approximately 70% are assumed to be aware of the event through the event promotional materials. These people will be informed of the availability of parking at the hotel. Assuming 2 persons per car, this represents 105 event vehicles in the hotel parking, above and beyond event hotel guests.

    - Some event spectators (30%) could be individuals who are already downtown to go to the beach, walk the pier, and/or eat and shop in the downtown, and who choose to participate in the event out of curiosity and interest. These individuals would already be part of the typical beach / downtown parking demand.

This additional event parking demand using the hotel parking is estimated to be a maximum of 155 vehicles (40 owners and bidders, 10 vendors and staff, and 105 spectators). Hotel property management has provided hotel parking data that was collected in late June, 2012. The data indicates that excess (unoccupied) parking on the hotel properties exceeded 300 spaces at all times. Hotel records also indicate that the hotels were at 99.7% occupancy on Saturday, the peak event parking day. This data indicates that the hotel parking will adequately accommodate the event parking demand above and beyond the parking needed for hotel guests.

IMPACT ASSESSMENT

Weekday

Set-up and Take-down Days

The parking data results indicate that the loss of 348 parking spaces in Parking Area 1 on weekdays during event set-up and take-down will not cause an impact to parking for beach-goers. There would be enough available parking in Parking Area 1 to accommodate the weekday beach parking demand during the set-up and take-down days.

Preview and Auction Days (Thursday and Friday)

On Thursday and Friday, the Auto Auction even will occupy 588 spaces in Parking Area 1, leaving roughly 150 spaces in Parking Area 1 for beach parking. There would be over 1,200 available parking spaces in the remainder of the beach parking, in Parking Areas 2, 3, and 4 to offset the additional temporary loss of parking on the Thursday and Friday event days.

No parking management measures would be needed to offset the temporary loss of parking spaces for the weekday.

Weekend

The temporary loss of 588 spaces during the preview and auction event on the weekend does represent a parking impact which will need to be addressed with a parking management program. The data indicates that, while there would be some available parking in the beach lots to the south, there would not enough to make up for all 588 parking spaces, unless the beach-goer continues past Magnolia Street.

People going to the beach, who first look for parking in the City Beach lot at the peak time (mid-afternoon on Saturday) would just have to "keep going" down PCH until they find a lot that's open – an occurrence not untypical for a summer weekend. One group impacted by this shift southward to the State Beach would be people with an annual City Beach Parking Pass, which is valid in the City Beach lots (down to Beach Boulevard) but not in the State Beach lots. This is addressed in the next section.

PARKING MANAGEMENT MEASURES

Replacement parking measures to accommodate beach parking demand will be implemented for Saturday and Sunday, to replace the parking taken up by the Auto Auction event.

Five remote parking areas have been identified as candidates for replacement parking:

Location	Number of Spaces	Distance to Event Site (mi.)	Distance to the Beach (mi.) [1]
City Hall 2000 Main Street	400	2.6	2.6
Edison High School 21400 Magnolia Street	178	2.2	0.75
Edison Park 21377 Magnolia Street	53	2.2	0.75
Newland Barn 19822 Beach Boulevard	60	2.3	1.9
Rodgers Senior Center 1706 Orange Avenue	104	1.1	0.5

[1] Measured from the remote lot to the closest entrance to the beach.

The location of each of these lots is shown on **Figure 3**.

In total, the five remote lots would provide 795 replacement parking spaces, which, in combination with the available parking in other beach parking lots, would more than offset the temporary loss of 588 parking spaces on the Auto Auction event weekend.

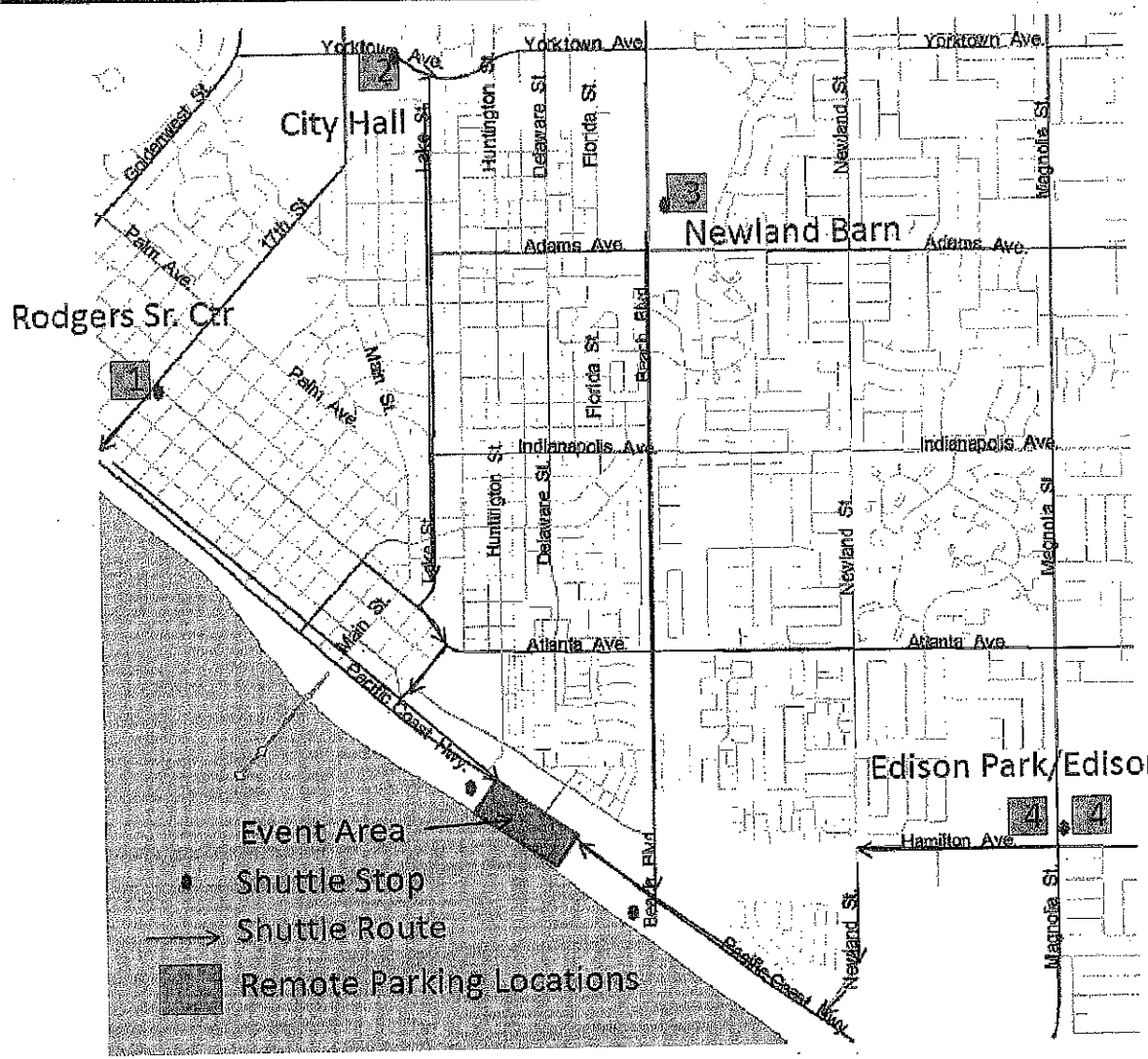


FIGURE 3

REMOTE PARKING LOCATIONS

Kimley-Horn and Associates, Inc.

ATTACHMENT NO. 5, 6

Review of the remote parking lot chart indicates that The City Hall and the two Edison lots (the High School and Edison Park) alone would provide a total of 631 spaces, which would be enough to offset the temporary loss of parking. It is recommended that the remote lot and shuttle operation focus on the City Hall and two Edison lots, since City Hall and the Edison High School and Edison Park areas are well-known facilities and easy to find.

The parking at Edison High School and Edison Park would be very convenient replacement parking for beach-goers, since it is less than a mile from the Magnolia Street entrance to the State Beach. The shuttle route should be designed to provide a stop not only near the Auto Auction event site, but also at the nearest entrance to the beach itself (Magnolia Street), since most of the people taking advantage of the remote parking and shuttle will be beach-goers.

The City Hall parking would build on the current shuttle operation provided by the City on weekends and Tuesday nights for Surf City Nights. Residents have become very familiar with this free parking and shuttle operation.

In both cases, one shuttle vehicle would be able to complete a circuit each half-hour.

Based on the empirical data, the remote parking lots and shuttle operation at City Hall and Edison would only be needed for Saturday and Sunday midday, when the beach parking demand is at its peak, and the Auto Auction event is occupying all 588 parking spaces.

The availability of nearby free parking and the convenience of not searching for a parking spot in the crowded beach parking lots will be an enticement to use the remote lots and shuttle. To enhance the awareness of and promote the utilization of the remote parking lots, advance promotion and point-of-entry signage would be employed, such as:

- Promote free parking and shuttle with maps and routes:
  - In all advance promotional advertising and brochures for the Auto Auction event;
  - On the City website;
  - On the Russo and Steele event website;
  - Signs and maps at the City Hall shuttle lot for the alternate Edison remote lots (in the event the City Hall lot is full)
  - Signs and maps at the entrances to the beach parking.
  - Signs and maps at or near the remote parking lots themselves.

Other recommended parking measures include:

- Communication and coordination between beach parking personnel and the remote lots to avoid sending beach parkers to a remote lot that is full.

- If needed, coordinate with Edison High School officials to expand the designated shuttle parking area to include additional parking to the north, along Magnolia Street (approximately 100 spaces).

- To minimize the impact to people with City Beach Parking Passes, the applicant and City will work with City and State Beach officials to allow vehicles with a City Beach Parking Pass to park in the State Beach parking lots, subject to parking availability.

SUMMARY

Implementation of a remote parking and shuttle program using the City Hall and Edison facilities on Saturday and Sunday afternoons, in combination with the available parking in the other beach parking lots, would more than offset the temporary loss of 588 parking spaces in Parking Area 1 during the preview and auction portion of the Auto Auction event.

Event organizers will use promotional materials, the internet, and signage and coordination to promote awareness and utilization of the remote lots.

The parking demand generated by the event participants, attendees, and staff will be accommodated by guest parking at the hotel and excess available parking for all other event participants who are not guests of the hotel.

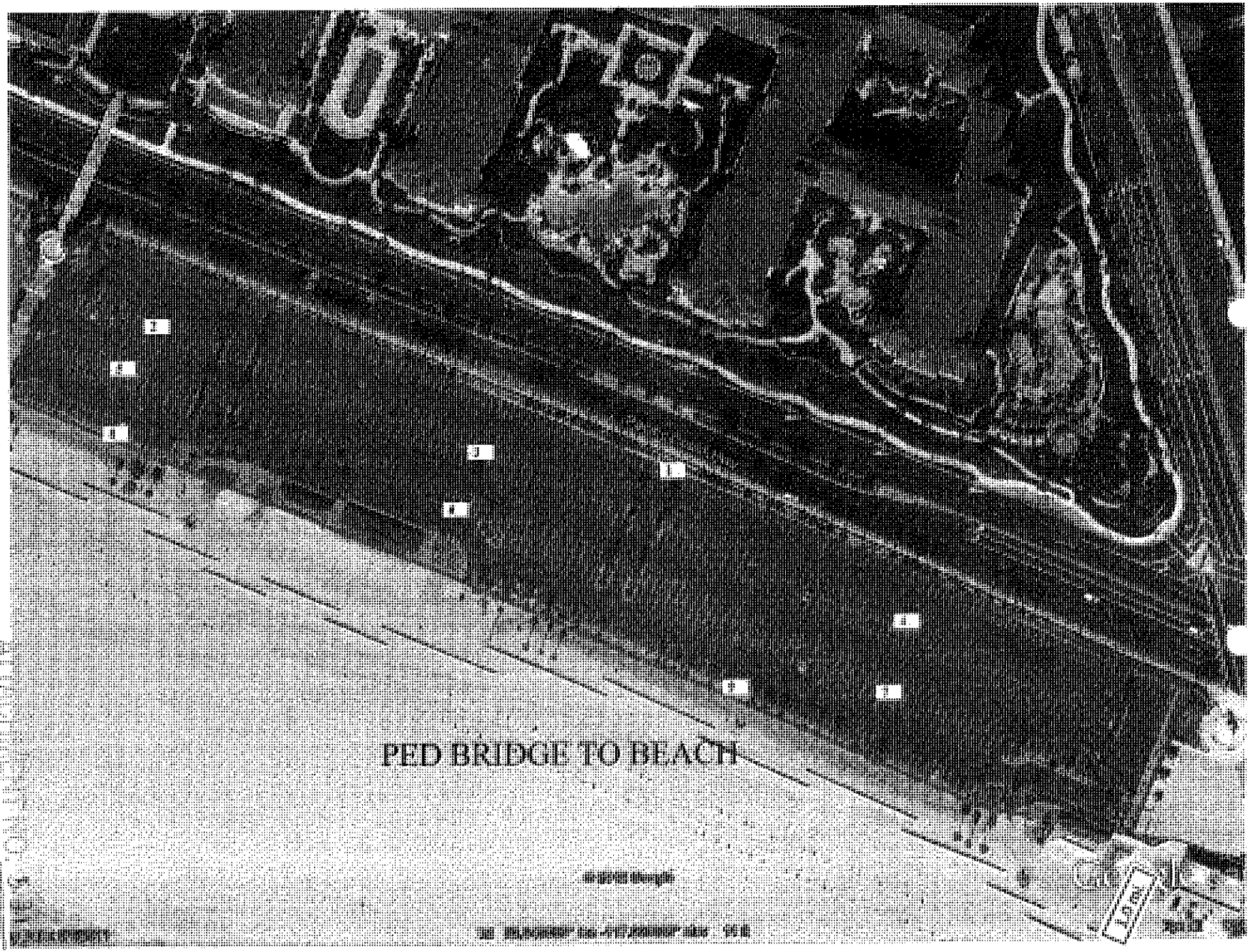
ATTACHMENT A

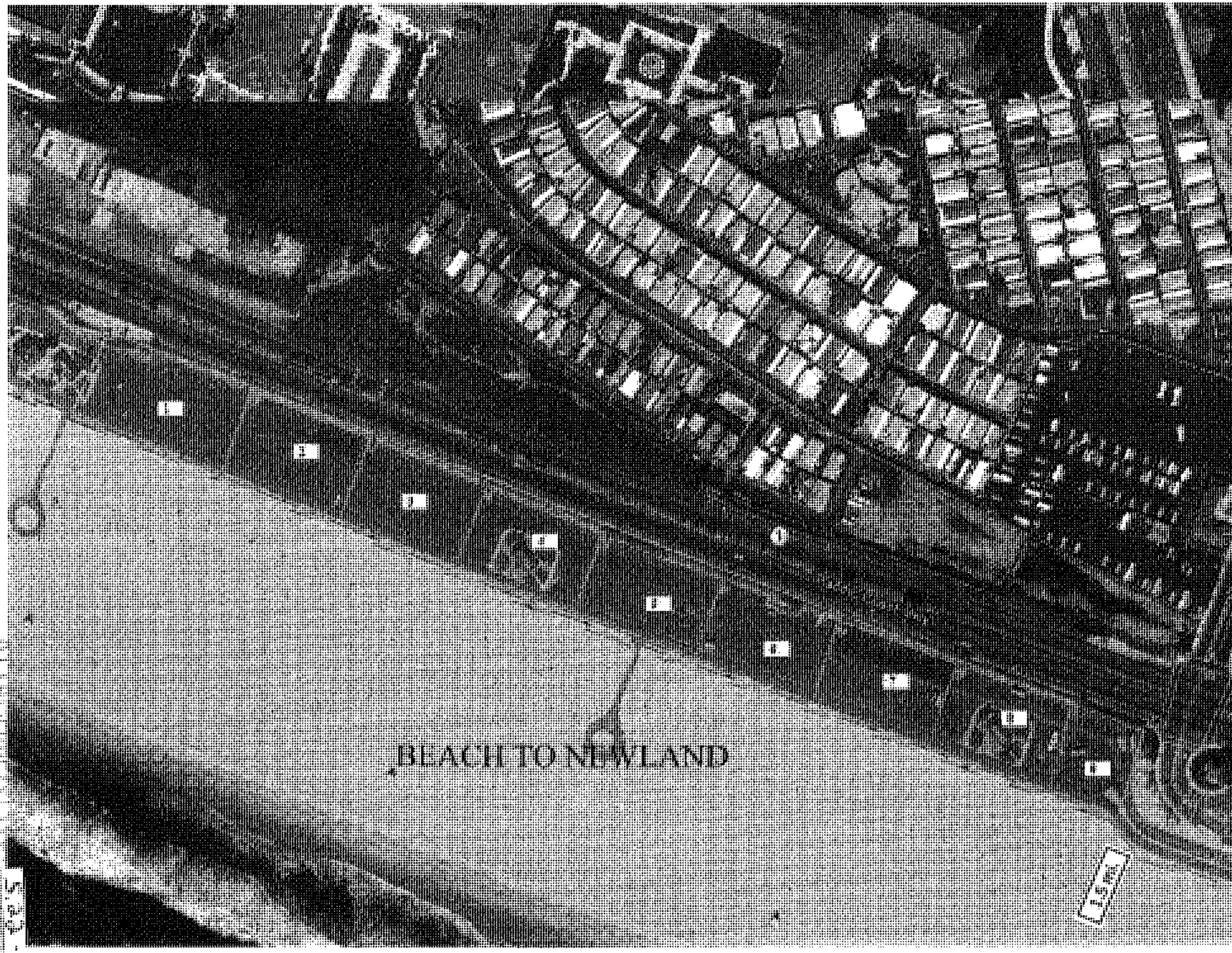
BREAKDOWN OF PARKING AREAS

FOR DATA COLLECTION

ATTACHMENT NO. 5.19

ATTACHMENT NO. 2


PED BRIDGE TO BEACH


BEACH TO NEWLAND


NEWLAND TO MAGNOLIA

Transmission System Engineering (59)

BACKGROUND

The California Environmental Quality Act (CEQA) requires the identification and description of the "Direct and indirect significant effects of the project on the environment." The Application for Certification requires discussion of the "energy resource impacts which may result from the construction or operation of the power plant." For the identification of impacts on the transmission system resources and the indirect or downstream transmission impacts, staff relies on the Phase I and Phase II Interconnection Studies for insuring the interconnecting grid meets the California Independent System Operator (California ISO) reliability standards. The studies analyze the effect of the proposed project on the ability of the transmission network to meet reliability standards. When the studies determine that the project will cause a violation of reliability standards, the potential mitigation or upgrades required to bring the system into compliance are identified. The mitigation measures often include the construction of downstream transmission facilities. CEQA requires the analysis of any downstream facilities for potential indirect impacts of the proposed project. Without a complete Phase I or Phase II Interconnection Study, staff is not able to fulfill the CEQA requirement to identify the indirect effects of the proposed project.

DATA REQUEST

Staff requests a complete Phase I and/or Phase II Interconnection Study of the proposed 939 MW Huntington Beach Energy Project (HBEP) to proceed with the preliminary staff analysis.

59. Provide the California ISO Phase I and/or Phase II Interconnection Study of the proposed 939 MW HBEP to the California ISO control grid. The Study should analyze the system impacts with and without the project during peak and off-peak system conditions, and demonstrate conformance or non-conformance with the utility reliability and planning criteria with the following provisions:

    a. Identify major assumptions in the base cases including imports to the system, major generation and load changes in the system and queue generation.

    b. Analyze the system for N-0, important N-1 and critical N-2 contingency conditions and provide a list of criteria violations in a table showing the loadings before and after adding the new generation.

    c. Analyze Short circuit duties.

    d. Analyze system for Transient Stability and Post-transient voltage conditions under critical N-1 and N-2 contingencies, and provide related plots, switching data and a list for voltage violations in the studies.

    e. Provide a list of contingencies evaluated for each study.

    f. List mitigation measures considered and those selected for all criteria violations.

    g. Provide electronic copies of *.sav and *.drw PSLF files.

    h. Provide power flow diagrams (**MW, % loading & P. U. voltage**) for base cases with and without the project. Power flow diagrams must also be provided for all N-0, N-1 and N-2 studies where overloads or voltage violations appear. Provide the pre and post project diagrams only for an elements largest overload.

Response: This Data Request is similar to the CEC Staff's Transmission System Engineering Data Adequacy Comment 2, which the Applicant responded to in the Data Adequacy Supplement dated August 4, 2012. The Applicant has received no additional information from CAISO regarding the Cluster Study (Phase 1 and Phase II) as it relates to HBEP. Please see the Applicant's Data Adequacy Supplement dated August 4, 2012.

Visual Resources (60–68)

BACKGROUND

Information is needed to augment the information presented in Table 5.13-1 and Figure 2.1-2 of the Application for Certification (AFC). Table 5.13-1 in the Visual Resources section of the AFC shows the approximate dimensions and proposed surface treatments for major project features for the Huntington Beach Energy Project (HBEP). In comparing the information in the table to Figure 2.1-1 in the AFC, "General Arrangement/Site Plan," staff observes that stated dimensions are inconsistent for a few project structures. Staff also notes that no information is provided in Table 5.13-1 stating how many structures are proposed and which ones would be unique to the proposed project. Of the project features listed in Table 5.13-1, seven are listed as "existing." It is not clear if those structures would be replaced by new structures with the same or similar functions or if the structures listed as existing would be retained and refurbished for HBEP.

DATA REQUEST

60. For each project feature listed in Table 5.13-1, please indicate the quantity and whether it would be erected in both power blocks, the existing electrical switchyard, or in a common area. Although Figure 2.1-1 provides some information (e.g., three combustion turbines in each power block), it does not clearly provide all of the information needed to evaluate the proposed changes to visual resources conditions. (For example, based on Figure 2.1-1, it is not clear how many 135-foot transmission structures would be constructed.)

Response: A revised version of Table 5.13-1 (Table 5.13-1R1) is attached. It has been reformatted to add columns in which identification is made of the quantity of each feature that will be located in each power block and elsewhere on the site.

DATA REQUEST

61. For structures listed in Table 5.13-1 as "existing," please note whether those structures are existing project features that would be retained and refurbished under the proposed project.

Response: Each of the structures listed on the table identified as "existing" will be retained and integrated into the operation of the proposed project. In Table 5.13-1R1, these structures have been placed in a separate section at the end of the list.

DATA REQUEST

62. Table 5.13-1 lists the "CO_2 F/F (LP tank)" as 55 feet long and 40 feet wide. That feature is listed in Figure 2.1-1 as 20 feet long and 15 feet wide. Please clarify the discrepancy.

Response: The dimensions of this feature have been corrected in Table 5.13-1R1.

DATA REQUEST

63. Table 5.13-1 and Figure 2.1-1 list the proposed air-cooled condenser (ACC) as 209 feet tall. Figure 2.1-2a shows the ACC as 104 feet tall. Based on staff's review of Figure 2.1-2a and the visual simulations in the AFC, the ACC is approximately the same height as the combustion gas turbine. Please correct the height dimension for the ACC.

Response: The correct height of the ACCs (104 feet) is indicated in Table 5.13-1R1.

DATA REQUEST

64. Table 5.13-1 lists the "stack" as 65 feet tall. Figure 2.1-1 does not list stack height. Under subsection 5.13.5.4 of the AFC, it states that the stacks for HBEP Blocks 1 and 2 would be approximately 120 feet tall. Please correct and clarify the discrepancy.

Response: The correct height of the stacks (120 feet) is indicated in Table 5.13-1R1.

DATA REQUEST

65. Table 5.13-1 lists the "new control/administration building" and the "new maintenance/warehouse building." On Figure 2.1-1, those features are labeled, "future." Please clarify when those structures would be constructed relative to the proposed construction schedules for Power Blocks 1 and 2.

Response: Construction of the new control/administration building and the new maintenance/warehouse building is scheduled to begin after the commercial operation date (COD) for HBEP Block 2 in the second quarter of 2020 and before December 30, 2020.

TABLE 5.13-1R1
Approximate Dimensions and Colors, Materials, and Finishes of the Major Project Features

Feature	Length (feet)	Width (feet)	Height (feet)	Diameter (feet)	Block 1 (No.)	Block 2 (No.)	Elsewhere Onsite (No.)	Color	Materials	Finish
Combustion Gas Turbine (CGT)	89	32	34	—	3	3		Flat Gray	Steel	Flat/untextured
CGT Generator Enclosure	16	39	34	—	3	3		Flat Gray	Flat Mild Steel Plate	Flat/untextured
CGT/HRSG Transition Duct	14	32	31	—	3	3		Flat Gray	A-36 Steel Plate	Flat/untextured
CGT Enclosure	41	32	25	—	3	3		Flat Gray	Flat Mild Steel Plate	Flat/untextured
Fuel Gas Skid	20	12	15	—	3	3		Flat Gray	Struct. Steel shape	Flat/untextured
CGT Control/Lube Oil Skid	50	14.5	--	—	3	3		Flat Gray	Flat Mild Steel Plate	Flat/untextured
STG Step UP Transformer	35	23	15	—	1	1		Flat Gray	Custom Steel Shape	Flat/untextured
Turbine Cooling Air Skid	10	8	—	—	3	3		Flat Gray	Struct. Steel Shape	Flat/untextured
CGT Step-up Transformer	35	23	9	—	3	3		Flat Gray	Custom Steel Shape	Flat/untextured
CO_2 F/F (LP tank)	15	20	15	—	3	3		Stark White	A-106 Pressure Vessel	Flat/untextured
STG Enclosure	59	55	40	—	1	1		Flat Gray	Flat Mild Steel Plate	Flat/untextured
HRSG	77	44	92	—	3	3		Flat Gray	A-36 Steel Plate	Flat/untextured
Stack	—	—	120	18	3	3		Flat Gray	A-36 Steel Plate	Flat/untextured
CGT Air Intake System	40	17	38	—	3	3		Flat Gray	Flat Mild Steel Plate	Flat/untextured
Control Package	40	20	15	—	1	1		Flat Gray	Flat Mild Steel Plate	Flat/untextured
Electrical Package	40	20	15	—	3	3		Flat Gray	Flat Mild Steel Plate	Flat/untextured

TABLE 5.13-1R1

Approximate Dimensions and Colors, Materials, and Finishes of the Major Project Features

Feature	Length (feet)	Width (feet)	Height (feet)	Diameter (feet)	Block 1 (No.)	Block 2 (No.)	Elsewhere Onsite (No.)	Color	Materials	Finish
SFC Transformer	11	8	10		3	3		Flat Gray	Custom Steel Shape	Flat/untextured
SEC Transformer	11	8	10		3	3		Flat Gray	Custom Steel Shape	Flat/untextured
Unit Transformer	9	11	9		2	2		Flat Gray	Custom Steel Shape	Flat/untextured
Generator Main Circuit Breaker	28	20	—	—	4	4		Flat Gray	Flat Mild Steel Plate	Flat/untextured
Fuel Gas Compressor Building	144	75	25	—			1	Flat Gray	Ribbed Sheet Steel	Flat/untextured
Boiler Feed Pump Enclosure	30	30	15	—	1	1		Flat Gray	Ribbed Sheet Steel	Flat/untextured
CEMS	15	15	10	—	1	1		Flat Gray	Ribbed Sheet Steel	Flat/untextured
BOP Fin Fan Cooler	86	48	15	—	1	1		Flat Gray	A-36 Steel shapes	Flat/untextured
STG Control/Lube Oil Skid	38	17	—	—	1	1		Flat Gray	Flat Mild Steel Plate	Flat/untextured
Fuel Gas Conditioning Skid	71.5	34	—	—	1	1		Yellow	Steel pipe and supp.	Flat/untextured
Relocated Gas Metering station	108	82	—	—			1	Yellow	Steel pipe and supp.	Flat/untextured
Air-cooled Condenser	209	127	104	—	1	1		Flat Gray	A-36 Steel shapes	Flat/untextured
New Control/Admin Building	100	72	40	—			1	Tan	Ribbed Sheet Steel	Flat/untextured
New Maintenance/ Warehouse Building	72	60	35	—			1	Tan	Ribbed Sheet Steel	Flat/untextured
Ammonia Tank and Containment	18	38	14	—			1	Stark White	A-106 Pressure Vessel	Flat/untextured
Ammonia Unloading	56	12	—	—			1			
Transformer Wall	53	42	30	—	4	4		Untinted	Concrete	Flat/untextured
Transmission Structure	85 to 135	—	—	—	3	2	5	Flat Gray	Steel	Flat/untextured
Transmission Dead-End Structures	75				3	3		Flat Gray	Steel	Flat/untextured
Existing Features to be Retained										
Existing Admin. Building	81	57	11	—			1	Tan		Flat/untextured
Existing Shops and Warehouse	214	115	17	—			1	Tan		Flat/untextured
Existing RO/EDI Building	113	51	30	—			1	Flat Gray	Ribbed Sheet Steel	Flat/untextured
Existing Service/Fire Water Tank (rescue)	—	—	48	40			1	Flat Gray	A-36 Steel	Flat/untextured
Existing Fire Water Enclosure	22	30	12	—			1	Flat Gray	Ribbed Sheet Steel	Flat/untextured
Existing Distilled Water Tanks (2)	—	—	32	28			2	Flat Gray	A-36 Steel	Flat/untextured
Existing Brine Tank	—	—	22	24			1	Flat Gray		Flat/untextured

BACKGROUND

Subsection 5.13.2.3.5 of the AFC, "Lighting," briefly and generally refers to the "limited times during the construction/commissioning period when the project site may appear as a brightly lit area as seen in close view and from distant hillside residential areas." Staff observes that the proposed construction periods for HBEP would begin in late 2014 with the demolition of Unit 5 and continue through construction of Power Blocks 1 and 2, which would finish in mid 2020. Demolition and removal of Units 1 and 2 would begin in late 2020 and finish by mid to late 2022. Construction of HBEP could occur continuously over approximately 8 years. Staff presumes that much of the construction work would require tall, lighted cranes and other support structures. Construction could extend to several hours after dark during 4–5 months of the year.

Subsection 5.13.2.4.6 of the AFC, "Light and Glare," states that "[t]he lighting associated with HBEP will not substantially exceed, and may represent a slight decrease in the lighting used on the existing Huntington Beach Generating Station." It is not clear from the brief discussion and analysis how lighting could potentially be decreased with construction and operation of the proposed project.

DATA REQUEST

66. Please provide information on the expected types and heights of project construction equipment, including cranes and tall scaffolding, etc. Provide approximate time periods (e.g., the number of continuous months during a construction year) when tall lighted structures would be used at the site. Please indicate what structures would require continuous lighting during project construction. Please describe any time periods when construction activities would be less visible.

Response: As discussed in Section 2.3.1 of the AFC Project Description, construction of HBEP will most typically take place between 6 a.m. and 6 p.m., Monday through Saturday, but there may be times when additional hours may be necessary to maintain critical schedules or to complete critical construction activities such as concrete pours. During the construction period, there will be mobile cranes and derrick cranes on the site. In the event that there are heavy lifts that extend into the evening, the derrick cranes would be lit. Such lifts that extend into the hours of darkness would be infrequent, and would most likely be limited to HRSG erection only.

Given the construction work schedule, it is unlikely that scaffolding will need to be lit at night to support construction activities. However, there may be a safety requirement for some limited lighting of any scaffolding (for fire watch, for example), but this would be limited to the brief periods when the scaffolding would be up. Except for the periods when there is scaffolding on the site that may require minimal safety lighting, there will be no times during the construction period when there would be continuous lighting of tall structures.

DATA REQUEST

67. Please provide additional analysis to substantiate how lighting could potentially be decreased with construction and operation of HBEP.

Response: At present, the existing Huntington Beach Generating Station Units 1–4 are illuminated at night when they are operating. The lighting associated with the existing Huntington Beach Generating Station's units is substantial. Lighting includes red aircraft safety warning beacons on the tops of the existing 207-foot-tall stacks, and unshielded exterior lighting on the stack platforms, on the scaffolding on the power block exteriors, and on the exterior staircases. With the replacement of the existing Huntington Beach Generating Station with the HBEP, the amount of lighting visible on the site will be significantly decreased from current conditions.

Because the new 120-foot-tall stacks for HBEP will be well under the 200-foot threshold at which the FAA requires aviation safety beacons, the stacks will not have red lights attached to their tops. The HBEP's power block equipment will be shorter and less massive than that of the existing Huntington Beach Generating Station and will require considerably less lighting. Instead of having lighting at several levels on their exteriors, the HBEP HRSGs

will have lighting only around the platform at the top. In addition, the lighting that will be used on the exterior of the HBEP will differ in design from that used on the existing Huntington Beach Generating Station in that it will be fully shielded to direct the light to the areas where it is required for safety and operations and to prevent offsite light spill and glare.

Because of the shorter heights and reduced mass of the HBEP structures and the more limited and highly shielded nature of the lighting, the illuminated areas visible on the site will be smaller and more subdued than those now seen in views of the existing Huntington Beach Generating Station. In addition, the overall amount of nighttime lighting seen on the site from HBEP may also be reduced by changes in operating practices. The HBEP will be illuminated only during the nighttime hours when it is in operation. Because the HPEP will be a combined-cycle facility that can be readily switched on and off, it has the potential to be turned off more during the night than the existing Huntington Beach Generating Station, which sometimes needs to be kept on at a low level of operation at nighttime in order to be ready to be ramped up to meet power demand requirements the next day.

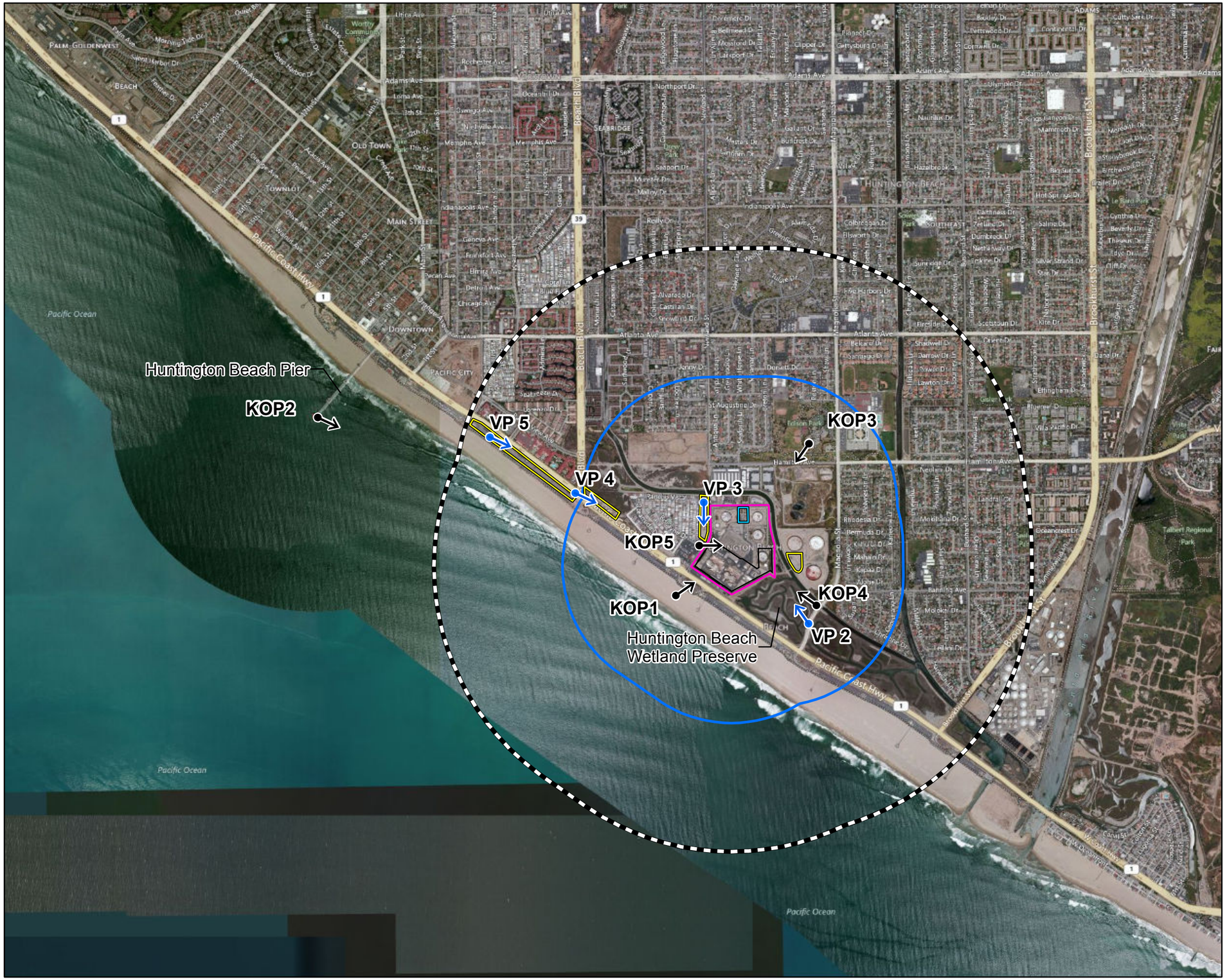
BACKGROUND

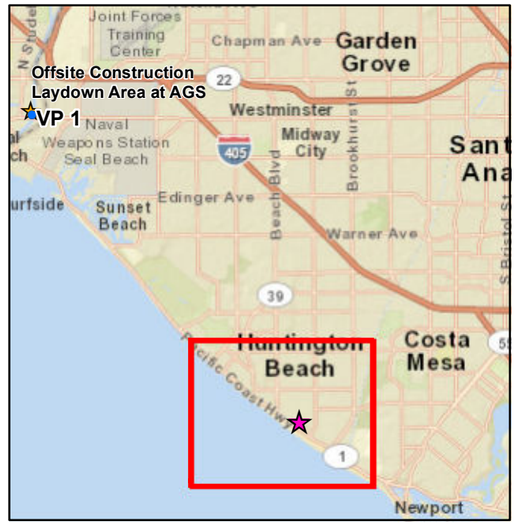
The visual resources analysis in the AFC describes five key observation points (KOPs), which are mapped on Figures 5.13-1a and 5.13-1b of the AFC. In addition to the KOPs, these two figures show four other viewpoints, which are labeled as VP 1 through VP 4. Figures 5.13-2, 5.13-3, and 5.13-4 provide five photographs of off-site construction laydown and parking areas. It is not clear if the photographs correspond to the viewpoints on the two figures.

DATA REQUEST

68. Please provide information on the meaning of the four viewpoints on Figures 5.13-1a and 5.13-1b. Please clarify whether and how those viewpoints correspond to the photographs of off-site construction laydown and parking areas.

Response: See the attached revised figures. Figures 5.13-1aR1 and 5.13-1bR1 indicate the correct locations of Viewpoints 1 through 5. Because Figure 5.13-1aR1 depicts the locations of each of the proposed offsite parking areas, the relationship between the viewpoints and these areas can be readily identified. The captions on Figures 5.13-2R1, 5.13-3R1, and 5.13-4R1 now include a reference to the viewpoint number used to identify the location of the viewpoint on Figures 5.13-1aR1 and 5.13-1bR1.





Legend

- Key Observation Point (KOP)
- Viewpoint (VP)
- AES Huntington Beach Generating Station
- AES Huntington Beach Energy Project
- Offsite Construction Parking
- Onsite Construction Parking
- 0.5-Mile Radius From Project Site
- 1-Mile Radius From Project Site

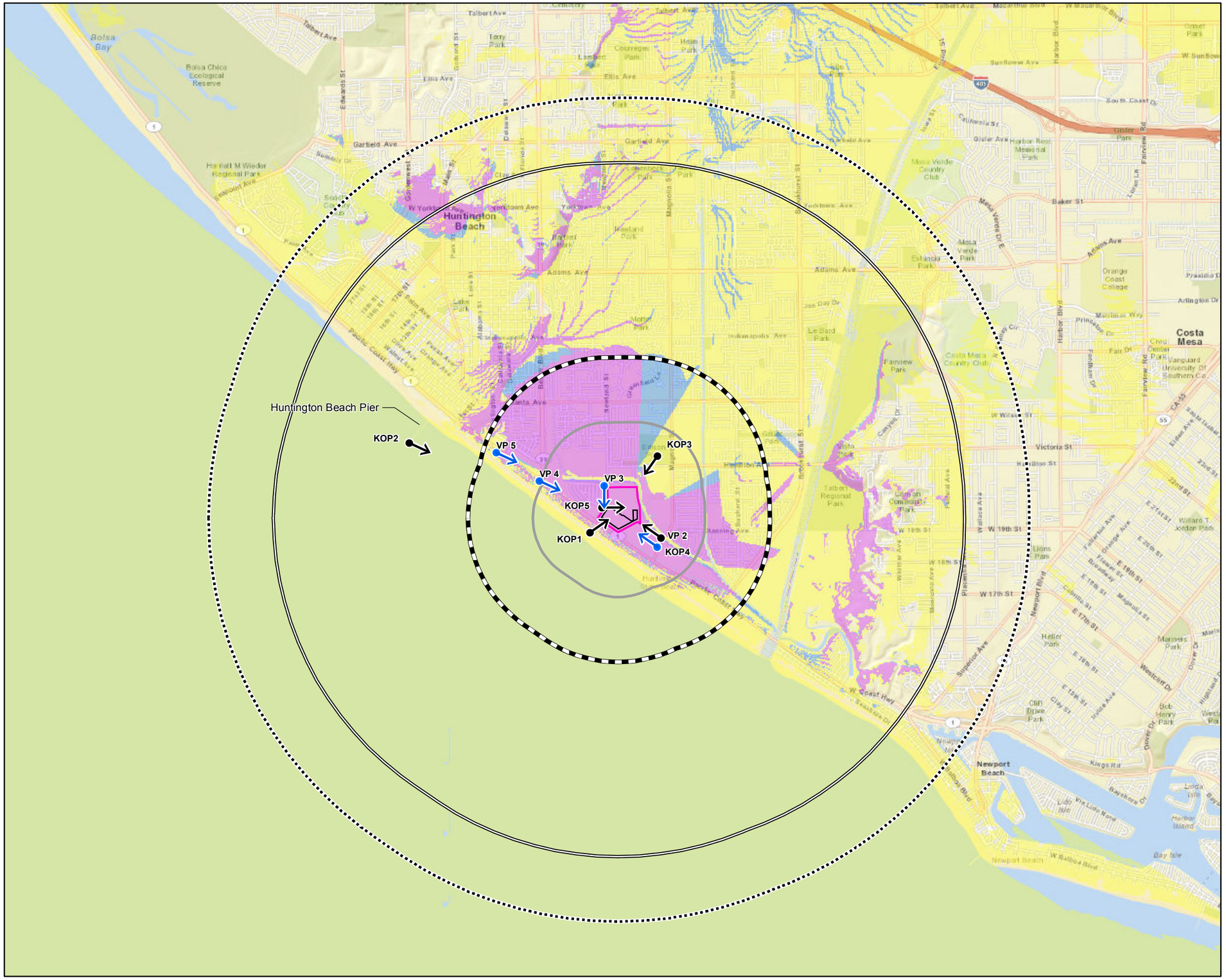
Imagery Source:
USGS 7.5 Minute Quadrangle
http://goto.arcgisonline.com/maps/USA_Topo_Maps

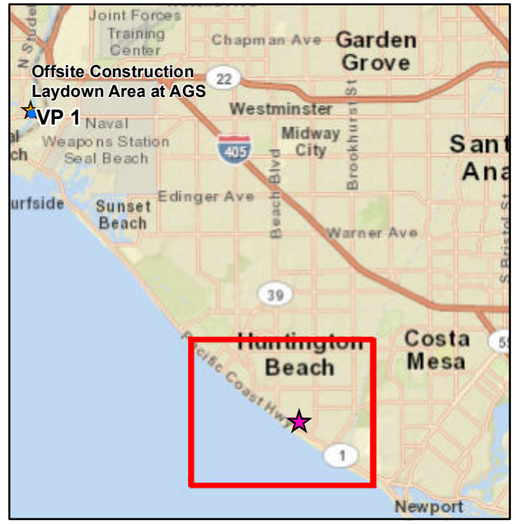
N

0 2,000 4,000
Feet

1 in = 2,000 ft

FIGURE 5.13-1a R1
Topographical Map of Project Area with KOP Locations
AES Huntington Beach Energy Project
Huntington Beach, California





Legend

- Key Observation Point (KOP)
- Viewpoint (VP)
- AES Huntington Beach Generating Station
- AES Huntington Beach Energy Project
- 0.5-Mile Radius From Project Site
- 1.0-Mile Radius From Project Site
- 2.5-Mile Radius From Project Site
- 3.0-Mile Radius From Project Site

Value

- No stacks will be visible
- 1 or 2 Stacks
- 3 or 4 Stacks
- 5 or 6 Stacks

Notes:
Viewshed based on 120 foot tall stacks and USGS 10 Meter DEM.

0 0.75 1.5
Miles

1 inch equals 0.75 miles

N

FIGURE 5.13-1b R1
Project Viewshed

AES Huntington Beach Energy Project
Huntington Beach, California

CH2MHILL

Viewpoint 1. View of construction laydown area at the southern edge of the Alamitos Generating Station.

Viewpoint 2. View from Magnolia Street looking northwest toward the Plain American Tank Farm. A 1.9 acre area behind the fence in front of the two closest tanks will be used for offsite parking during the construction period.

FIGURE 5.13-2 R1
Offsite Construction Parking Areas

AES Huntington Beach Energy Project
Huntington Beach, California

Viewpoint 3. View from Newland Street looking south toward Huntington By-The Sea RV Park. The vacant land between the RV park and the street will be used for offsite parking during the construction period.

Viewpoint 4. View from southwest corner of Pacific Coast Highway and Beach Boulevard, looking toward project site. The vacant along the opposite side of Pacific Coast Highway will be used for offsite parking during the construction period.

FIGURE 5.13-3 R1
Offsite Construction Parking Areas
AES Huntington Beach Energy Project
Huntington Beach, California

Viewpoint 5. View from City of Huntington Beach Shore Parking, looking southeast. This existing paved parking area will be leased from the City of Huntington Beach for use for offsite parking during the construction period.

FIGURE 5.13-4 R1
Offsite Construction Laydown Area

AES Huntington Beach Energy Project
Huntington Beach, California

Waste Management (69–71)

BACKGROUND

The Huntington Beach Energy Project is proposed to be built on a site currently occupied by the AES Huntington Beach Generation Station. Demolition of existing facilities for the new project development will generate significant hazardous wastes including asbestos debris, oily debris, heavy metal dust, paint thinners and solvents and used lubricating oil. In addition, the Huntington Beach Generating Station has plugged oil and gas wells, aboveground storage tanks, degreasing pits, two retention basins and five generating units that are sources of contamination. The extent of contamination is not currently defined. The site will need soil sampling, characterization, and possibly remediation which will require coordination with the Energy Commission, the Department of Toxic Substance Control and possibly the Regional Water Quality Control Board. Staff experience suggests that coordination with these agencies to ensure the site is appropriately characterized and remediated could impact the project schedule.

DATA REQUEST

69. What type of discussions, investigations and/or remediation activities has the applicant entered into with DTSC concerning potential contamination of various areas of the generating station (i.e. aboveground storage tanks, degreasing pits, number 4 auxiliary transformer area, primary fuel pumping area, etc.)?

Response: Through discussions with the previous owner of the HBEP site (Southern California Edison [SCE]), review of existing records regarding contamination at the existing Huntington Beach Generating Station, and conducting a Phase 1 Environmental Site Assessment, the Applicant has identified the potential contamination issues that are likely to arise during demolition of existing Huntington Beach Generating Stations Units 1, 2, and 5, and construction of the HBEP. The Applicant has consulted with DTSC regarding potential contamination and needed cleanup efforts at the existing Huntington Beach Generating Station, starting with an initial discussion held on October 27, 2010, and continuing to the present day, specifically concerning the previous owner's efforts to identify, quantify and remediate past contamination issues on the existing Huntington Beach Generating Station site.

As part of the due diligence being conducted in anticipation of obtaining funding for the HBEP, the Applicant is currently identifying and prioritizing the individual tasks needed to address potential contamination to ensure the work can be accomplished in time to meet the Applicant's schedule for construction and operation of HBEP, which in turn is important to obtain a power purchase contract for the facility, and obtain financing for cleanup and construction activities. The Applicant is working with DTSC Project Manager Steven Rounds in the Chatsworth office and Engineering Geologist Greg Neal regarding coordination of AES's remediation efforts with that of SCE. AES will work with DTSC, the CEC and other regulatory agencies as appropriate throughout the planning process to ensure the agencies are informed of known and discovered issues, and are involved in plans for conducting soil sampling, characterization and possibly remediation of known and discovered contamination. A Construction Waste Management Plan will be prepared to describe procedures that will be used during demolition and construction activities and will be submitted to the CEC CPM.

DTSC is currently supervising the previous site owner's (SCE) efforts to address two known contamination issues at the existing Huntington Beach Generating Station regarding alleged improper storage of hazardous waste in a stormwater retention basin and a boiler chemical cleaning basin. This work is being done in accordance with a settlement agreement between SCE and DTSC regarding the alleged improper storage of hazardous waste at seven power plants in the Los Angeles basin owned by the previous owner of the existing Huntington Beach Generating Stations, SCE. SCE is currently working with DTSC to identify, quantify and clean up any contamination of soils and groundwater that may have been caused by past storing of hazardous waste materials in the two

basins. SCE is currently monitoring groundwater via monitoring wells, and is conducting sampling borings on the existing Huntington Beach Generating Station to assess previous contamination at the site. SCE is required to produce a monitoring plan and basin closure plan for submittal to and approval by DTSC. The closure plan will be based on at least 1 years of monitoring of groundwater beneath the existing Huntington Beach Generating Station.

DATA REQUEST

70. If cleanup of areas with high concentrations of contamination is required, how long would remediation take and would the remediation be completed prior to the Huntington Beach Energy Project construction?

Response: As noted in the response to Data Request 69, the Applicant is currently prioritizing the tasks needed to complete the needed remediation of known contamination issues at the HBEP site, and is confident that any remediation required to complete construction of HBEP will be accomplished within the planned schedule for construction and demolition activities associated with the Project. HBEP Block 1 will be constructed primarily on the site of the existing Huntington Beach Generating Stations Unit 5 and on the site of two existing AST's just to the north of Unit 5. HBEP Block 2 will be constructed on the site of the currently operating Units 3 and 4 of the Huntington Beach Generating Station. Existing known and discovered contamination at these sites will be remediated prior to construction of the new facilities for HBEP. Remediation of areas is not needed for construction of the HBEP, and remediation may continue during and after construction of the new facilities, with SCE conducting this remediation under the supervision of DTSC.

Because of the existing structures at the Huntington Beach Generating Station, it is not currently possible to adequately assess the extent of contamination under these structures, though presence of contaminants is assumed. ASTs previously associated with site operations are known to have shallow soil with petroleum hydrocarbons underneath, for example, and groundwater underlying the existing Huntington Beach Generating Station site is known to be impacted by metals, volatile organic compounds, and 1,4-dioxane. Several pipelines are known to exist under the sites, though exact locations and potential leakage are unknown. Also, several fuel oil spills are known to have occurred during past operations; even though cleanup was performed by SCE at the time of many if not all of these spills, it is reasonable to assume that residual contamination exists and may not be revealed until equipment is decommissioned and removed. Therefore, the HBEP construction schedule was set to accommodate needed cleanup of both known and undiscovered contamination. The plans for remediation efforts will be submitted to DTSC, the CEC Construction Compliance Manager (CPM)and other regulatory agencies as appropriate for review and approval.

DATA REQUEST

71. Please provide an estimate of the amount of asbestos that will be disposed of from the demolition of the HBGS project.

Response: An inadvertent error was made in Tables 5.14-1 and 5.14-2 in the Waste Management Section of the AFC for HBEP. The estimated quantity of asbestos waste to be disposed of during demolition of the existing Huntington Beach Generating Station as part of HBEP is anticipated to be a maximum of 500 tons for existing Units 1 and 2, and a maximum of 200 tons for existing Unit 5 (Unit 5 has been decommissioned for several years and is no longer an operating unit). Although not part of the HBEP, demolition of Units 3 and 4 would generate a maximum of 500 tons of asbestos as well, for a cumulative total of approximately 1,200 tons. Further detail regarding asbestos abatement measures is described in Applicant's response to Data Response -37.

Worker Safety and Fire Protection (72)

BACKGROUND

Huntington Beach Energy Project (HBEP) will add a large scale industrial facility into the jurisdiction of the City of Huntington Beach Fire Department (HBFD). First responder and fire protection services will be required for the project and will be provided by HBFD Fire Station 4. Construction and operation of the project will increase the assets that the fire department must protect and potentially increase call frequency for emergency first aid and medical services. Energy Commission staff requires assurance that after applying any proposed mitigations, the fire department's increased responsibility will not adversely affect to a significant extent its ability to continue providing service to the public.

DATA REQUEST

72. Please provide a letter, email, or record of conversation with HBFD that confirms the absence of any expected impacts on the local fire district resulting from construction and operation of the proposed project, or indentifies impacts and the needed mitigation to address such impacts to the satisfaction of the HBFD.

    Or, in the absence of such letter or communication, please provide a Fire and Emergency Services Risk Assessment and a Fire Protection and Emergency Services Needs Assessment for the construction and operation of the project that provides an objective estimate of both equipment and staffing shortfalls (if any) and the associated recommended mitigations (if any) that would be required by HBFD to maintain its current level of readiness to respond to the public.

    The Fire and Emergency Services Risk Assessment and a Fire Protection and Emergency Services Needs Assessment should be considerate of the guidance provided by NFPA 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments and by NFPA 551: Guide for the Evaluation of Fire Risk Assessments. The Fire Protection and Emergency Services Needs Assessment should address emergency fire and medical response equipment, staffing, and location needs, while the Risk Assessment should be used to establish the risk (chances) of significant impacts occurring. The Fire Protection and Emergency Services Needs Assessment and Risk Assessment should evaluate the following: (a) the risk of impact on the local population that could result from potential unmitigated impacts on local fire protection and emergency services (i.e. "drawdown" of emergency response resources, extended response times, etc.) and (b) recommend an amount of funding that should be provided and used to mitigate any identified impacts on local fire protection and emergency medical response services.

Response: A record of conversation between CH2M HILL and the Huntington Beach Fire Department is provided as Attachment DR72-1. The Huntington Beach Fire Department has indicated that construction and operation of the HBEP will not have an impact on fire department services and their ability to respond. Therefore a Fire and Emergency Service Risk Assessment and Fire Protection and Emergency Service Needs Assessment is not required.

Attachment DR72-1
Record of Conversation with Huntington Beach Fire Department

CH2MHILL TELEPHONE CONVERSATION RECORD

Call To: Deputy Fire Marshall Huntington Beach Fire Dept.

Phone No.: 714-608-5946 **Date:** October 8, 2012

Call From: Fatuma Yusuf **Time:** 10:40 AM

Message Taken By: Fatuma Yusuf

Subject: Impact of HBEP on HBFD services

I called to confirm information previously reported to me but not recorded by Ashraf Shaqadan of CH2M HILL regarding the conclusion that the HBEP would not place undue burden on HBFD's services. I reminided Deputy Marshall Culhane about his previous converstations with Ashraf and informed him that Ashraf had left the firm and that I was confirming the information he had shared with Ashraf. Deputy Fire Marshall Culhane told me that the construction and operation of the HBEP should not affect the ability of the HBFD to continue to provide service to its existing service area since HBFD had many stations from which to respond to service calls.

Bob Culhane
Deputy Fire Marshall
Administrative Office
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California Coastal Commission (CCC-1–CCC-5)

DATA REQUEST

CCC-1: We expect to obtain information about the proposed project's potential wetland effects as part of an ongoing investigation into clearing and grading in an area of the AES site with wetland characteristics. We will provide any relevant information obtained later in the AFC review.

Response: This is a statement from the California Coastal Commission and is not a Data Request; therefore, no response is necessary or provided by the Applicant.

DATA REQUEST

CCC-2: We concur with the data requests identified in the September 10, 2012, letter from the U.S. Fish and Wildlife Service, which involve potential biological resource impacts to nearby species due to several aspects of project construction and operations—e.g., noise, dust, lighting, etc.—and we incorporate those requests by reference.

Response: Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's October 22, 2012, correspondence to the Siting Committee.

DATA REQUEST

CCC-3: The power plant site has several known geologic hazards, several of which were recently identified in the 2010 Supplemental EIR for the proposed Poseidon desalination facility at the site. According to the AFC application and EIR, the site has a fault running directly beneath it, has the potential for surface rupture, could experience ground motions greater than 1g, has corrosive soils, and could experience liquefaction, lateral spread, and subsidence resulting from seismic events. The site is also within a tsunami runup zone that extends some distance inland. Any of these site characteristics could affect project feasibility, require project components be relocated, or could result in significant adverse effects on coastal resources. We therefore request that AES provide detailed, site specific information describing the type and extent of this suite of geologic hazards and the mitigation measures it will include as part of the project to avoid and minimize the adverse effects of these hazards. Information provided should also describe how these hazards affect the proposed layout of project components and any feasible alternative layouts that might avoid or reduce potential impacts of these hazards. The studies conducted and information provided should be consistent with that we requested for the proposed desalination project, as described in our July 13, 2012 letter to Poseidon that we attached to our previous AFC review correspondence.

Response: Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's October 22, 2012, correspondence to the Siting Committee. Notwithstanding such objections, Applicant provides the following response.

As noted in Section 5.4 of the AFC (see Section 5.4.1.2), further analysis and additional geotechnical investigation will be accomplished as part of the detailed engineering and design of the project. Section 5.4 of the AFC contains sufficient information to complete a geologic hazards analysis and demonstrate HBEP's compliance with LORS.

Applicant wishes to again clarify that the Poseidon Desalination Project (PDP) is an independent and separate project from HBEP, proposed by a different company than the Applicant.[15] A few key points to understand about the PDP and the HBEP:

- Although the PDP and HBEP are projects independent from each other, it is possible that both projects might receive the requisite approvals, and, thus, both projects might end up being constructed and/or become operational.
- The PDP will purchase or lease land within the larger existing Huntington Beach Generating Station site from a different AES entity than the AES entity developing HBEP. The land sale/lease agreement between PDP and that AES entity will be one of business and at arm's length. Thus, there will be no partnership or involvement in the development of the PDP by an AES entity other than as landlord or seller. The involvement between Applicant and PDP is limited to the consideration of easements for PDP access on the HBEP site and shared use of an existing ocean outfall; however, such an agreement would have no affect on the construction or operation of HBEP.
- The PDP will have to obtain and have its own permits including any necessary permits for operation of ocean water intake and discharge through the existing pipelines that currently provide cooling water for the existing Huntington Beach Generating Station.
- The PDP will have to purchase its electrical power, like any other user, from SCE.
- The expected common facilities to the two projects are: the existing outfall associated with the existing Huntington Beach Generating Station to discharge water; shared emergency and property access roads; and an easement through the HBEP site for PDP's ocean water intake and discharge pipes will be provided. It should be noted that PDP's proposed discharge to the existing and shared outfall would be more than 1,400 times the volume than the discharge to the existing outfall proposed as part of HBEP. (See AFC Section 5.15.3 [p. 5.15-19].)
- The PDP is allowed use of the existing intake and outfall via a separate agreement (lease) with the State Lands Commission and allowed use of the existing outfall as permitted by a National Pollutant Discharge Elimination System Permit issued to PDP by the Santa Ana Regional Water Quality Control Board.
- Although PDP will use the existing intake facilities to draw ocean water into its desalination process, HBEP will not use ocean water or the existing intake facilities nor will the HBEP use any effluent from PDP.
- Applicant has not proposed the use of water produced by PDP for HBEP; HBEP will use potable water as discussed in Section 5.15 of the AFC.

DATA REQUEST

CCC-4: The AFC application briefly mentions the desalination facility being proposed within the power plant boundary, but does not include sufficient information about likely or potential cumulative impacts that could occur during concurrent construction and operation of the power plant and desalination projects, as well as another project—construction of a City of Huntington Beach reservoir—that is proposed for the site. The combined project schedules, locations of project components, and interactions among the three proposals could result in substantial cumulative impacts, which need to be identified and assessed during the AFC process. For example, the power plant project proposes to use up to several hundred offsite public parking spaces during the several years of project construction, and use of these spaces would adversely affect public access to the shoreline. However, if areas within the power plant site now set aside for the desalination facility or reservoir are available

[15] Applicant does not make any claims as to the accuracy of information provided in the PDP permitting proceedings.

during all or part of the power plant construction, the adverse public access effects associated with the proposed offsite parking could largely be eliminated. We request that the applicant provide detailed proposed layouts and schedules for the three proposed projects and identify potential modifications to those layouts and schedules that could avoid or reduce potential individual and cumulative impacts to coastal resources, including impacts to biological resources, public access, and those associated with geologic hazards.

Response: Applicant reiterates and incorporates by reference its objections to this Data Request, as set forth in Applicant's October 22, 2012, correspondence to the Siting Committee. Notwithstanding such objections, Applicant provides the following response:

As discussed in Section 2.0 of the HBEP AFC (and in each section of the AFC as it relates to specific HBEP impacts and cumulative impacts), the construction of the HBEP will require the removal of existing Huntington Beach Generating Station Units (1, 2, and 5) during the construction process. The demolition of Unit 5, scheduled to occur between the 4th quarter of 2014 and the end of 2015, provides the space for the construction of HBEP Block 1. Construction of Blocks 1 and 2 are each expected to take approximately 42 and 30 months, with Block 1 construction scheduled to occur between the 1st quarter of 2015 through the 2nd quarter of 2018, and Block 2 construction scheduled to occur between the 1st quarter of 2018 through 2nd quarter of 2020. Removal/demolition of existing Huntington Beach Generating Station Units 1 and 2 is scheduled to occur between the 4th quarter of 2020 through the 3rd quarter of 2022. See AFC Figure 1.1-3 for the space available for the HBEP.

Existing Huntington Beach Generating Station Units 3 and 4 were licensed through the CEC (00-AFC-13C) and demolition of these units is authorized under that license and will proceed irrespective of the HBEP. Therefore, demolition of existing Huntington Beach Generating Station Units 3 and 4 is not part of the HBEP project definition. However, to ensure a comprehensive review of potential project impacts, the demolition of existing Huntington Beach Generating Station Units 3 and 4 is included in the cumulative impact assessment. Removal/demolition of existing Huntington Beach Generating Station Units 3 and 4 is scheduled to occur between the 3rd quarter of 2015 and the 2nd quarter of 2017, in advance of the construction of HBEP Block 2.

See also Applicant's responses to Data Requests 34, 58, and CCC-5.

DATA REQUEST

CCC-5: As noted previously, the entire AES site has been designated by the Energy and Coastal Commissions as suitable for power plant expansion; however, the current proposal would use only about half the available expansion area and would move a number of the proposed project's construction-related activities to offsite locations. Some of these offsite activities would result in greater adverse impacts to coastal resources than would locating the activities within the AES site — for example, the proposal to use for several months more than 200 public parking spaces near the beach would adversely affect public access to the shoreline. Similarly, it appears that using the full area available within the AES site may allow for alternative configurations of the power plant components that could substantially reduce identified or potential coastal resource impacts. As noted in our previous letter, the proposed expansion would place relatively high noise-generating power plant components adjacent to sensitive wetlands known to provide breeding and nesting habitat for sensitive species. Some or all of these components might instead be located within the AES site boundary but further from these habitat areas. Similarly, conclusions from the above-requested geologic hazards studies could result in the need for some project components to be sited elsewhere. We therefore request that AES describe opportunities to site any or all of the currently proposed offsite project components within its site. We also request

that AES describe its legal interests in, and site control of, the full power plant site boundary (e.g., existing or proposed landownership, leases, or easements for the proposed projects, easements for other components such as the onsite substation, etc.) that would illustrate potential alternative layouts that might fully or partially mitigate these impacts.

Response: As discussed in Section 1.1 of the HBEP AFC, HBEP will replace and be constructed on a portion of the existing Huntington Beach Generating Station. HBEP will be developed on previously disturbed land zoned for industrial use in accordance with and consistent with the City of Huntington Beach's General Plan, the City's certified Local Coastal Plan, and zoning code.

As discussed in Section 1.1 of the AFC, the CAISO and CEC recognize the importance of the location of the existing Huntington Beach Generating Station in providing energy and contingency electrical reserve for the western Los Angeles Basin Local Reliability Area and northern San Diego County. Specifically, the existing Huntington Beach Generating Station location serves Orange County by providing essential electrical service to the existing SCE Ellis substation through a dedicated 230-kV transmission line connection.

Figure 1.1-3 of the AFC shows the existing Huntington Beach Generating Station site. As shown on the figure, the existing Southern California Edison 230-kV switchyard is on a separate legal parcel that is owned by SCE and this switchyard will remain at this location. Also, the City of Huntington Beach owns a separate legal parcel on which a decommissioned fuel oil tank and its containment basin are located. These two separately owned parcels are not available to the Applicant for the siting, construction, and operation of the HBEP. The split location of the other two decommissioned fuel oil tanks at Huntington Beach Generating Station are not of sufficient size to allow construction of HBEP.

Based on the importance of existing Huntington Beach Generating Station Units 1, 2, 3, and 4 to the electrical grid, the construction and commissioning of HBEP Blocks 1 and 2 and the decommissioning and demolition of Huntington Beach Generating Station Units 1, 2, 3 and 4 must be phased (see response to CCC Data Request 4 above. The phased construction of HBEP Blocks 1 and 2, and corresponding phased demolition of existing Huntington Beach Generating Station Units 1, 2, 3 and 4 is depicted on Figures CCC5-1a through CCC5-1d. As shown on these figures, the HBEP site is the only available location on the existing Huntington Beach Generating Station that will accommodate the following: (1) continued operation of existing Huntington Beach Generating Station Units 1–4, (2) the phased construction of HBEP Blocks 1 and 2, and (3) the phased demolition of existing Huntington Beach Generating Station Units 1–4.

Applicant described its legal interests in, and site control of, the HBEP site in the AFC. (See AFC pages 1-4, 5.6-2, and Figures 1.1-1 and 1.1-3.) As set forth in the AFC, the Assessor's Parcel Numbers for the HBEP site are 114-150-82 and 114-150-96. HBEP will utilize 28.6 acres, using only a portion of APN 114-150-96. Following project approval, the Project Owner will obtain a lot line adjustment to establish a single parcel for the 28.6 acre HBEP site, prior to commencing construction of the first power block. Additional information regarding constraints within the larger existing Huntington Beach Generating Station site are set forth in Applicant's response to Data Request CCC-4, above.

FIGURE CCC5-1a
Development Phase 1
AES Huntington Beach Energy Project
Huntington Beach, California

CH2MHILL

FIGURE CCC5-1b
Development Phase 2
AES Huntington Beach Energy Project
Huntington Beach, California

CH2MHILL

FIGURE CCC5-1c
Development Phase 3
AES Huntington Beach Energy Project
Huntington Beach, California

CH2MHILL

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FIGURE CCC5-1d
Development Phase 4
AES Huntington Beach Energy Project
Huntington Beach, California

FIGURE 1.1-3
Site Location Map
AES Huntington Beach Energy Project
Huntington Beach, California

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