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CH2MHILL

September 24, 2007

360346

Christopher Meyer
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Chula Vista Energy Upgrade Project (07-AFC-4)
Data Adequacy Supplement

Dear Mr. Meyer:

Please find attached the Chula Vista Energy Upgrade Project's Data Adequacy Supplement. This supplement was prepared in response to the Staff's Data Adequacy Recommentation dated September 6, 2007. It is being submitted to respond to the Staff's requests for additional information.

Attached are 75 hard copies and 50 electronic copies on CD-ROM.

If you have any questions about this matter, please contact me at (916) 286-0278 or Sarah Madams at (916) 286-0249.

Sincerely,

CH2M HILL

Douglas M. Davy, Ph.D.
AFC Project Manager

Attachment

cc: S. Madams

Supplement

In Response to Data Adequacy Review

of the

Application for Certification

for the

Chula Vista Energy Upgrade Project

Chula Vista, California

(07-AFC-4)

Submitted to the:

California Energy Commission

Submitted by:

MMC

MMC Energy, Incorporated

With Technical Assistance by:

CH2MHILL

Sacramento, California
September 2007

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Contents

1.0 Introduction

This supplement to MMC Energy Incorporated's (MMC's) Application for Certification (AFC) for the Chula Vista Energy Upgrade Project (CVEUP) (07-AFC-4), responds to comments that California Energy Commission (CEC) Staff have made as a result of their data adequacy review of the AFC. The intention of this supplement is to provide all additional information necessary for Staff to find that the AFC contains adequate data to begin a power plant site certification proceeding under Title 20, California Code of Regulations and the Warren-Alquist Energy Resources Conservation and Development Act.

The format for this supplement follows the order of the AFC and provides additional information and responses to CEC information requests for several disciplines. Only sections for which CEC Staff posed requests or questions related to data adequacy are addressed in this supplement. If the response calls for additional appended material, it is included at the end of each subsection. Appended material is identified by the prefix "DA" indicating an item submitted in response to a Staff Data Adequacy comment, a number referring to the applicable AFC chapter, and a sequential identifying number. For example, the second attachment in response to a Transmission System Engineering comment would be Attachment DA3.0-1, because the AFC section describing electrical transmission is Section 3.0. Tables are also numbered in this way. Appended material is paginated separately from the remainder of the document.

Each subsection contains data adequacy questions or information requests, with numbers and summary titles and, in parentheses, the citation from Appendix B, Title 22, California Code of Regulations (Regulations Pertaining to the Rules of Practice and Procedure and Power Plant Site Certification) indicating a particular information requirement for the AFC. Each item follows with the CEC Staff comment on data adequacy for this item, under the heading "Information required to make AFC conform with regulations" followed by MMC's response to the information request and the information requested.

3.0 Transmission System Engineering

1. One-Line Diagrams (Appendix B [b] [2] [C])

A detailed description of the design, construction, and operation of any electric transmission facilities, such as power lines, substations, switchyards, or other transmission equipment, which will be constructed or modified to transmit electrical power from the proposed power plant to the load centers to be served by the facility. Such description shall include the width of rights of way and the physical and electrical characteristics of electrical transmission facilities such as towers, conductors, and insulators

Information required to make AFC conform with regulations:

1. Provide a one-line diagram for the Otay Substation before the interconnection of the project.

2. Provide a one-line diagram for the Otay Substation after the addition of the project. Show all equipment ratings including breakers, disconnect switches, buses, and etc. which are required for the addition of the project.

3. Provide detail information on the required transmission line upgrade listed on section 3.3.3. Show exact location of the reconductoring section, conductor type, conductor rating, and the required pole structures, size and number of poles required.

Response—Figure DA3.0-1a includes a one-line diagram of the Otay Substation as it is currently and Figure DA3.0-1b is a markup of the one-line diagram showing changes to breaker ratings that will be required to handle the higher voltages that the CVEUP will supply. The connection between the CVEUP and the Otay Substation is made through Tie-Line 6929, as indicated on Figure DA3.0-1b.

Per agreement with CEC Staff, the Application will provide the information requested in Item #3 regarding the reconductoring program in response to a Data Request.

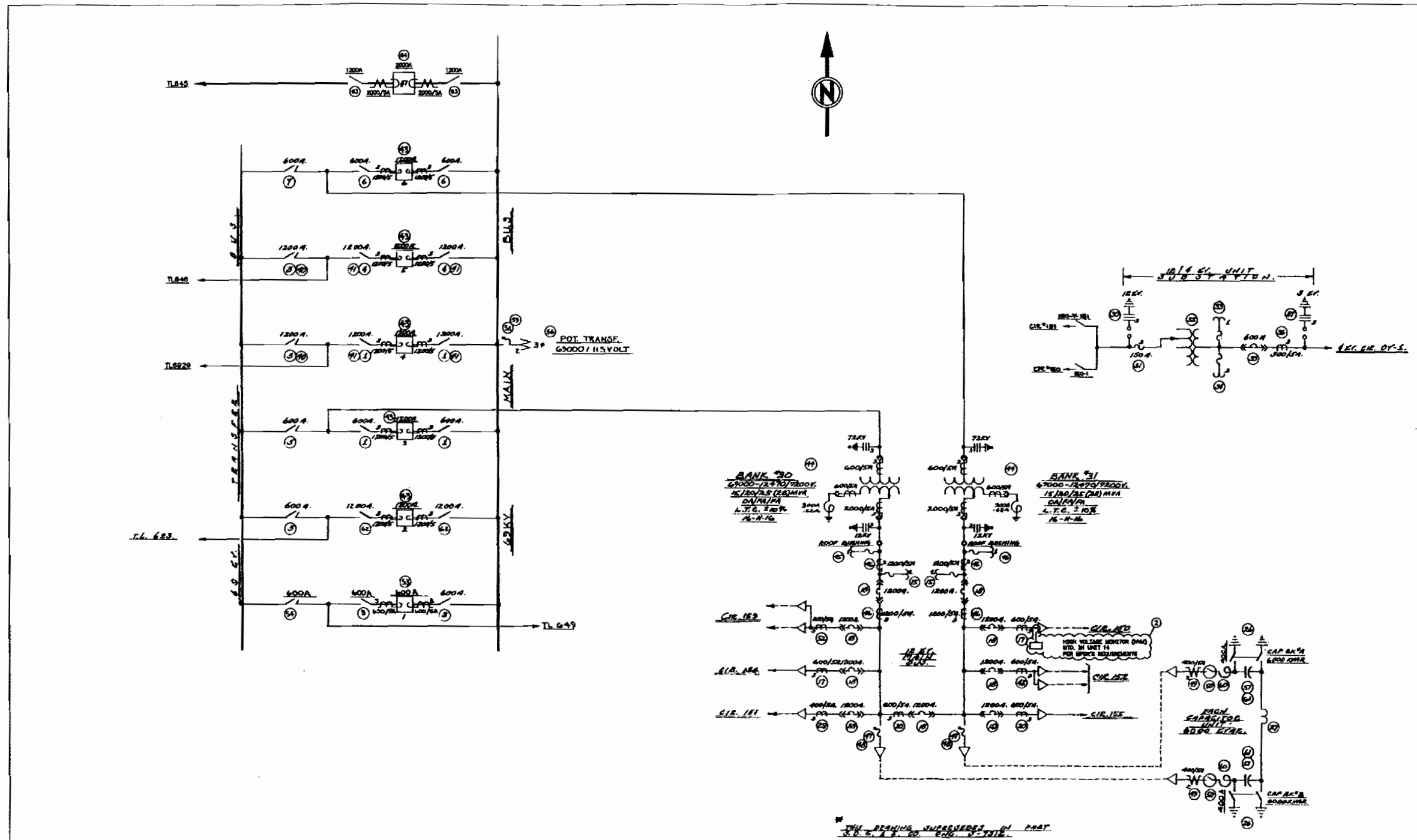


FIGURE DA3.0-1a
EXISTING ONE-LINE DIAGRAM FOR OTAY SUBSTATION
CHULA VISTA ENERGY UPGRADE PROJECT
CITY OF CHULA VISTA, CALIFORNIA

5.1 Air Quality

2. ***Cumulative Impacts (Appendix B[g][1])***

...provide a discussion of the existing site conditions, the expected direct, indirect and cumulative impacts due to the construction, operation and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation.

Information required to make AFC conform with regulations:

A discussion of the expected cumulative impacts due to the construction and operation of the facility.

Response—Cumulative impacts from construction of the proposed modified facility are not expected to occur due to the following:

- Construction impacts are typically localized within the immediate vicinity of the construction site.
- Based on the use of the surrounding immediate area it is highly unlikely that any future construction will occur concurrent with the power plant site construction that would result in a cumulative impact. The parcels immediately east and west of the CVEUP site have recently been developed with warehouse facilities. The property directly south is a regional park. The current plan for the park does not provide for any development of the park with improvements such as playing fields or playgrounds in this location that would contribute to the construction impacts of the project. In addition, MMC has contacted the city and obtained a list of proposed projects and none of these projects are proposed in close proximity to the proposed site. Therefore, no cumulative air quality impacts are expected from construction.
- Except for PM_{10}, construction impacts for the proposed power plant do not result in significant short or long term impacts.

Discussion of the cumulative impacts from operation of the proposed modified facility will be submitted under separate cover. The cumulative analysis and discussion will follow the protocol found in Attachment DA5.1-1.

3. ***Fuel Characteristics (Appendix B[g][8][B])***

The heating value and chemical characteristics of the proposed fuels, the stack height and diameter, the exhaust velocity and temperature, the heat rate and the expected capacity factor of the proposed facility.

Information required to make AFC conform with regulations:

The chemical characteristics of the proposed natural gas fuel.

Response—Table DA5.1-1 presents the estimated fuel characteristics for the natural gas to be used by the facility. Table DA5.1-2 presents the estimated fuel characteristics for the diesel fuel to be used by the facility.

TABLE DA5.1-1
Typical Natural Gas Properties

Nitrogen	0.862
CO2	0.047
Methane	98.95
Ethane	0.095
Oxygen	0.047
Total	99.998
Sulfur	<= 0.2 grs/100 scf
Specific Gravity	0.56
HHV, btu/scf	~1018-1030

Data: Sulfur and HHV data from SDG&E database for the Moreno and Coast lines (July 2006 through July 2007). Remaining data from gas samples for SoCal region.

TABLE DA5.1-2
Typical Diesel Fuel Properties

Carbon	86 – 87 % wt.
Hydrogen	12 – 13 % wt.
Nitrogen	0.03 – 0.09 % wt.
Sulfur	<= 0.05% wt.
Ash	< 0.001 % wt.
Chlorine	< 3 ppm
API Gravity	30.2 – 35.9
HHV, btu/gal	137,000 – 140,000

Data: Shell Oil CO. – Los Angeles Basin LSD samples, and EPA AP-42 default fuel data.

4. Greenhouse Gases (Appendix B [g][8][E])

The emission rates of criteria pollutants and greenhouse gases (CO_2, CH_4, N_2O, and SF_6) from the stack, cooling towers, fuels and materials handling processes, delivery and storage systems, and from all on-site secondary emission sources.

Information required to make AFC conform with regulations:

The emission rates of greenhouse gases (CO_2, CH_4, N_2O, and SF_6) from the gas turbines and the diesel emergency engine.

Response—The only processes on site expected to generate emissions of greenhouse gases would be the combustion turbines and the emergency generator engine, which are fired with clean (PUC grade) natural gas and California certified diesel fuel, respectively. There are no cooling towers proposed for the site, and there are no materials handling systems which are expected to emit GHGs. The site is not expected to have any equipment, which would contain

SF6, therefore no emissions of this GHG are expected. Emissions from the combustion of natural gas and distillate (diesel) fuels have been estimated using the default emissions factors per the California Climate Action Registry Utility Protocol dated 10-15-2004, and the revised General Protocol dated 6/2006. Table DA5.1-3 presents the GHG estimates and support data for the combustion turbines, while Table DA5.1-4 presents the GHG estimates and support data for the emergency generator engine.

TABLE DA5.1-3
GHG Emissions Estimates for the Proposed Combustion Turbines

Fuel	Natural Gas
Annual Fuel Use	4688000 mmbtu/yr
CCAR Default Carbon Content	14.47 kg C/mmbtu
CCAR Default Heat Content	1027 btu/scf
CCAR Adjusted Default CO2 EF	52.79 kg CO2/mmbtu
CCAR Default CH4 EF	0.0059 kg CH4/mmbtu
CCAR Default N2O EF	0.001361 kg N2O/mmbtu
Estimated CO_2 Emissions	247,480 metric tons/yr
Estimated CH_4 Emissions	27.66 metric tons/yr
Estimated N_2O Emissions	6.38 metric tons/yr
Total CO_2e Emissions	***250,039 metric tons/yr***

CO_2e emissions based upon the GWP SAR-1996 factors.

TABLE DA5.1-4
GHG Emissions Estimates for the Proposed EGS Engine

Fuel	Diesel/Distillate
Annual Fuel Use	2496 gal/yr
CCAR Default Carbon Content	19.95 kg C/mmbtu
CCAR Default Heat Content	138,690 btu/gal
CCAR Default CO_2 EF	10.15 kg CO2/gal
CCAR Default CH_4 EF	0.0003 kg CH4/gal
CCAR Default N_2O EF	0.0001 kg N2O/gal
Estimated CO_2 Emissions	25.33 metric tons/yr
Estimated CH_4 Emissions	0.00075 metric tons/yr
Estimated N_2O Emissions	0.00025 metric tons/yr
Total CO_2e Emissions	***25.42 metric tons/yr***

CO_2e emissions based upon the GWP SAR-1996 factors.

The total estimated CO_2e potential to emit would be approximately 250,064 metric tons per year for the proposed modified facility. The existing facility has a CO_2e potential to emit of approximately 169,862 metric tons per year, yielding an approximate increase of GHGs of 80,202 metric tons of CO_2e per year.

Generation of power from fossil-fired sources creates GHGs. The CVEUP will be capable of producing additional power to serve local load. Although Tables DA5.1-3 and -4 provide the maximum emissions from this facility, MMC anticipates this facility will be dispatched at a much lower rate resulting in reduced emissions of GHGs. Furthermore, the calculated increase in emissions does not take into account the real reduction in GHG emission from locating power plants close to the load. The location of this facility close to the load will create real reductions in GHG and criteria pollutant emissions based upon the real reduction in line losses from power imported into the region to serve loads.

This real displacement is especially true for peaking facilities. Peaking facilities only run when needed to support local load. When peaking facilities are called upon to run, they will most likely be displacing imports of generation. Reducing transmission losses are real reductions because they are MWhs that do not need to be produced at all to serve load. MMC believes that placing power plants near the load is a responsible GHG reduction strategy because these facilities create real reductions in the amount of power that is needed to serve load in Chula Vista and San Diego.

*5. **Commissioning Emissions (Appendix B [g][8][F][ii])***

A description of the project's planned initial commissioning phase, which is the phase between the first firing of emissions sources and the commercial operations date, including the types and durations of equipment tests, criteria pollutant emissions, and monitoring techniques to be used during such tests.

Information required to make AFC conform with regulations:

Criteria pollutant emission estimates for the types of equipment tests, and monitoring techniques to be used during initial commissioning.

Response—Section 5.1.5.10 of the AFC presents a detailed explanation of the commissioning phase of the project, including the types and durations of equipment tests, i.e., initial load testing, initial tuning, and final tuning. In addition, the time frames and periods for each phase are presented along with emissions values and the estimated impacts. Tables DA5.1-5 and DA5.1-6 present commissioning emissions in greater detail. The monitoring techniques to be used during the commissioning phase to quantify emissions are as follows:

- Monitoring and recording of fuel use.
- Emissions factors for NO_x, CO, VOC, SO_x, and PM10 (lbs/mmbtu or lbs/mmscf) will be used to quantify and track emissions.
- Emissions factors will be developed by MMC and submitted to the CEC for review and approval prior to use.
- Should the required CEMS be certified prior to the end of the commissioning period, data from the CEMS may at that time be substituted for the emission factor noted above.

TABLE DA5.1-5
Expected Commissioning Phases and Emissions for a Single Turbine

Phase (each turbine)	Hours/Day	Days	Load Range	NOx lbs/hr	CO lbs/hr	VOC[4] lbs/hr	SOx[4] lbs/hr	PM10[4] lbs/hr
Initial Load Testing and Engine Checkout[1]	<=4	<=2	<= 10%	51	45	4.48	1.1	3.0
Pre-Catalyst Initial Tuning[2]	<=8	<=9	50-100%	51	45	4.48	1.1	3.0
Post-Catalyst Initial Tuning[2]	<=8	<=15	50-100%	34	6.2	1.2	1.1	3.0
Final Tuning[3]	<=16	<=15	50-100%	4.2	6.2	1.2	1.1	3.0

Notes:

[1] Unsynchronized operation followed by low load engine check.

[2] Includes the periods both before and after SCR and CO catalyst loading. Post-catalyst period includes water injection for NOx and CO catalyst use.

[3] Includes SCR and CO catalyst operation and pre-witness performance testing.

[4] Steady state controlled emission rates for SOX and PM10 are 1.1, and 3.0 lbs/hr respectively. These rates have been used to conservatively estimate hourly and total emissions during commissioning. VOC rates represent uncontrolled, and controlled with the CO catalyst, for the phases as presented.

TABLE DA5.1-6
Total Commissioning Emissions for Two Turbines

Phase	NOx, lbs	CO, lbs	VOC, lbs	SOx, lbs	PM10, lbs
Initial Load Testing and Engine Checkout	816	720	35.8	17.6	48
Pre-Catalyst Initial Tuning	7344	6480	322.6	158.4	432
Post-Catalyst Initial Tuning	8160	1488	288	264	720
Final Tuning	2016	2976	576	528	1440
Totals[1]	**18336**	**11664**	**1222**	**968**	**2640**

[1] These values represent the maximum expected total emissions based upon the maximum hours/day, maximum number of days per phase, and the maximum expected emissions rates from the previous table.

6. Cumulative Modeling Protocol (Appendix B [g][8][I][iii])

A protocol for a cumulative air quality modeling impacts analysis of the project's typical operating mode in combination with other stationary emissions sources within a six mile radius which have received construction permits but are not yet operational, or are in the permitting process. The cumulative inert pollutant impact analysis should assess whether estimated emissions concentrations will cause or contribute to a violation of any ambient air quality standard; and

Information required to make AFC conform with regulations:

A cumulative air quality modeling protocol.

(Please note that SDAPCD NSR rules are not relevant to the determination of whether a cumulative modeling analysis is required, the Energy Commission requires a cumulative analysis, if there are relevant cumulative sources present, as part of the CEQA air quality analysis).

Response—The cumulative analysis protocol is attached (see Attachment DA5.1-1).

7. Offsets or Emission Reductions (Appendix B [g][8][J][i])

The quantity of offsets or emission reductions that are needed to satisfy air permitting requirements of local permitting agencies (such as the air district), state and federal oversight air agencies, and the California Energy Commission. Identify by criteria air pollutant, and if appropriate, greenhouse gas; and

Information required to make AFC conform with regulations:

The quantity of offsets or emission reductions needed to satisfy the Energy Commission staff's position that all non-attainment pollutants and their precursors (NO_x, VOC, SO_2 and $PM_{10}/PM_{2.5}$) be mitigated at a minimum ratio of 1:1.

Response—The Applicant proposes mitigation to satisfy the CEC Staff's CEQA requirements at a 1:1 ratio, and based on the following emission rates:

NOx - 32.5 tons per year

PM_{10} - 28.7 tons per year

VOC - 6.6 tons per year

SOx - 6.3 tons per year

Mitigation of these emissions will be accomplished by one, or a combination of, the following strategies:

- Shutdown and replacement of the existing facility (existing potential to emit compared to proposed potential to emit).
- Reduction in operational hours of the proposed facility to result in a net "zero" increase in potential to emit for all non-attainment pollutants.
- Purchase of ERCs from the APCD ERC bank, to be credited to the new facility.

Payment of mitigation fees to the APCD to fund a District directed emissions reduction program.

ATTACHMENT DA5.1-1

Cumulative Air Quality Modeling Protocol

Cumulative Impacts Analysis Protocol

Potential cumulative air quality impacts that might be expected to occur resulting from MMC Chula Vista Energy Upgrade Project and other reasonably foreseeable projects are both regional and localized in nature. These cumulative impacts will be evaluated as follows.

Regional Impacts

Regional air quality impacts are possible for pollutants such as ozone, which involve photochemical processes that can take hours to occur. CVEUP is proposing to supply emissions mitigation per afc Appendix 5.1G. Additional mitigation for other pollutants may be required by the CEC.

Although the relative importance of VOC and NO_x emissions in ozone formation differs from region to region, and from day to day, most air pollution control plans in California require roughly equivalent controls (on a ton per year basis) for these two pollutants. The change in emissions of the sum of these pollutants, equally weighted, will be used to provide a reasonable estimate of the impact of CVEUP on ozone levels. The net change in emissions of ozone precursors from CVEUP will be compared with emissions from all sources within San Diego County/Air Basin (Table 1).

TABLE 1
Estimated San Diego County/Air Basin Emissions Inventory for 2005 (tons/day)

Source Category	TOG	ROG	CO	NOx	SOx	PM10	PM2.5
Total Stationary Sources	366	54.9	25.3	8.7	0.43	7.7	6.5
Total Area Sources	60.8	38.3	28	2.7	0.23	93.5	22.1
Total Mobile Sources	102.9	93.7	887.4	194.2	12.5	12.5	10.5
Total Natural Sources	87	76.1	137.6	4.2	1.3	13.9	11.8
County/Air Basin Total	616.7	263	1078	209.8	14.5	127.6	50.9

Source: CARB

Air quality impacts of fine particulate, or PM_{10}, have the potential to be either regional or localized in nature. On a regional basis, an analysis similar to that proposed above for ozone will be performed, looking at the three pollutants that can form PM_{10} in the atmosphere, i.e., VOC, SO_x, and NO_x as well as at directly emitted particulate matter. SDAPCD regulations do not require offsets to be provided for PM_{10} emissions from the project, as the facility emissions do not exceed the major source threshold. However, full mitigation may be required by the CEC.

As in the case of ozone precursors, emissions of PM_{10} precursors are expected to have approximately equivalent ambient impacts in forming PM_{10}, per ton of emissions on a regional basis. Table 2 provides the comparison of emissions of the criteria pollutants from CVEUP with emissions from all sources within San Diego County/Air Basin as a whole.

TABLE 2
Comparison of CVEUP Project Emissions to Estimated Inventory for 2005

Category	TOG	ROG[1]	CO	NOx	SOx	PM10	PM2.5
CVEUP Emissions (tons/yr)	-	5	29.9	23.2	4.8	13.2	13.2
CVEUP Emissions (tons/day)	-	0.0137	0.082	0.0636	0.0132	0.0362	0.0362
County/Air Basin Total (tons/day)	616.7	263	1078	209.8	14.5	127.6	50.9
CVEUP % of County/Air Basin Total Tons/day basis	-	0.0052	0.0076	0.0303	0.091	0.0284	0.0711

[1] CVEUP VOC emissions compared to inventory ROG emissions.

Localized Impacts

Localized impacts from CVEUP could result from emissions of carbon monoxide, oxides of nitrogen, sulfur oxides, and directly emitted PM_{10}. A dispersion modeling analysis of potential cumulative air quality impacts will be performed for all four of these pollutants.

In evaluating the potential cumulative localized impacts of CVEUP in conjunction with the impacts of existing facilities and facilities not yet in operation but that are reasonably foreseeable, a potential impact area in which cumulative localized impacts could occur was identified as an area with a radius of 6 miles around the plant site. Based on the results of the proposed air quality modeling analyses described above, "significant" air quality impacts, as that term is defined in federal air quality modeling guidelines, will be determined. If the project's impacts do not exceed the significance levels, no cumulative impacts will be expected to occur, and no further analysis will be required. Otherwise, in order to ensure that other projects that might have significant cumulative impacts in conjunction with CVEUP are identified, a search area with a radius of 8 miles beyond the project's impact area will be used for the cumulative impacts analysis. Within this search area, three categories of projects with combustion sources will be used as criteria for identification:

- Projects that are existing and have been in operation since at least 1-1-07 (emissions are included in the overall background air quality assessment).
- Projects for which air pollution permits to construct have been issued and that began operation after 1-1-07.
- Projects for which air pollution permits to construct have not been issued, but that are reasonably foreseeable.

Projects that are existing and have been in operation since at least 1-1-07 will be reflected in the ambient air quality data that has been used to represent background concentrations; consequently, no further analysis of the emissions from this category of facilities will be performed. The cumulative impacts analysis adds the modeled impacts of selected facilities to the maximum measured background air quality levels, thus ensuring that these existing projects are taken into account.

Projects for which air pollution permits to construct have been issued but that were not operational by 1-1-07 will be identified through a request of permit records from the San Diego APCD. The search will be requested to be performed at two levels. For permits that are considered "major modifications" (i.e., emissions increases greater than 40 tons/year of NO_x or

SO_2, 25 tons/year of total suspended particulate, 15 tons/year of PM_{10}), a region within 8 miles of the proposed project site will be evaluated. For projects that had smaller emissions changes, but still greater than 15 tons/year, a region within 8 miles of the proposed project site will also evaluated. Projects that satisfy either of these criteria and that had a permit to construct issued after January 1, 2007, will be included in the cumulative air quality impacts analysis. The January 1, 2007 date was selected based on (1) the typical length of time a permit to construct is valid and typical project construction times, to ensure that projects that are not reflected in the current ambient air quality data are included in the analysis, and (2) ambient air quality data for calendar year 2006 is now available which incorporates the impacts of emissions from newly operational facilities which came on-line prior to 1-1-07. Projects for which the emissions change was smaller than 15 tons/year will be assumed to be *de minimus*, and will not be included in the dispersion modeling analysis.

A list of projects within the project region meeting the above noted criteria will be requested from the SDAPCD staff.

Given the potentially wide geographic area over which the dispersion modeling analysis is to be performed, the Aermod model will be used to evaluate cumulative localized air quality impacts. The detailed modeling procedures, Aermod options, and meteorological data used in the cumulative impacts dispersion analysis were the same as those described in Section 5.1. The receptor grid was spaced at 100 meters and covered the area in which the detailed modeling analysis (described above) indicated that the project will have impacts that may exceed any significance levels.

Cumulative Impacts Dispersion Modeling

The dispersion modeling analysis of cumulative localized air quality impacts for the proposed project will be evaluated in combination with other reasonably foreseeable projects and air quality levels attributable to existing emission sources, and the impacts were compared to state or federal air quality standards for significant impact. As discussed above, the highest second-highest modeled concentrations will be used to demonstrate compliance with standards based on short-term averaging periods (24 hours or less).

Supporting information to be used in the analysis includes the following:

- 2005 estimated emissions inventory for San Diego County/Air Basin (Table 1);
- List of projects resulting from the screening analysis of permit files by the SDAPCD;
- Map showing locations of sources included in the cumulative air quality impacts dispersion modeling analysis;
- Stack parameters for sources included in the cumulative air quality impacts dispersion modeling analysis; and
- Output files for the dispersion modeling analysis.

5.2 Biological Resources

8. Agency Correspondence (Appendix B [g][13][H])

Submit copies of any preliminary correspondence between the project applicant and state and federal resource agencies regarding whether federal or state permits from other agencies such as the U. S. Fish and Wildlife Service, the National Marine Fisheries Service, the U.S. Army Corps of Engineers, the California Department of Fish and Game, and the Regional Water Quality Control Board will be required for the proposed project.

Information required to make AFC conform with regulations:

Please contact the USFWS and CDFG regarding the proposed project and laydown areas to discuss the proposed project and potential impacts to adjacent sensitive biological resources. Please provide the contact information for each agency, a record of conversation, and a summary of the agency's position.

Response—Project Biologist Sophie Chiang has contacted the USFWS and CDFG to discuss the proposed project and potential impacts to adjacent sensitive biological resources. Records of conversation are provided in Attachment DA5.2-1.

9. Contact Information (Appendix B [i][2])

The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.

Information required to make AFC conform with regulations:

Please contact the USFWS and CDFG and provide the contact information of the person communicated with for each agency.

Response—Project Biologist Sophie Chiang has contacted the USFWS and CDFG to discuss the proposed project and potential impacts to adjacent sensitive biological resources. Contact information is provided in Records of Conversation found in Attachment DA5.2-1.

ATTACHMENT DA5.2-1

Records of Conversation

CH2MHILL TELEPHONE CONVERSATION RECORD

Call To: Kathleen Brubaker, Fish and Wildlife Service Carlsbad Field Office

Phone No.: 760.431.9440 ext. 255 **Date:** September 10, 2007

Call From: Sophie Chiang **Time:** 11:25 AM

Message Taken By:

Subject: Biological/Sensitive Species concerns related to CVEEUP

Project No.: **360346**

Left a message: I understand that Susan Wynn had forwarded my message regarding the Chula Vista Energy project and I explained that I was placing a courtesy call to see if FWS had any issues.

CH2MHILL TELEPHONE CONVERSATION RECORD

Call To: Kathleen Brubaker, Fish and Wildlife Service Carlsbad Field Office

Phone No.: 760.431.9440 ext. 255 **Date:** September 13, 2007

Call From: Sophie Chiang **Time:** 4:30 PM

Message Taken By:

Subject: Biological/Sensitive Species concerns related to CVEEUP

Project No.: **360346**

Kathleen returned my call: She has not had the chance to review the email or map that Vicki Touchstone forwarded, so I explained the project (including laydown areas) and its location in terms of being adjacent to riparian habitat (potential vireo and flycatcher habitat). I explained that there will not be any intrusion into the habitat and we will address any temporary construction noise issues. Although they need to review the project in full, what I explained to her did not raise any red flags. Kathleen will assign staff to the project and they will review the email, map, and AFC when it is available to identify any concerns. Cara McGary (ext. 374), who is on vacation until next Monday (9.17.07), will be the FWS staff for the project.

CH2MHILL TELEPHONE CONVERSATION RECORD

Call To: Marilyn Fluharthy, California Department of Fish and Game

Phone No.: 858.467.4231 **Date:** August 30, 2007

Call From: Sophie Chiang **Time:** 3:00 PM

Message Taken By:

Subject: Biological/Sensitive Species concerns related to CVEEUP

Project No.: **360346**

Marilyn acknowledged that Christopher Meyer of the CEC had made initial contact with her. I introduced myself as the project biologist and asked her if the Department had any concerns related to the project, especially in relation to sensitive species issues (least Bell's vireo, southwestern willow flycatcher, etc). She said that she has not looked into the project or assigned staff to review the project yet. When staff conducts their review, they will address Chula Vista MSCP consistency/sensitive species issues. Because they are understaffed, it can be assumed that a non-response from the Department means they don't have any comments. I told her that anticipated acceptance and document distribution would occur at the end of September.

CH2MHILL TELEPHONE CONVERSATION RECORD

Call To: Vicki Touchstone, Fish and Wildlife Service Carlsbad Field Office

Phone No.: 760.431.9440 ext. 349 **Date:** August 30, 2007

Call From: Sophie Chiang **Time:** 3:20 PM

Message Taken By:

Subject: Biological/Sensitive Species concerns related to CVEEUP

Project No.: **360346**

Vicki acknowledged that Christopher Meyer of the CEC had made initial contact with her. She reviewed the map that Christopher Meyer provided and said that the CVEEUP site is not located near the refuge complex (San Diego National Wildlife Refuge) and therefore our project should probably be handled by someone in the Ecological Services department. Vicki passed the project information onto Kathleen Brubaker who is on vacation. So, Vicki provided me the names of 2 other contacts in the Ecological Services department: Susan Wynn (ext 216) who handles MSCP issues and David Zoutendyk (ext 222). Vicki can pass along Christopher's email and project information to either Susan or David, just let her know.

CH2MHILL TELEPHONE CONVERSATION RECORD

Call To: Vicki Touchstone, Fish and Wildlife Service Carlsbad Field Office

Phone No.: 760.431.9440 ext. 349 **Date:** September 10, 2007

Call From: Sophie Chiang **Time:** 11:30 AM

Message Taken By:

Subject: Biological/Sensitive Species concerns related to CVEEUP

Project No.: **360346**

Left a message: I let her know that Susan had forwarded my message onto Kathleen Brubaker. Because Kathleen may be on vacation and we need to tie up loose ends by the end of this week (Sept. 14), I asked if there is anyone else I could contact.

12:20 PM: Vicki returned my call and she told me that Kathleen is back from vacation and is in the office today. Kathleen is the best person to talk to about the project, so I should wait for her to call back.

CH2MHILL TELEPHONE CONVERSATION RECORD

Call To: Susan Wynn, Fish and Wildlife Service Carlsbad Field Office

Phone No.: 760.431.9440 ext. 216 **Date:** August 30, 2007

Call From: Sophie Chiang **Time:** 3:30 PM

Message Taken By:

Subject: Biological/Sensitive Species concerns related to CVEEUP

Project No.: **360346**

I received her voice mail, so I left a message for Susan.

CH2MHILL TELEPHONE CONVERSATION RECORD

Call To: Susan Wynn, Fish and Wildlife Service Carlsbad Field Office

Phone No.: 760.431.9440 ext. 216 **Date:** September 10, 2007

Call From: Sophie Chiang **Time:** 11:20 AM

Message Taken By:

Subject: Biological/Sensitive Species concerns related to CVEEUP

Project No.: **360346**

Susan forwarded my message onto Kathleen Brubaker ext. 255 and transferred me to Kathleen.

5.3 Cultural Resources

10. City Ordinance (Appendix B [g][2][B])

The results of a literature search to identify cultural resources within an area not less than a 1-mile radius around the project site and not less that than one-quarter (0.25) mile on each side of the linear facilities. Identify any cultural resources listed pursuant to ordinance by a city or county, or recognized by any local historical or archaeological society or museum. Literature searches to identify the above cultural resources must be completed by, or under the direction of, individuals who meet the Secretary of the Interior's Professional Standards for the technical area addressed.

Information required to make AFC conform with regulations:

Please identify any cultural resources listed pursuant to ordinance by the City of Chula Vista.

Response—The City of Chula Vista Historic Preservation Program includes a list of historic sites. Properties must meet at least one of the six local criteria to qualify for inclusion in this list. The criteria are:

1. Bears a relationship to overall heritage on a local, state, or national basis
2. Relates to a historic personage who played an important role historically, on a local, state, or national basis
3. A site where an important event took place.
4. Distinguishing architectural characteristics that are identifiable.
5. Archaeologically significant in its association with pre-history of the area.
6. Has integrity (Evidence of original features).

The City's list of historic sites currently includes 62 properties. The complete site list can be found on the City's internet site at:

http://www.ci.chula-Vista.ca.us/City_Services/Development_Services/Planning_Building/PDF/sitelist.pdf

However, discussions with City Planning staff have indicated that there are nine additional properties that are provisionally listed or that are informally listed pending final approval. One of these properties is located within one mile of the CVEUP. This is the Lorenzo Anderson House at 3947 Main Street in Chula Vista, proposed for listing as "one of the oldest orchard houses in Chula Vista."

With regard to properties on the City's list, Code 2.32.090 says:

> No permit for the demolition, substantial alteration or removal of any building, structure or site shall be issued without first referring the matter to the resource conservation commission.... The building, engineering and planning departments shall notify the resource conservation commission in writing within five days of any request it receives for any such permit.

This property is located approximately 525 feet north of the CVEUP. A vehicle storage yard separates the two properties. The CVEUP would have no direct effects on this property. The City of Chula Vista's Program Manager for Historic Preservation is Lynnette Tessitore-Lopez, Associate Planner (619-409-5465).

11. Surveyor qualifications (Appendix B [g][2][C])

The results of new surveys or surveys less than 5 years old shall be provided if survey records of the area potentially affected by the project are more than five (5) years old. Surveys to identify new cultural resources must be completed by (or under the direction of) individuals who meet the Secretary of the Interior's Professional Standards for the technical area addressed.

Qualifications of surveyor and author of survey technical report.

Information required to make AFC conform with regulations:

Surveys to identify new cultural resources must be completed by (or under the direction of) individuals who meet the Secretary of the Interior's Professional Standards. Please provide resumes for Terry Fulton, the author of the technical report contained in Appendix 5.3B, and Phil Fulton, the field surveyor for the technical report.

Response—Resumes for by LSA Associates archaeologists Terry Fulton, Phillip Fulton, and Deborah McLean are included as Attachment DA5.3-1.

12. Surveyor Qualifications (Appendix B [g][2][C][v])

The names and qualifications of the cultural resources specialists who contributed to and were responsible for literature searches, surveys, and preparation of the technical report.

Information required to make AFC conform with regulations:

Please provide resumes for Terry Fulton, the author of the technical report contained in Appendix 5.3B, and Phil Fulton, the field surveyor for the technical report.

Response—See response to Item #11, above.

ATTACHMENT DA5.3-1

LSA Associates Resumes

PHIL A. FULTON

CULTURAL RESOURCES MANANGER

EXPERTISE

All aspects of Cultural Resources Management
Archaeological Surveys, Monitoring, and Excavation
Cartography, Transit/Total Station Operation, GPS, Photography
Native American Relations

EDUCATION

University of California, Santa Barbara, B.A., Environmental Studies, 1984.

PROFESSIONAL EXPERIENCE

Since 1986, Mr. Fulton has worked full time as a professional archaeologist. He is experienced in all aspects of field archaeology, including survey, testing, data recovery, and construction monitoring, with extensive supervisory experience on both historic and prehistoric projects that includes writing numerous site evaluations and reports for potential NRHP eligibility. Mr. Fulton is a proven field supervisor, has directed crews of up to 30 individuals, and is adept at interacting with the various agencies and parties that are involved in large-scale projects. He is proficient at transit and total station operation, cartography, GPS, and photodocumentation, and has worked extensively processing and analyzing historic and prehistoric artifacts in the laboratory.

PRINCIPAL PROFESSIONAL RESPONSIBILITIES

As a Field Director for LSA Associates, Inc., Mr. Fulton's responsibilities include supervising and conducting archaeological surveys, excavations, and evaluations of archaeological sites. Other responsibilities include report preparation and documentation of archaeological resources, as well as conducting records or archival searches prior to project fieldwork.

AREAS OF GEOGRAPHIC EXPERIENCE

Coastal and Inland California
Northern and Southern California
Mojave and Colorado Deserts
American Southwest
Great Basin
American Northwest
Rocky Mountains/Wyoming

PROFESSIONAL EXPERIENCE

Cultural Resources Manager, LSA Associates, Inc. Responsible for monitor coordination, surveys, testing, data recovery programs, site evaluation of both prehistoric and historic sites and report preparation, in Santa Barbara, San Bernardino, Riverside, Orange, Ventura, Mono, and Inyo Counties, California, 2001–present.

Field Director and Crew Chief, Applied Earthworks, Inc. Direct and coordinate large projects including monitoring, survey, testing and data recovery excavations, site evaluation of both prehistoric and historic sites, Native American consultation, and report preparation throughout Northern and Southern California, and Deschutes County, Oregon, 1998–2002.

Archaeological Consultant, Shapiro and Associates, Inc., Washington County, Oregon, 2001–2002.

Field Director and Crew Chief, Northwest Archaeological Associates, Inc. Direct and coordinate large projects including monitoring, survey, testing and data recovery excavations, evaluation of both prehistoric and historic sites, Native American consultation, and report preparation throughout Oregon, Idaho, Washington and Wyoming, 1997–2000.

Crew Chief/Field Technician, Greenwood and Associates. Excavation of historic and prehistoric sites and survey throughout Los Angeles, Riverside, San Diego, San Bernardino, San Luis Obispo and Santa Barbara Counties, California, 1988–1997.

Field Director, Crew Chief and Field and Laboratory Technician, INFOTEC Research, Inc. Direct and coordinate large projects including monitoring and excavations, evaluation of prehistoric and historic sites, supervise survey and excavation crews, and perform testing and data recovery excavations throughout Northern and Southern California, Idaho, and Oregon, 1991–1995.

Field Technician, Office of Contract Archaeology, University of New Mexico. Archaeological excavation and survey of sites throughout Arizona and New Mexico, 1991.

Field Technician/Feature Excavator, The Chambers Group. Phase II and Phase III excavations of extensive prehistoric and historic sites as well as survey in San Bernardino, Sonoma and Lake Counties, California, 1990–1991.

Field Technician/Feature Excavator, Whittley and Simon. Data recovery excavations of prehistoric village site, Ventura County, California, 1990.

Crew Chief, Santa Barbara Trust for Historic Preservation, El Presidio De Santa Barbara State Historic Park, Santa Barbara, California, 1989.

Field Technician, Westec Services, Inc., Excavations and surveys throughout Santa Barbara County. Mitigation excavations at Mission de Alcala, San Diego, CA, 1987–1989.

Crew Chief, Santa Barbara Trust for Historic Preservation, Excavations of El Presidio de Santa Barbara, Santa Barbara Co., CA, 1989.

Field Technician, Ancient Enterprises Phase 2 test excavations, CA-LAN-183, Los Angeles Co., CA, 1989.

Laboratory Technician, Ancient Enterprises laboratory processing of CA-LAN-183, 1989.

Field Technician, URS Corporation Las Flores Ranch Project, 10,000 acre survey, San Bernardino Co., CA, 1987.

Field Technician, Painted Cave Archaeological Associates Snow Project, archaeological survey, Santa Barbara Co., CA, 1987.

Field Technician, Archaeological Energy Consutants Phase II excavations in southwestern Wyoming, 1987.

Field Technician, Center for Archaeological Studies, U.C. Santa Barbara. Hyatt Project, test excavations of CA-SBA-73, Santa Barbara Co., CA, 1986.

Site Photographer/Field Technician, Center for Archaeological Studies, U.C. Santa Barbara. Mission Santa Ines, Phase III excavations, Santa Barbara Co., CA, 1986.

Field Technician/Volunteer, U.S. Bureau of Land Management, Point Sal Project. Profiling and excavation of column samples from shell middens, CA-SBA-232, Santa Barbara Co., CA, 1986.

TERRI P. FULTON

ARCHAEOLOGIST/SENIOR CULTURAL RESOURCES MANAGER

EXPERTISE

Cultural Resource Management
Archaeological Surveys, Monitoring, Excavation, and Site Evaluation
Cartography, Transit/Total Station Operation, GPS, Photography
Native American Consultation

REGIONAL EXPERTISE

Western United States, including Northern and Southern California, Oregon, Idaho, Wyoming, Washington, Arizona, New Mexico, and the Santa Barbara Channel Islands.

EDUCATION

University of California, Santa Barbara, B.A., Cultural Anthropology/Archaeology, 1987.

SUMMARY OF ARCHAEOLOGICAL EXPERIENCE

Field. Survey, testing, excavation, feature excavation, monitoring, transit operation, cartography and GPS on both historic and prehistoric sites with extensive supervisory experience, including site evaluation and treatment.

Laboratory. All phases from sorting to cataloging, including functional laboratory design and flotation on both historic and prehistoric sites, with extensive supervisory experience.

Management. Field coordination of large pipeline and fiber optic line construction projects, including extensive logistical planning for field crews consisting of up to 30 field technicians and archaeological monitors, emergency discovery treatment evaluation, extensive writing responsibilities, budget tracking, company representation, client interfacing, and Native American consultation.

Additional Training. Completion of Section 106 workshop, Riverside, California, June, 1995.

PRINCIPAL PROFESSIONAL RESPONSIBILITIES

Ms. Fulton's responsibilities include project management and field and laboratory direction, including supervising and conducting archaeological surveys and excavations, documenting and evaluating archaeological sites, as well as managing the processing and preparation of archaeological collections for curation. Other responsibilities include report preparation, conducting records or archival searches prior to project fieldwork, NAHC and Native American consultation, and compliance with CEQA and NEPA guidelines.

PROFESSIONAL EXPERIENCE

2001–present Senior Cultural Resources Manager, LSA Associates, Inc. Responsible for project management, monitor coordination, surveys, testing, data recovery programs, site evaluation of both prehistoric and historic sites and report preparation, as well as laboratory direction and collection management in Santa Barbara, San Bernardino, Riverside and Orange Counties, California.

1998–2002 Field Director and Crew Chief, Applied Earthworks, Inc. Direct and coordinate large projects, including monitoring, survey, testing and data recovery excavations, site evaluation of both prehistoric and historic sites, Native American consultation, and report preparation throughout Northern and Southern California, and Deschutes County, Oregon.

2001–2002 Archaeological Consultant, Shapiro and Associates, Inc., Washington County, Oregon.

1997–2000 Field Director and Crew Chief, Northwest Archaeological Associates, Inc. Direct and coordinate large projects, including monitoring, survey, testing and data recovery excavations, evaluation of both prehistoric and historic sites, Native American consultation, and report preparation throughout Oregon, Idaho, Washington, and Wyoming.

1989–1997 Field Technician, Greenwood and Associates. Excavation of historic and prehistoric sites and survey throughout Los Angeles, Riverside, San Diego, San Bernardino, San Luis Obispo and Santa Barbara Counties, California.

1991–1996 Field Director, Crew Chief, and Field and Laboratory Technician, INFOTEC Research, Inc. Direct and coordinate large projects, including monitoring and excavations, evaluation of prehistoric and historic sites, supervise survey crews, and perform testing and data recovery excavations throughout Northern and Southern California, Idaho, and Oregon.

1991 Field Technician, Office of Contract Archaeology, University of New Mexico. Archaeological excavation and survey of sites throughout Arizona and New Mexico.

1990–1991 Field Technician/Feature Excavator, The Chambers Group. Phase II and Phase III excavations of extensive prehistoric and historic sites as well as survey in San Bernardino, Sonoma and Lake Counties, California.

1990 Field Technician/Feature Excavator, Whittley and Simon. Data recovery excavations of prehistoric village site, Ventura County, California.

Laboratory Technician, Santa Barbara Trust for Historic Preservation, El Presidio De Santa Barbara State Historic Park, Santa Barbara, California.

1989	Laboratory Director, Environmental Solutions, Inc., Vandenberg Air Force Base, Santa Barbara County, California.
	Laboratory Technician, Dames and Moore. Santa Barbara County, California.
1988	Laboratory Director, Larry Wilcoxon Archaeological Consultants, Santa Barbara County, California.
	Field Technician, Dames and Moore, excavations in Santa Barbara County, California.
	Field Technician, Westec Services, Inc., excavations in Santa Barbara County, California.
	Field Technician, Environmental Solutions Inc., Vandenberg Air Force Base, Santa Barbara County, California.
1987–1988	Laboratory Director, The Planning Corporation, Santa Barbara County, California.
1987	Field Technician, URS Corp. Survey in San Bernardino County, California.
	Field Technician, The Planning Corporation, Santa Barbara County, California.
1986	Assistant Laboratory Director, Center for Archaeological Studies, University of California, Santa Barbara.
1983–1985	Field and Laboratory Assistant, Center for Archaeological Studies, University of California, Santa Barbara. Various projects in Santa Barbara County, the Santa Barbara Channel Islands and Belize, Central America.

REPORTS

2006 Cultural Resources Assessment, Del Mar Fairgrounds Project, Cities of Del Mar and San Diego, San Diego County, California.

2006 Cultural Resources Assessment, Irvine Park Public Stables Project, City of Irvine, Orange County, California.

2006 Cultural Resources Assessment, Santa Ana East and West Pump Stations Project, City of Santa Ana, Orange County, California.

2006 Cultural Resources Assessment, Vail Lake Transmission Main and Pump Station Project, Riverside County, California.

2006 Cultural Resources Assessment, Villa Park Dam Stables Project, City of Irvine, Orange County, California.

2005–2007 Numerous Historic Property Survey Reports (HPSRs) and Archaeological Survey Reports (ASRs) for the California Department of Transportation (Caltrans) Districts 7, 8, and 12.

2005 Cultural Resources Assessment, Proposed Sea Terrace Park Recreational Trails Project, City of Dana Point, Orange County, California.

2005 Riverside County to Orange County Major Investment Study, Draft Cultural Resource Assessment.

2005 Cultural Resource Assessment, Orange County Transportation Authority Long-Range Transportation Plan.

2004–2005 Numerous cultural resource assessments for Cingular, AT&T, and Verizon Wireless facilities.

2004 Cultural Resource Assessment, Puente Hills Landfill Native Habitat Preservation Authority, Puente Hills, California.

2003 Archaeological Survey Report, Whipple-Havasu Circuit, Southern California Edison, San Bernardino County, California; coauthored with Curt Duke.

2003 Archaeological Survey Report, Remote Circuit, Southern California Edison, San Bernardino County, California; coauthored with Curt Duke.

2003 Archaeological Survey Report, Tufa Circuit, Southern California Edison, Mono County, California; coauthored with Curt Duke.

2003 Archaeological Survey Report, Jenks Lake Circuit, Southern California Edison, San Bernardino County, California; coauthored with Curt Duke.

2003 Cultural Resource Assessments, AT&T Wireless Services, Facilities M310A, M310B, M310C, M310D, and M310E, Los Angeles, California; and Facilities 20115A, 20100A, 26029A, and 26020A, San Diego County, California.

DEBORAH K. B. MCLEAN, RPA

PRINCIPAL
ARCHAEOLOGIST

EXPERTISE

Archaeology
Cultural Resources Project Management
Technical Review of Documents
Cultural Resources Assessments per:
- National Environmental Policy Act (NEPA)
- California Environmental Quality Act (CEQA)
- National Historic Preservation Act (NHPA), Section 106
- California Department of Transportation (Caltrans)

EDUCATION

California State University, Fullerton, M.A., Anthropology, specialization in Archaeology, 2001. Thesis title: An Assessment of the Manufacture, Use, Origin, and Nomenclature of Utilitarian Ceramics Produced by Native American Peoples of Orange County, California.

Illinois State University, Normal, Illinois, B.A., Anthropology, 1973.

SPECIAL TRAINING

Cultural Sensitivity Training Program presented by the Morongo Band of Mission Indians, March 2007.

Land Use Planning and the Protection of Native American Cultural Places, Senate Bill 18 Local and Tribal Intergovernmental Consultation presented by the Governor's Office of Planning and Research and the Association of Environmental Professionals, Orange County Chapter, September 2006.

Senate Bill 18 Consultations presented by the Governor's Office of Planning and Research, the Native American Heritage Commission, the California Tribal Business Alliance, Hanson Bridgett Marcus Vlahos Rudy, LLP, and the City of Riverside, December 2005.

An Overview of the Senate Bill 18 Consultation Process Used by the Morongo Band of Mission Indians presented by the Association of Environmental Professionals, Inland Empire Chapter, hosted by Britt Wilson, October 2005.

Seminar on providing expert witness testimony presented by the California Energy Commission, June 2000.

Analysis and Preservation of Historic Bridges presented by the American Society of Civil Engineers, 1999.

Introduction to Federal Projects and Historic Preservation Law presented by the Advisory Council on Historic Preservation and the GSA Interagency Training Center, 1994.

Cultural Resources Compliance Workshop presented by the State of California Department of Transportation, 1994.

Cultural Resource Management (unofficial attendance) presented by the U.S. Army Corps of Engineers, 1991.

SCUBA diver under the sanctions of N.A.U.I.

PROFESSIONAL CERTIFICATIONS

Register of Professional Archaeologists (RPA)
Orange County Certified Archaeologist

PROFESSIONAL EXPERIENCE

Principal/Archaeologist, LSA Associates, Inc., Irvine, California, 1993–present.

Archaeology and Paleontology Laboratory Manager, John Minch and Associates, 1992–1993.

Assistant Project Archaeologist, Gallegos & Associates, 1991.

Logistical Field Coordinator, INFOTEC Research, Inc., 1991.

Staff Archaeologist, Chambers Group, Inc., 1989–1991.

Archaeological Writer/Editor, Scientific Resource Surveys, 1988.

Archaeologist/Assistant to the Principal Investigator, Center for Anthropological Studies, University of California at Santa Barbara, 1986.

Realtor, First Hawaiian Realty, 1977–1984.

Staff Archaeologist, Historic Preservation Division, Denver Service Center, National Park Service, 1975–1976.

PRINCIPAL PROFESSIONAL RESPONSIBILITIES

As a Principal for the LSA Irvine Cultural and Paleontological Group, Ms. McLean is responsible for coordinating and directing archaeological projects in compliance with CEQA, NEPA, NHPA Section 106, and Caltrans. Ms. McLean coordinates and directs archaeological and paleontological projects, oversees subsequent laboratory operations, and prepares technical reports. Ms. McLean provides

Principal oversight and review of documents and is also responsible for departmental staffing and management.

FIELD AND LABORATORY EXPERIENCE

Ms. McLean's experience includes 22 years of prehistoric and historic archaeology in California; two years of historic archaeology in several New England states and Texas (underwater archaeology in the Gulf of Mexico); and prehistoric archaeology in the Midwest, including work at Cahokia Mounds State Park, a World Heritage site. She has laboratory experience with prehistoric and historic archaeology collections from various parts of the United States, including extensive work with California archaeological and paleontological collections. Her laboratory experience includes directing laboratory operations.

TECHNICAL REPORTS

Ms. McLean has authored and coauthored over 120 technical reports for LSA. The following are some of these reports:

Historic Property Survey Report for the City of Colton Bike Lane Project, Cities of Colton and San Bernardino, San Bernardino County, California, 2006.

Historic Property Survey Report for the Interstate 10/Cedar Avenue Project, County of San Bernardino, California, 2006.

Historic Property Survey Report for the Interstate 10/Cherry Avenue Project, City of Fontana, San Bernardino County, California, 2006.

Historic Property Survey Report for the State Route 91-Add HOV Lanes Through Riverside-Adams Street to Route 60/215 Junction, City of Riverside, Riverside County, California, 2006.

Cultural Resource Assessment of 22 Natural Treatment System Facility Sites Within the San Diego Creek Watershed, Natural Treatment System project, Irvine Ranch Water District, Orange County, California, 2005.

Finding of No Adverse Effect Without Standard Conditions Pursuant to the Section 106 Programmatic Agreement of January 2004 for The Orange County Gateway Project, Cities of Placentia, Anaheim, and Yorba Linda, Orange County, California, EA 965100, 2005.

Historic Property Survey Report for the State Route 91/Van Buren Boulevard Interchange Project, City of Riverside, Riverside County, California, 2004.

Monitoring and Inadvertent Discovery Plan for the Bayview Senior Affordable Housing Project, City of Newport Beach, Orange County, California, 2004.

Results of Cultural Resources Due Diligence for the Neff Block and the Fascia Block Redevelopment Project in the City of Monrovia, Los Angeles County, California. 2004.

Cultural Resource Assessment and Evaluation for the Yorba Linda Craftsman Residential Development, City of Yorba Linda, Orange County, California, 2003.

Historic Property Survey Report for 7th Standard Road Widening Project, City of Shafter, Kern County, California, 2003.

Historic Property Survey Report for the First Street Bridge over San Lorenzo Creek, King City, County of Monterey, California, 2003.

Historic Property Survey Report for the West Vista Way Widening Project, City of Vista, San Diego County, 2003.

Archaeological and Historic Architecture Assessment for the Former Santa Ana II Manufactured Gas Plant Site, City of Santa Ana, Orange County, California, 2002.

First Supplemental Historic Property Survey Report for the State Route 74 - Dexter Avenue to Seventh Street, City of Lake Elsinore, Riverside County, California, 2002.

Cultural Resource Assessment for the Proposed Kit Carson Middle School, Escondido Union School District, City of Escondido, San Diego County, California, 2001.

Historic Property Survey Report for the Gabilan/Natividad Creeks Class I Bicycle/Pedestrian Path Project, City of Salinas, Monterey County, California, 2001.

Archaeological and Historical Assessment at 7911 El Paseo Grande, La Jolla (City of San Diego), San Diego County, California, 2000.

Preliminary Staff Assessment, Moss Landing Power Plant Project, Cultural Resources, for the California Energy Commission, Monterey County, California, 2000.

Results of Archaeological Monitoring at the Sunset Heights (El Norte) Project in the City of Escondido, San Diego County, California, 2000.

Cultural Resources Assessment of the Kaiser West End Project, City of Fontana, San Bernardino County, California, 1997.

Historic Property Survey Report for the Route 99/Jack Tone Road Interchange Reconstruction Project, City of Ripon, San Joaquin County, California, 1999.

Cultural Resources Assessment for Amargosa Creek Improvement Project, Los Angeles County, California, 1996.

Cultural Resources Assessment for Ritter Ranch, Planning Area 1, Los Angeles County, California, 1996.

Cultural Resources Assessment, Southern California Gas Company Natural Gas Transmission Line 6902 El Centro to Mexicali, Imperial County, California, 1996.

Cultural Resources Assessment for the Alviso Marina, Santa Clara County, California, 1995.

Test Level Investigations at CA-ORA-1371/H, East Hicks Canyon, Orange County, California, 1995.

Archaeological and Historical Investigations of the Cram School Site and Tentative Tracts 13551 and 15554, East Highlands, San Bernardino County, California, 1994.

Historic Property Survey Report for Proposed Material Borrow Sites for the State Route 58 Mojave Freeway Project in Mojave, Kern County, California, 1994.

Cultural Resources Assessment of Alternative Sites for the Russell Ranch Project, 1993.

Ms. McLean authored or co-authored the following technical reports prior to her employment with LSA:

Cultural Resources Investigations: Meadow Insect Salvage Timber Sale, for INFOTEC Research, Inc., 1991 (with Roderic N. McLean).

Cultural Resource Survey and Assessment for the Geysers Geothermal Leasing Program, for Chambers Group, Inc., 1991 (with Peter Carr and Roderic N. McLean).

Cultural Resource Survey and Assessment for Raging Waters, for Chambers Group, Inc., 1990.

Cultural Resource Survey and Assessment for Rolling Hills Ranch, for Chambers Group, Inc., 1990 (with Paul Farnsworth).

An Assessment of Site 5MF605 in Browns Park National Wildlife Refuge, Colorado, for National Park Service, Department of the Interior, 1976 (with Catherine H. Blee and Laurence L. Loendorf).

Harper's Ferry National Historical Park Archaeological Investigation of Buildings 8 and 9, for National Park Service, Department of the Interior, 1976.

Harper's Ferry National Historical Park, West Virginia, Archaeological Investigation of Buildings 9 and 10, for National Park Service, Department of the Interior, 1976 (with Catherine H. Blee).

William Howard Taft National Historic Site Archaeological Investigation of Foundation and Cistern, for National Park Service, Department of the Interior, 1975.

PROFESSIONAL PUBLICATIONS

Test excavation of the Charles and Mildred Washington gravesite. Magazine of the Jefferson County, West Virginia Historical Society XLIII: 31–33, 1977.

PROFESSIONAL PRESENTATIONS

Society for Historical Archaeology (Williamsburg, Virginia), "Artifact Analysis Results – the Noble Adobe – Site 33-14135," January 20, 2007.

Pacific Coast Archaeological Society (Irvine, California), "Excavation of CA-ORA-269, a San Joaquin Hills Rock Shelter," October 14, 2004.

California State University, Fullerton, Cultural Resource Management Class, "Cultural Resource Management," April 14, 2004.

PROFESSIONAL VOLUNTEER ACTIVITIES

Society for California Archaeology Annual Meeting (Ventura), Volunteer Organizer, March 29–April 2, 2006.

Society for California Archaeology Annual Meeting (Riverside), Volunteer Organizer, March 17–21, 2004.

PROFESSIONAL MEMBERSHIPS

Society for Historical Archaeology
Society for California Archaeology
Pacific Coast Archaeological Society

5.6 Land Use

13. Legal Parcel Status (Appendix B [g][3][C])

A discussion of the legal status of the parcel(s) on which the project is proposed. If the proposed site consists of more than one legal parcel, describe the method and timetable for merging or otherwise combining those parcels so that the proposed project, excluding linears and temporary laydown or staging area, will be located on a single legal parcel. The merger need not occur prior to a decision on the Application but must be completed prior to the start of construction.

Information required to make AFC conform with regulations:

Provide a discussion and a copy of the recorded final map, lot line adjustment map, or Certificate of Compliance demonstrating that the property site was established in accordance to the procedures and the requirements set forth in the State Subdivision Map Act (Government Code section 66410 – 66499.58).

Response—The Applicant has requested a recorded final map and Certificate of Compliance or other document to demonstrate that the property was established in accordance with the Subdivision Map Act. Discussions with the San Diego County Assessor's Office (see Record of Conversation, Attachment DA5.6-1) indicated that the parcel was established at least by 1965. This date is established by the earliest version of the Assessor's Parcel Map available at the Assessor's office on microfilm. Attachment DA5.6-2 is a copy of the 1965 map. On this map, the CVEUP parcel (at that time numbered APN 629-062-018) is shown in the lower right-hand corner as a 3.79-acre parcel. The table at the upper right hand corner of this document establishes that this parcel was established before the 1965. This indicates that the parcel was not established pursuant to the Subdivision Map Act, which was passed into law in 1972. The Applicant are continuing to search for documentation that will establish exactly when the parcel was established and will provide this information to the CEC Staff when available.

14. Permit Schedule (Appendix B [i][3])

A schedule indicating when permits outside the authority of the commission will be obtained and the steps the applicant has taken or plans to take to obtain such permits.

Information required to make AFC conform with regulations:

Please provide a schedule for any land use planning action(s) required for the proposed project to make it consistent with local LORS.

Response—There are no land use planning actions required for the proposed project to make it consistent with local LORS. The project is consistent with LORS as currently planned and sited and would not require rezoning or zoning exemptions or variances or other discretionary actions within the City's jurisdiction, but for the CEC's sole authority for power plant licensing.

ATTACHMENT DA5.6-1

Record of Conversation

CH2MHILL TELEPHONE CONVERSATION RECORD

Call To: John Karpinski, Senior Technician, San Diego County Assessor's Office

Phone No.: 619-685-2455 **Date:** September 19, 2007

Call From: Douglas Davy **Time:** 11:00 AM

Subject: Parcel history – Assessor's Parcel # 629-06-018

Project No.: 360346, MMC Energy Chula Vista Energy Upgrade Project

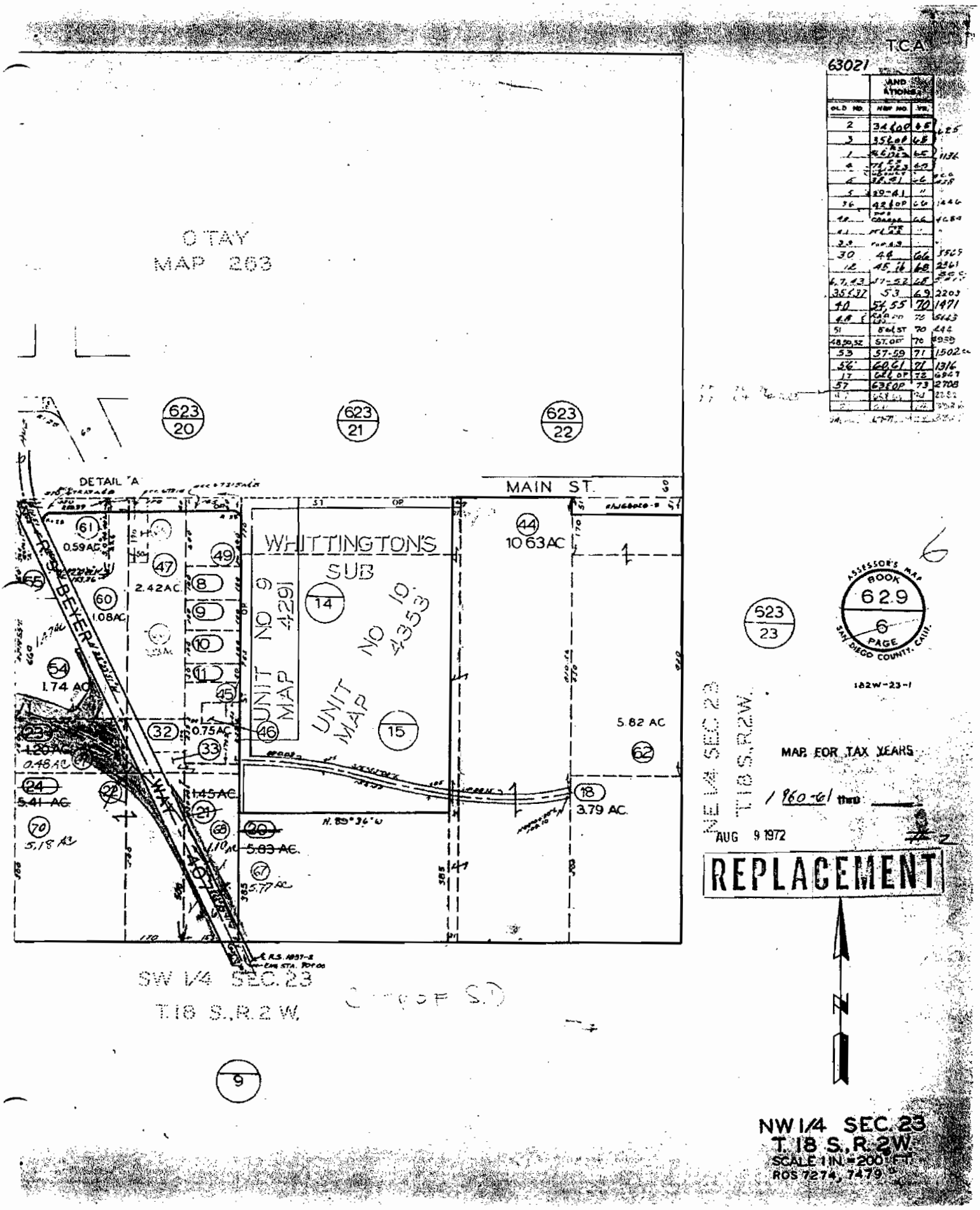
I telephoned the San Diego County Assessor's Office to ask whether or not a Subdivision Map or Survey Map is available through their records, of Parcel 629-060-04, the 3.82-acre site of the MMC Energy Chula Vista Energy Upgrade Project. Mr. Karpinski answered the telephone and fielded my question.

When Mr. Karpinski looked up the parcel, he noted that "there is no recorded subdivision." Rather, the parcel is located within an area of "section lands." He did indicate to me that the parcel number had changed "for the convenience of the Assessor's Office" in 1982. This change was made strictly to reform the parcel numbering system in the map block for taxing purposes, and not because of any change in the parcel. Before 1982, the parcel number was 629-062-018.

I asked Mr. Karpinski whether or not he could locate earlier records indicating when the parcel was created. He said that he would look in the Assessor's Office's oldest map book copy, on microfilm, dated 1965. He indicated to me that the parcel in question had been created by 1965 and was the same shape, size, and location then as it is today. He promised to send me a fax of the microfilmed 1965 map. This indicates that the parcel was created before 1974 and is therefore not subject to the Subdivision Map Act.

ATTACHMENT DA5.6-2

Assessor's Parcel Map - 1965


T.C.A.
63021
OLD NO.
NEW NO.
YR.
OTAY
MAP 263
623/20
623/21
623/22
DETAIL "A"
MAIN ST.
WHITTINGTON'S SUB
UNIT NO 9 MAP 4291
UNIT NO 10 4353
R.S. BEYER
0.59 AC
2.42 AC
1.08 AC
1.74 AC
0.75 AC
1.20 AC
0.48 AC
5.41 AC
1.45 AC
5.83 AC
5.77 AC
10.63 AC
5.82 AC
3.79 AC
N. 89° 36' W.
623/23
ASSESSOR'S MAP BOOK 629 PAGE 6 SAN DIEGO COUNTY, CALIF.
182W-23-1
NE 1/4 SEC. 23 T.18 S., R.2W.
MAP FOR TAX YEARS
1960-61 thru
AUG 9 1972
REPLACEMENT
SW 1/4 SEC. 23
T.18 S., R.2W.
9
NW 1/4 SEC. 23
T. 18 S., R. 2W.
SCALE 1 IN. = 200 FT.
ROS 7274, 7479

5.10 Socioeconomics

15. (Appendix B [g][7][B][vii])

An estimate of the total construction payroll and separate estimates of the total operation payroll for permanent and short-term (contract) operations employees;

Information required to make AFC conform with regulations:

Please provide separate estimates of the total operation payroll for permanent and short-term (contract) operations employees.

Response—The project will have two employees during the operations phase. Both employees will be contract employees. Therefore, the operation payroll, as stated in Section 5.10.2.4.4 of the AFC $112,000 and is entirely for contract employees.

5.12 Traffic and Transportation

16. Peak Traffic Counts (Appendix B [g][5][C][ii])

Current daily average and peak traffic counts;

Information required to make AFC conform with regulations:

Please provide peak traffic counts.

Response—Table DA5.12-1 provides peak counts for key roadway segments.

TABLE DA5.12-1
Existing Roadway Segment Peak Hour Volumes

Roadway Segment	AM Peak	PM Peak
Main St between I-5 NB ramps and Broadway	1500	1900
Main St between Broadway and Fourth Ave.	1560	2005
Main St between Fourth Ave. and Third Ave.-Beyer Way	1360	1730
Min St between Third Ave-Beyer Way and Albany Ave.	1390	1900
Main St between Albany Ave. and Hilltop Dr.	1440	2090
Main St between Hilltop Dr. and I-805 ramps	1580	2100
Main St between I-805 ramps and Heritage Road	1940	2580

Obtained from the "Construction Traffic Analysis" report by LSA Associates Inc., February 2007

17. Levels of Service During Operation (Appendix B [g][5][C][iii])

Current and projected levels of service before project development, during construction, and during project operation;

Information required to make AFC conform with regulations:

Please provide projected levels of service during project operation.

Response— During project operation, CVEUP is expected to generate approximately four average daily vehicle trips. That is, the project would generate a very low volume of trips. Thus, operational traffic will not have any measurable impact on the study area roadways. As a result, the existing roadway and intersection LOS conditions will remain the same during project operation. Existing LOS conditions were presented in AFC Tables 5.12-3 and 5.12-5.

18. Percentage of Truck Traffic (Appendix B [g][5][C][v])

Estimated percentage of current traffic flows for passenger vehicles and trucks; and

Information required to make AFC conform with regulations:

Please provide an estimated percentage of current traffic flows for trucks on Main Street between I-5 and I-805.

Response— It is necessary to estimate the percentage of trucks on Main Street, because this information is not available from published sources. The estimate is based on the 2005 truck traffic data published by Caltrans for I-5 and I-805 in the vicinity of the project site (close to Main Street junction). On I-5, truck percentage is about 4 percent. On I-805, this percentage is higher and is about 7 percent. Thus, an average of 5.5 percent trucks is assumed for Main Street.

19. Road Features Affecting Public Safety (Appendix B [g][5][C][vi])

An identification of any road features affecting public safety.

Information required to make AFC conform with regulations:

Please provide an identification of any road features affecting public safety

Response—Road features such as dangerous intersections and rail road crossings are not located along the project area roadways or routes that project-related traffic would take. The intersections operate with acceptable Levels of Service. Therefore, there are no road features affecting public safety in the immediate project vicinity. The project itself, furthermore, would not install any new roadways that would have the potential to affect public safety.

20. Operation Impacts (Appendix B [g][5][D])

An assessment of the construction and operation impacts of the proposed project on the transportation facilities identified in subsection (g)(5)(C). Also include anticipated project-specific traffic, estimated changes to daily average and peak traffic counts, levels of service, and traffic/truck mix, and the impact of construction of any facilities identified in subsection (g)(5)(C).

Information required to make AFC conform with regulations:

Please provide an assessment of the operation impacts of the proposed project on the transportation facilities identified in subsection (g)(5)(C). Also include anticipated project-specific traffic, estimated changes to daily average and peak traffic counts, levels of service, and traffic/truck mix, and the impact of construction of any facilities identified in subsection (g)(5)(C).

Response—During project operations, it is estimated that only 4 daily trips will be added to local roadways. These include the AM and PM peak trips of the two extra personnel at the CVEUP facility. Since the number of trips is significantly low, no impacts are associated with project operations. There are no plans for local roadway construction that would impact project transportation operations.

21. Agency Officials (Appendix B [i][2])

The name, title, phone number, address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.

Information required to make AFC conform with regulations:

Please provide the address (required), and email address (if known), of an official who was contacted within each agency, and also provide the name of the official who will serve as a contact person for Commission staff.

Response—Table DA5.12-2 contains the names and addresses of Traffic and Transportation agencies.

TABLE DA5.12-2
Permits and Permit Schedule for CVEUP Traffic and Transportation

Permit	Administering Agency	Schedule
Single/annual-trip transportation permit for oversized loads and oversized vehicles	Caltrans – South Region Transportation Permits Office 655 W 2nd Street San Bernardino, CA 92401 Steven Dickey Steven_dickey@dot.ca.gov (909) 383-4637	Obtain when necessary, 2-hour processing time (single trip) to 2 weeks (annual trip)
Hazardous materials transportation license	California Highway Patrol HM Licensing Program 444 N. 3rd St., Suite 310 Sacramento, CA 95811 Linda Brescia Lbrescia@chp.ca.gov (916) 327-5039	Obtain when necessary, approximately 2-week processing time
Moving permit for moving any extra-legal load which is overweight and/or oversized	San Diego County Department of Public Works County Operations Center 5555 Overland Avenue, Suite 2156 San Diego, CA 92123, USA Phone: (858) 694-2212 John Snyder John.snyder@sdcounty.ca.gov 858-694-2055	Obtain when necessary, most moving permits can usually be issued over the counter
Transportation permit for the transportation of oversize and overweight loads through the City of Chula Vista	City of Chula Vista Engineering Department 276 4th Ave Chula Vista, CA 91910 Ellen Vistro contactengineering@ci.chula-vista.ca.us 619-691-5024	Obtain when necessary, same-day processing if the insurance certificate is on file; otherwise, processed as soon as the insurance certificate is provided

5.14 Waste Management

23. Enforcement Actions (Appendix B [g][12][C])

A description of all waste disposal sites which may feasibly be used for disposal of project wastes. For each site, include the name, location, classification under Title 23, California Code of Regulations, § 2530 et seq., the daily or annual permitted capacity, daily or annual amounts of waste currently being accepted, the estimated closure date and remaining capacity, and a description of any enforcement action taken by local or state agencies due to waste disposal activities at the site.

Information required to make AFC conform with regulations:

Provide a description of any enforcement action taken by local or state agencies due to waste disposal activities at the site.

Response—A database search was conducted on the California Integrated Waste Management Board's (CIWMB) Solid Waste Information System (SWIS) on September 20, 2007 for the three landfills identified in the CVEUP Application. According to CIWMB, there are currently no enforcement actions against any of the three landfills. Two of the three landfills have however received inspection findings during recent periodic inspections:

- During the August 16, 2007 periodic Local Enforcement Agency (LEA) inspections, the Otay Landfill received a violation under regulation 20919.5 Explosive Gas Control, and an Area of Concern was noted under regulation 20830 - Litter Control. No additional information was provided.
- During the August 10, 2007 periodic inspection by the LEA at the Sycamore Sanitary Landfill, two Areas of Concern were noted. One was under regulation 20919.5 - Explosive Gas Control and PRC 44014(b) - Operator Complies with Terms & Conditions of Permit. No additional information was provided.
- During the July 26, 2007 periodic inspection by the LEA at the West Miramar Sanitary Landfill, no Violations or Areas of Concern were reported.

5.15 Water Resources

24. Flood Control Facilities (Appendix B [g][14][B][iv])

Flood control facilities (existing and proposed); and

Information required to make AFC conform with regulations:

Provide a detailed description or plans for any existing or proposed flood control facilities.

Response—The Lower Otay Reservoir controls releases and therefore exerts significant hydraulic control on the Otay River watershed. Sixty-nine percent of the approximately 145-square mile Otay River watershed is above the reservoir. The Otay Reservoir was designed for water supply, and has limited capacity for flood control. Nevertheless, the reservoir effectively controls most flows from small storms in the upstream watershed. The storage levels in the reservoir determine the amount of runoff retained by the dam. It typically completely impounds all upstream runoff from smaller storms, and effectively leaves the downstream mainstem of the Otay River dry except in extreme events. Therefore flooding potential at the Project site from the Otay River watershed is highly unlikely based on current and past flooding history.

Telegraph Canyon Creek is the adjacent drainage basin to the north of the Otay River Basin. This waterway originates in the hills east of the City of Chula Vista and flows to the southwest and eventually empties directly into San Diego Bay. It flows through a lined channel north of the site before discharging into the bay. Floodwater is controlled by controlling drainage into the lined channel. Telegraph Canyon Creek is a tributary to Carbon Canyon Creek. Flows in Carbon Canyon Creek can be diverted to the Santa Ana River or the San Gabriel River depending on recharge and flood control needs. Due to this diversion option, flood control is effective in the project area in this basin.

The adjacent watershed to the south of the Otay River basin is the Tijuana River watershed. It is a binational watershed located on the westernmost portion of the US- Mexican border. The basin contains three surface water reservoirs, various flood control works, and a National Estuarine Sanctuary as flood control works. The major tributary drainages include the Cottonwood and Campo creeks in the United States, and the Rio Las Palmos system in Mexico. There are three dams in the Tijuana River watershed, controlling 78 percent of the area. Due to the distance of the river from the project site, flooding in the Tijuana River basin would not affect the immediate project area.

25. Local requirements (Appendix B [g][14][D][iv])

A copy of applicable regional and local requirements regulating the drainage systems, and a discussion of how the project's drainage design complies with these requirements.

Information required to make AFC conform with regulations:

Provide a copy of applicable regional and local requirements regulating the drainage systems, and a discussion of how the project's drainage design complies with these requirements.

Response—Copies of the County of San Diego Hydrology Manual and the City of Chula Vista's Development and Redevelopment Projects Storm Water Management Standards Requirements are included as Attachment DA5.15-1. AFC Section 5.15.2.3 discusses compliance with these requirements.

26. Effects on Water Users (Appendix B [g][14][E][i])

The effects of project demand on the water supply and other users of this source, including, but not limited to, water availability for other uses during construction or after the power plant begins operation, consistency of the water use with applicable RWQCB basin plans or other applicable resource management plans, and any changes in the physical or chemical conditions of existing water supplies as a result of water use by the power plant;

Information required to make AFC conform with regulations:

Provide a discussion on the effects of project demand on the water supply and other users of this source, including, but not limited to, water availability for other uses during construction or after the power plant begins operation, consistency of the water use with applicable RWQCB basin plans or other applicable resource management plans, and any changes in the physical or chemical conditions of existing water supplies as a result of water use by the power plant.

Response—The CVEUP is not expected to have any significant adverse effects on other water users. The City of Chula Vista has issued a "Will-Serve" letter to the project proponent. This document provides that, based on the regional, state and federal water quality requirements with which the City of Chula Vista must comply, the project will not have any significant effects on other users of water. In addition, the project's use of water will be relatively small, compared with other kinds of industrial users. Water supply will continue to be available and sufficient for other uses during project construction and operation.

The San Diego Region (Region 9) of the Regional Water Quality Control Board has written the Water Quality Control Plan for the San Diego Basin (Basin Plan), of which the City of Chula Vista is a participating member. The Basin Plan requires all municipalities to be in compliance with federal and state water quality requirements. The City of Chula Vista implements state requirements through *Standard Urban Stormwater Mitigation Plan.* The Basin Plan is included in Attachment DA5.15-1.

Page 5.15-11 states: "Quality of the discharge would be similar, as this simple-cycle project would not involve water cycling." In other words, the chemical composition of the water entering the project site will be essentially the same as the water discharged. By contrast, combined-cycle plants cycle water through evaporative cooling systems several times, thus concentrating constituents. The CVEUP will use relatively little water, and most of the water used will be evaporated, resulting in relatively small discharge to the sanitary sewer system.

27. 100-year Floodplain (Appendix B [g][14][vi])

The effects of the project on the 100-year flood plain, flooding potential of adjacent lands or water bodies, or other water inundation zones; and

Information required to make AFC conform with regulations:

Provide a discussion of the effects of the project on the 100-year flood plain, flooding potential of adjacent lands or water bodies, or other water inundation zones; was not discussed.

Response—The project will not affect the flooding potential of adjacent lands. The proposed drainage plan incorporates all runoff into the same discharge outlet that is currently used which discharges into the Otay River Valley Drainage. The new drainage plan ensures that no flooding will occur onsite or to adjacent areas, and that all discharge and runoff associated with the site will be channeled into the Otay River Valley Drainage per the plant NPDES permit.

28. Assumptions and Calculations (Appendix B [g][14][vii])

All assumptions, evidence, references, and calculations used in the analysis to assess these effects.

Information required to make AFC conform with regulations:

Provide assumptions, evidence, references or calculations used in the analysis to assess these affects.

Response—Stormwater runoff calculations and assumptions used in the stormwater management analysis provided in the Storm Water Management Plan provided in AFC Appendix 5.15A. This document shows that the amount of runoff for which the proposed system is designed is consistent with and sufficient for expected rainfall events in the project area and at the project site. The site design is in compliance with the City of Chula Vista's design requirements per the City's *Development and Redevelopment Projects Storm Water Management Standards Requirements Manual.*

ATTACHMENT DA5.15-1

Drainage Standards

Note: The Drainage Standards Documents cited are very large documents that are available from the following publicly accessible sources.

Development and Redevelopment Projects Storm Water Management Standards Requirements Manual: http://www.ci.chula-vista.ca.us/City_Services/Development_Services/Engineering/stormWaterManual.asp

Water Quality Control Plan for the San Diego Basin (Basin Plan): http://www.swrcb.ca.gov/rwqcb9/programs/basinplan.html

County of San Diego Hydrology Manual: http://www.sdcounty.ca.gov/dpw/engineer/hydrologymanual.html

In order avoid unnecessary use of paper resources, we have provided them on the electronic copies (CD-ROM) of this Data Adequacy Supplement, but not in this hard-copy submittal. The Applicant will make these documents available on request, either in paper or electronic form.