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June 5, 2008

Ms. Angela Hockaday
California Energy Commission
Docket Unit
1516 Ninth Street
Sacramento, CA 95814-5512

Re: **CANYON POWER PLANT'S**
DATA RESPONSES TO DATA REQUESTS 1 - 55
DOCKET NO. 07-AFC-9

Dear Ms. Hockaday:

Enclosed for filing with the California Energy Commission are one (1) original and eighteen (18) copies of the **CANYON POWER PLANT'S DATA RESPONSES TO DATA REQUESTS 1 - 55**, for the Canyon Power Plant Energy Project (07-AFC-9).

Sincerely,

Marguerite Cosens

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION *For the CANYON POWER PLANT* **PROJECT**	**Docket No. 07-AFC-9** **PROOF OF SERVICE**

INSTRUCTIONS: All parties shall either (1) send an original signed document plus 12 copies or (2) mail one original signed copy AND e-mail the document to the address for the Docket as shown below, AND (3) all parties shall also send a printed or electronic copy of the document, which includes a proof of service declaration to each of the individuals on the proof of service list shown below:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 07-AFC-9
1516 Ninth Street, MS-14
Sacramento, CA 95814-5512
docket@energy.state.ca.us

APPLICANT

Southern California Public Power Authority (SCPPA)
c/o City of Anaheim
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DECLARATION OF SERVICE

I, Marguerite Cosens, declare that on June 5, I deposited copies of the attached **Canyon Power Plant's Data Responses to Data Requests 1-55** in the United States mail at with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.

Marguerite Cosens

Data Responses
CANYON POWER PLANT

submitted to:

California Energy Commission

submitted by:

Southern California Public Power Authority

with support from:

URS Corporation

June 2008

Data Responses
CANYON POWER PLANT
June 2008

CANYON POWER PLANT
APPLICATION FOR CERTIFICATION
RESPONSE TO CEC DATA REQUESTS
07-AFC-9

Technical Area: Air Quality

Data Request 1-AIR: Please identity any PM_{10} ERCs owned by the applicant that the District will require to be surrendered as a condition for participation in the Priority Reserve. Please include the ERC number and amount in pounds per day, and ERC source location and holder name.

Response: At this time neither the City of Anaheim nor the Southern California Public Power Authority (SCPPA) own PM_{10} ERCs and as stated in the AFC, the Canyon Power Project (CPP) PM_{10} emissions will be offset with Priority Reserve Credits in accordance with South Coast Air Quality Management District (SCAQMD) Rule 1309.1. Section 6.2.6.3.1 of the AFC and Section 8.3.1 of the Application for Permit To Construct demonstrate how the CPP complies with Rule 1309.1 requirements and therefore qualifies to access the Priority Reserve for its PM_{10} credits.

Technical Area: Air Quality

Data Request 2-AIR: If the applicant is unable to adequately respond to Data Requests 1 above, please provide a status report starting June 1, 2008, and monthly until the District has issued the final determination of compliance. The report should provide new and updated information from previous status reports as appropriate. The reports should include:

a) Contact names and telephone numbers

b) Company or source names

c) Pollutant credit types and amounts in pounds per day

d) ERC certificate numbers

e) The methods of emission reductions (e.g., shutdown, reduction of hours of operation, emission controls, etc.)

f) The status of ERC or option negotiations

g) The location of the emission reduction credits

Response: The CPP Project Team will submit a monthly Confidential Air Quality Status Report beginning on July 1, 2008 in accordance with this Data Request.

BACKGROUND: NITROGEN OXIDES

The applicant proposes to rely on the District's nitrogen oxides (NO_X) RECLAIM program to acquire emission reduction credits to mitigate the project's NO_X emission impacts.

Technical Area: Air Quality

Data Request 3-AIR: Please provide a list of NO_X RECLAIM trading credits (RTCs) that the applicant owns or has under option contract. Please update staff as to the status of securing the NO_X RTCs as part of the status report discussed in Data Request 2.

Response: At this time neither the City of Anaheim nor SCPPA has purchased the NO_X RECLAIM trading credits (RTCs) necessary to begin construction of the CPP. The CPP Project Team will report progress regarding securing the RTCs in its monthly Confidential Air Quality Status Reports submitted pursuant to Data Request Number 2.

BACKGROUND: CUMULATIVE ASSESSMENT

The applicant indicates on page 6.2-49 in the AFC that the required cumulative assessment will be completed and submitted as pertinent data becomes available from the District.

Technical Area: Air Quality

Data Request 4-AIR: Please provide the estimated date that the cumulative assessment will be complete.

Response: The cumulative modeling analysis was delayed for two reasons:

1) The CPP Team has been working with SCAQMD to reach agreement regarding emissions and stack parameters for remodeling the CPP emissions to reflect increased turbine startup and shutdown times and increased annual hours of operation for the blackstart engine. The agreement was reached May 22, 2008.
2) Difficulty in obtaining complete emissions and stack parameter data for potential cumulative sources from SCAQMD.

We expect that the revised CPP modeling and the revised cumulative modeling will be completed before July 1, 2008. The work conducted to date to develop the required information to support cumulative modeling and the remaining tasks that will need to be completed to finalize the cumulative modeling are described in the response to Data Request 5.

Technical Area: Air Quality

Data Request 5-AIR: Please include a status of the activities regarding the cumulative assessment, until its completion, in the monthly status report.

Response: SCAQMD recently (on May 22, 2008) approved the revised modeling parameters for the CPP turbines and blackstart engine.

Since the date of our PTC/PTO application to SCAQMD, the CPP Team has been in frequent contact with SCAQMD in an effort to obtain the data needed to: 1) determine which new sources within 6 miles from the CPP need to be included in the cumulative analysis, and 2) obtain location coordinates, stack parameters and emissions data for those sources that should be included. This process started with our submittal of a list to the District of all zip codes areas wholly or partially contained within the 6-mile radius from CPP. The very long list of permits that was provided back to URS was reviewed to determine sources not permitted within the last two years, sources not located within 6 miles and sources of a type typically emits only ROGs, which are not modeled. Next, we requested data from SCAQMD inspectors assigned to the facilities that had not been eliminated by the initial screening. In some cases, the information provided was sufficient to eliminate additional facilities if, for example, the new permit was issued for an emission control device, if the only emissions were determined to be ROGs, or if the quantity of emissions was found to be very small. The complete list of sources, including those that have been eliminated, as well as those still under consideration, is provided in the "List" tab of the attached Excel workbook. To date, at least some emissions and stack parameter information has been obtained for most of the sources still under consideration. The CPP Team will work with CEC to finalize the cumulative list and to develop reasonable estimates for parameters which cannot be obtained from SCAQMD.

Until the cumulative analysis has been completed, the applicant will include information on the status of this effort in the monthly status reports.

Fac ID	SIC Co	Name	Appl Nbr	Appl Status	BACT	BACT Desc	AQMD Inspector	Insp Phone	Included	Reason eliminated
153049		S C YAMAMOTO, INC	473302	APPLICATION ON HOLD	40101	I C E (50-500 HP) N-EM STAT OIL ONLY	ABDI MAJIDIFAR	9093962449	x	included in cumulative modeling
153049		S C YAMAMOTO, INC	473303	APPLICATION ON HOLD	40101	I C E (50-500 HP) N-EM STAT OIL ONLY	ABDI MAJIDIFAR	9093962449		APPLICATION REJECTED
128484	1794	CROSSROADS SERVICES	473182	APPLICATION ON HOLD	41901	I C E (50-500 HP) N-EM PORT N-RENT DIESE	ABDI MAJIDIFAR	9093962449		No data available. The permit application for the compressor was sent back to the applicant based on their request. The company has decided not to operate the compressor any longer. (SCAQMD)
35006	1081	KINSBURSKY BROTHERS INC	470424	ASSIGNED TO ENGINEER - CLASS I		DUST COLLECTOR/HEPA, OTHER R-1401 TOXICS	AL KING	9093962637		This application is for a baghouse.
152081		FREY ENVIRONMENTAL, INC.	469467	ASSIGNED TO ENGINEER - CLASS I	28000	SOIL TREAT VAPOR EXTRACT GASOLINE UNDER	ARTURO ARREOLA	9093962534		outside 6 miles
111813	4612	CONOCOPHILLIPS COMPANY	467368	ASSIGNED TO ENGINEER - CLASS I	231906	STORAGE TANK FX RF W/ INT FLOATER CRUDE	ARTURO ARREOLA	9093962534		storage tank
12893	2479	POWDERCOAT SERVICES INC	470554	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH/ENCLOSURE, POWDER COATING SYSTEM	ASHA RAWAL	9093962506		spray booth - VOC source
12893	2479	POWDERCOAT SERVICES INC	470552	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH/ENCLOSURE, POWDER COATING SYSTEM	ASHA RAWAL	9093962506		spray booth - VOC source
12893	2479	POWDERCOAT SERVICES INC	470553	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH/ENCLOSURE, POWDER COATING SYSTEM	ASHA RAWAL	9093962506		spray booth - VOC source
12893	2479	POWDERCOAT SERVICES INC	470551	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH/ENCLOSURE, POWDER COATING SYSTEM	ASHA RAWAL	9093962506		spray booth - VOC source
153470	3999	GOMEZ SANDBLASTING	474948	APPLICATION ON HOLD	284	ABRASIVE BLASTING (CABINET/MACHINE/ROOM)	AZAR DABIRI	9093962367	?	new source
153470	3999	GOMEZ SANDBLASTING	474949	APPLICATION ON HOLD		DUST COLLECTOR CARTRIDGE TYPE	AZAR DABIRI	9093962367	?	new source
153470	3999	GOMEZ SANDBLASTING	474929	APPLICATION ON HOLD	263	OVEN, POWDER COATING]	AZAR DABIRI	9093962367		VOC source
153470	3999	GOMEZ SANDBLASTING	474946	APPLICATION ON HOLD		SPRAY BOOTH/ENCLOSURE, POWDER COATING SYSTEM	AZAR DABIRI	9093962367		spray booth - VOC source
153470	3999	GOMEZ SANDBLASTING	474950	APPLICATION ON HOLD		DUST COLLECTOR CARTRIDGE TYPE	AZAR DABIRI	9093962367	?	new source
153470	3999	GOMEZ SANDBLASTING	474945	APPLICATION ON HOLD		SPRAY BOOTH METALLIZING	AZAR DABIRI	9093962367		spray booth - VOC source
153470	3999	GOMEZ SANDBLASTING	474947	APPLICATION ON HOLD	284	ABRASIVE BLASTING (CABINET/MACHINE/ROOM)	AZAR DABIRI	9093962367	?	new source
35006	1081	KINSBURSKY BROTHERS INC	438104	ASSIGNED TO ENGINEER - CLASS I	451125	Lead compounds Bulk Unloading	BELINDA C WAN	9093962532	x	included in cumulative modeling, Battery Cores Recycling and Air Pollution Control System
35006	1081	KINSBURSKY BROTHERS INC	438102	ASSIGNED TO ENGINEER - CLASS I	450750	LEAD SIZE REDUCTION	BELINDA C WAN	9093962532	x	included in cumulative modeling, Cumberland Plastics Grinder
35006	1081	KINSBURSKY BROTHERS INC	454360	ASSIGNED TO ENGINEER - CLASS I		BAGHOUSE, AMBIENT TEMP (>500 SQ FT)	BELINDA C WAN	9093962532	x	included in cumulative modeling, Baghouse Venting Five Catalyst Shear Machines Application is still open.
24060	3088	LASCO BATHWARE INC.	471453	ASSIGNED TO ENGINEER - CLASS I	276900	STORAGE TANK PLASTICS & RESINS	BIJAN ATAIAN	9093962454		storage tank
24060	3088	LASCO BATHWARE INC.	471454	ASSIGNED TO ENGINEER - CLASS I	276900	STORAGE TANK PLASTICS & RESINS	BIJAN ATAIAN	9093962454		storage tank
24060	3088	LASCO BATHWARE INC.	471452	ASSIGNED TO ENGINEER - CLASS I	276900	STORAGE TANK PLASTICS & RESINS	BIJAN ATAIAN	9093962454		storage tank
108658		DUAL GRAPHICS INC	473428	ASSIGNED TO ENGINEER - CLASS I	373	LITHOGRAPHIC PRINTING PRESS, IR DRY	BIJAN ATAIAN	9093962454		VOC source
151594	1311	VINTAGE PRODUCTION CALIFORNIA LLC	467611	ASSIGNED TO ENGINEER - CLASS I	53720	GAS TURBINE-DIG. GAS/LDF <300 KW	C S BHATT	9093962653		outside 6 miles
151594	1311	VINTAGE PRODUCTION CALIFORNIA LLC	467608	ASSIGNED TO ENGINEER - CLASS I	53720	GAS TURBINE-DIG. GAS/LDF <300 KW	C S BHATT	9093962653		outside 6 miles
151594	1311	VINTAGE PRODUCTION CALIFORNIA LLC	467612	ASSIGNED TO ENGINEER - CLASS I	53720	GAS TURBINE-DIG. GAS/LDF <300 KW	C S BHATT	9093962653		outside 6 miles
151594	1311	VINTAGE PRODUCTION CALIFORNIA LLC	467613	ASSIGNED TO ENGINEER - CLASS I	53720	GAS TURBINE-DIG. GAS/LDF <300 KW	C S BHATT	9093962653		outside 6 miles
151594	1311	VINTAGE PRODUCTION CALIFORNIA LLC	467614	ASSIGNED TO ENGINEER - CLASS I	53720	GAS TURBINE-DIG. GAS/LDF <300 KW	C S BHATT	9093962653		outside 6 miles
151594	1311	VINTAGE PRODUCTION CALIFORNIA LLC	467603	ASSIGNED TO ENGINEER - CLASS I	322950	AMINE TREATING UNIT	C S BHATT	9093962653		outside 6 miles a1
151594	1311	VINTAGE PRODUCTION CALIFORNIA LLC	467606	ASSIGNED TO ENGINEER - CLASS I	53720	GAS TURBINE-DIG. GAS/LDF <300 KW	C S BHATT	9093962653		outside 6 miles
152933	7215	COYOTE HILL CLEANERS	472814	ASSIGNED TO ENGINEER - CLASS I	233	DRY CLEANING EQUIP PETROLEUM SOLVENT	CAROLYN D WILEY	9093962631		dry cleaners VOC source
72517	9199	ORANGE CO, NORTH COURTS	398790	APPLICATION ON HOLD	666415	RULE 1415 PLAN NOTIFICATIONS	COLLEEN COLLIER	9093963282		APPLICATION still ON HOLD
72519	9199	ORANGE CO - COUNTY OPERATIONS CENTER	398799	APPLICATION ON HOLD	666415	RULE 1415 PLAN NOTIFICATIONS	COLLEEN COLLIER	9093963282		outside 6 miles
118733	3845	MEDTRONIC INC., HEART VALVES DIV.	475478	ASSIGNED TO ENGINEER - CLASS I	43902	I C E (>500 HP) EM ELEC GEN DIESEL	DEREK K HOLLINSHE/	9093962275		outside 6 miles
122858	9999	SEKISUI T.A. INDUSTRIES,INC	451198	ASSIGNED TO ENGINEER - CLASS I	211	COATING & DRYING EQUIP CONTINUOUS ORG, WEB TYPE	EMMANUEL V QUIZON	9093962523		VOC source
122858	9999	SEKISUI T.A. INDUSTRIES,INC	473311	ASSIGNED TO ENGINEER - CLASS I	211	COATING & DRYING EQUIP CONTINUOUS ORG, WEB TYPE	EMMANUEL V QUIZON	9093962523		VOC source
122858	9999	SEKISUI T.A. INDUSTRIES,INC	451197	ASSIGNED TO ENGINEER - CLASS I	211	COATING & DRYING EQUIP CONTINUOUS ORG, WEB TYPE	EMMANUEL V QUIZON	9093962523		VOC source
106081	2752	FISHER PRINTING INC, CIRCULAR SPECIALIST	467770	ASSIGNED TO ENGINEER - CLASS I		AFTERBURNER HOT ROCK BED TYPE	EMMANUEL V QUIZON	9093962523		VOC source
106081	2752	FISHER PRINTING INC, CIRCULAR SPECIALIST	474744	ASSIGNED TO ENGINEER - CLASS I	272	PRINTING PRESS LITHOGRAPHIC HEAT SET	EMMANUEL V QUIZON	9093962523		VOC source
106081	2752	FISHER PRINTING INC, CIRCULAR SPECIALIST	474751	ASSIGNED TO ENGINEER - CLASS I	272	PRINTING PRESS LITHOGRAPHIC HEAT SET	EMMANUEL V QUIZON	9093962523		VOC source
106081	2752	FISHER PRINTING INC, CIRCULAR SPECIALIST	474745	ASSIGNED TO ENGINEER - CLASS I	272	PRINTING PRESS LITHOGRAPHIC HEAT SET	EMMANUEL V QUIZON	9093962523		VOC source
106081	2752	FISHER PRINTING INC, CIRCULAR SPECIALIST	474755	ASSIGNED TO ENGINEER - CLASS I		AFTERBURNER HOT ROCK BED TYPE	EMMANUEL V QUIZON	9093962523		VOC source
106081	2752	FISHER PRINTING INC, CIRCULAR SPECIALIST	474754	ASSIGNED TO ENGINEER - CLASS I		AFTERBURNER HOT ROCK BED TYPE	EMMANUEL V QUIZON	9093962523		VOC source
106081	2752	FISHER PRINTING INC, CIRCULAR SPECIALIST	474753	ASSIGNED TO ENGINEER - CLASS I	272	PRINTING PRESS LITHOGRAPHIC HEAT SET	EMMANUEL V QUIZON	9093962523		VOC source
106081	2752	FISHER PRINTING INC, CIRCULAR SPECIALIST	474747	ASSIGNED TO ENGINEER - CLASS I	272	PRINTING PRESS LITHOGRAPHIC HEAT SET	EMMANUEL V QUIZON	9093962523		VOC source
68823	4810	PACIFIC BELL, AT&T CALIFORNIA, DBA	473714	ASSIGNED TO ENGINEER - CLASS I	43902	I C E (>500 HP) EM ELEC GEN DIESEL	FRANCISCO L ESCOB	9093962503	x	included in cumulative modeling, PERMIT TO OPERATE GRANTED 9/20/2007
7757	5093	TAORMINA INDUSTRIES LLC	443785	ASSIGNED TO ENGINEER - CLASS I		ODOR CONTROL UNIT	GAURANG RAWAL	9093962543		VOC source
7757	5093	TAORMINA INDUSTRIES LLC	463634	ASSIGNED TO ENGINEER - CLASS I		ODOR CONTROL UNIT	GAURANG RAWAL	9093962543		VOC source
152853		ASPEN PROPERTIES	472567	ASSIGNED TO ENGINEER - CLASS I	28100	SOIL TREAT VAPOR EXTRACT OTHER VOC UNDER	GAURANG RAWAL	9093962543		VOC source
152516	7513	HARBOR TRUCK BODIES INC	473309	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	GOPINATH SHAH	9093962513		spray booth - VOC source
138389	7216	BROWNIES SUEDE & LEATHER CLEANERS INC	421583	APPLICATION ON HOLD		SPRAY BOOTH PAINT AND SOLVENT	GRACE VU	9093962628		spray booth - VOC source
107149	3471	MARKLAND MANUFACTURING INC	459149	ASSIGNED TO ENGINEER - CLASS I		MESH PADS, TOXIC GAS STREAM	JEANNE PANDE VILLA	9093962621	?	
23303	7011	SHERATON-ANAHEIM MOTOR HOTEL	458167	APPLICATION ON HOLD	11203	BOILER (5-20 MMBTU/HR) COMB GAS-DISTILL	JOE TUMAMBING	9093962462		APPLICATION REJECTED
150997		TIME WARNER CABLE	465620	APPLICATION ON HOLD	43901	I C E (50-500 HP) EM ELEC GEN-DIESEL	JOE TUMAMBING	9093962462	x	included in cumulative modeling, APPLICATION ON HOLD
108620	3711	KRYSTAL KOACH INC	473691	APPLICATION ON HOLD	555002	TITLE V PERMIT RENEWAL APPLICATION	JOE TUMAMBING	9093962462		TITLE V PERMIT RENEWAL APPLICATION
152711	7216	EAST HILLS CLEANERS	472144	APPLICATION ON HOLD	233	DRY CLEANING EQUIP PETROLEUM SOLVENT	JOE TUMAMBING	9093962462		outside 6 miles, dry cleaners VOC source
1744	3069	KIRKHILL RUBBER CO	469751	ASSIGNED TO ENGINEER - CLASS I	269	OVEN, RUBBER CURING	KAMBIZ HADJFOROO	9093963205		VOC source
146039		ASHFORD ANAHEIM LLP/LONGSDON SOUTH P	456585	ASSIGNED TO ENGINEER - CLASS I	27210	LANDFILL GAS COLLECTION (10-50 WELLS)	KENNY K MATSUDA	9093962656		VOC source
146039		ASHFORD ANAHEIM LLP/LONGSDON SOUTH P	456584	ASSIGNED TO ENGINEER - CLASS I	27210	LANDFILL GAS COLLECTION (10-50 WELLS)	KENNY K MATSUDA	9093962656		VOC source
113518	4911	RIDGEWOOD POWER MANAGEMENT,LLC	474006	APPLICATION ON HOLD		SELECTIVE CATALYTIC REDUCTION	KENNY K MATSUDA	9093962656		submitted by for the Ridgewood Power, are pending engineering evaluation and have not been approved. (SCAQMD)
113518	4911	RIDGEWOOD POWER MANAGEMENT,LLC	474005	APPLICATION ON HOLD		SELECTIVE CATALYTIC REDUCTION	KENNY K MATSUDA	9093962656		submitted by for the Ridgewood Power, are pending engineering evaluation and have not been approved. (SCAQMD)
113518	4911	RIDGEWOOD POWER MANAGEMENT,LLC	475036	APPLICATION ON HOLD		Flare, Open Landfill/Digester Gas	KENNY K MATSUDA	9093962656		submitted by for the Ridgewood Power, are pending engineering evaluation and have not been approved. (SCAQMD)
113518	4911	RIDGEWOOD POWER MANAGEMENT,LLC	475037	APPLICATION ON HOLD	555007	Title V Permit Revision	KENNY K MATSUDA	9093962656		TITLE V PERMIT RENEWAL APPLICATION
113518	4911	RIDGEWOOD POWER MANAGEMENT,LLC	474003	APPLICATION ON HOLD	53738	TURBINE ENGINE (<=50 MW) LANDFILL GAS	KENNY K MATSUDA	9093962656		submitted by for the Ridgewood Power, are pending engineering evaluation and have not been approved. (SCAQMD)
113518	4911	RIDGEWOOD POWER MANAGEMENT,LLC	474001	APPLICATION ON HOLD	53738	TURBINE ENGINE (<=50 MW) LANDFILL GAS	KENNY K MATSUDA	9093962656		submitted by for the Ridgewood Power, are pending engineering evaluation and have not been approved. (SCAQMD)
113518	4911	RIDGEWOOD POWER MANAGEMENT,LLC	474002	APPLICATION ON HOLD		SELECTIVE CATALYTIC REDUCTION	KENNY K MATSUDA	9093962656		submitted by for the Ridgewood Power, are pending engineering evaluation and have not been approved. (SCAQMD)
113518	4911	RIDGEWOOD POWER MANAGEMENT,LLC	474004	APPLICATION ON HOLD	53738	TURBINE ENGINE (<=50 MW) LANDFILL GAS	KENNY K MATSUDA	9093962656		submitted by for the Ridgewood Power, are pending engineering evaluation and have not been approved. (SCAQMD)
113518	4911	RIDGEWOOD POWER MANAGEMENT,LLC	474009	APPLICATION ON HOLD	354950	FUEL GAS, TREATING , Flare, Open Landfill/Digester Gas	KENNY K MATSUDA	9093962656		submitted by for the Ridgewood Power, are pending engineering evaluation and have not been approved. (SCAQMD)
113518	4911	RIDGEWOOD POWER MANAGEMENT,LLC	474007	APPLICATION ON HOLD		SELECTIVE CATALYTIC REDUCTION	KENNY K MATSUDA	9093962656		submitted by for the Ridgewood Power, are pending engineering evaluation and have not been approved. (SCAQMD)
113518	4911	RIDGEWOOD POWER MANAGEMENT,LLC	474008	APPLICATION ON HOLD	53738	TURBINE ENGINE (<=50 MW) LANDFILL GAS	KENNY K MATSUDA	9093962656		submitted by for the Ridgewood Power, are pending engineering evaluation and have not been approved. (SCAQMD)
152120		WESTGATE INVESTMENT GROUP,LLC	469614	ASSIGNED TO ENGINEER - CLASS I	27220	LANDFILL GAS COLLECTION (<10 WELLS)	KENNY K MATSUDA	9093962656		included in cumulative modeling, has no NOx, CO or PM10 emissions because there is no combustion control devices. Based on permit conditions the emissions the VOC emissions are less than 1 pound per day. The exhaust stack is 4 inches diameter, and 35'-0" high. The maximum exhaust rate is 250 cfm
136516	1311	BLACKSAND PARTNERS LP	458727	ASSIGNED TO ENGINEER - CLASS I	231809	Crude Oil/Gas/Water Separation >=400 BPD	LI CHEN	9093962426	?	
72315	4813	SPRINT	474147	ASSIGNED TO ENGINEER - CLASS I	43902	I C E (>500 HP) EM ELEC GEN DIESEL	MARIA VIBAL	9093962422	x	included in cumulative modeling, Permit to be granted 2007/9/19
5472	7216	TAFT CLEANERS	466474	PERMIT TO CONSTRUCT GRANTED	603	DRY CLEANING,DRY-TO-DRY NV,W/ SIC,PERC	MARIA VIBAL	9093962422		outside 6 miles, dry cleaners VOC source
88841	7216	SWISS CLEANERS	467590	PERMIT TO CONSTRUCT GRANTED	603	DRY CLEANING,DRY-TO-DRY NV,W/ SIC,PERC	MARIA VIBAL	9093962422		dry cleaners VOC source
150743	3273	PACIFIC READY MIX, INC.	474236	ASSIGNED TO ENGINEER - CLASS I	101920	STORAGE SILO CEMENT	MARILYN MAXINE PO	9093962376		storage tank
113444		R M MYERS CORPORATION	462187	ASSIGNED TO ENGINEER - CLASS I		NEGATIVE AIR MACHINE/HEPA,ASBES <=15 GAL	RAMAN PATEL	9093962466		ASBESTOS RELATED
108620	3711	KRYSTAL KOACH INC	471414	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471416	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471418	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471426	ASSIGNED TO ENGINEER - CLASS I	202	SPRAY EQUIPMENT OPEN	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471428	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471979	ASSIGNED TO ENGINEER - CLASS I	202	SPRAY EQUIPMENT OPEN	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471427	ASSIGNED TO ENGINEER - CLASS I	202	SPRAY EQUIPMENT OPEN	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471430	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471408	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471409	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471406	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471412	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471981	ASSIGNED TO ENGINEER - CLASS I	202	SPRAY EQUIPMENT OPEN	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471421	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471982	ASSIGNED TO ENGINEER - CLASS I	202	SPRAY EQUIPMENT OPEN	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471423	ASSIGNED TO ENGINEER - CLASS I	202	SPRAY EQUIPMENT OPEN	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471410	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471978	ASSIGNED TO ENGINEER - CLASS I	202	SPRAY EQUIPMENT OPEN	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471983	ASSIGNED TO ENGINEER - CLASS I	202	SPRAY EQUIPMENT OPEN	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471411	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471407	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471977	ASSIGNED TO ENGINEER - CLASS I	202	SPRAY EQUIPMENT OPEN	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471420	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471980	ASSIGNED TO ENGINEER - CLASS I	202	SPRAY EQUIPMENT OPEN	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471413	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471417	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471419	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH PAINT AND SOLVENT	RENE E LOOF	9093962544		spray booth - VOC source
108620	3711	KRYSTAL KOACH INC	471425	ASSIGNED TO ENGINEER - CLASS I	202	SPRAY EQUIPMENT OPEN	RENE E LOOF	9093962544		spray booth - VOC source
18414	3479	OR. CO. PLATING CO INC	429573	PERMIT TO CONSTRUCT GRANTED	666117	RULE 1169 COMPLIANCE PLAN	SEAN K CULLINS	9093962655		This application is for a compliance plan for Rule 1469. There are no emissions associated with this application. (SCAQMD)
133243	3724	ASTECH ENGINEERED PRODUCTS INC.	475072	ASSIGNED TO ENGINEER - CLASS I			SHAILESH M PATEL	9093962681		outside 6 miles
133243	3724	ASTECH ENGINEERED PRODUCTS INC.	475073	ASSIGNED TO ENGINEER - CLASS I	321	TANK, SURFACE PREPARATION - OTHER ACIDS	SHAILESH M PATEL	9093962681		outside 6 miles
153344		PANELITE ENGINEERING INC	474377	ASSIGNED TO ENGINEER - CLASS I			SIMON MARGOLIS	9093962492		outside 6 miles
149329		AFC CABLE SYSTEMS FULLERTON FACILITY	462972	ASSIGNED TO ENGINEER - CLASS I	284455	POLYVINYL CHLORIDE EXTRUSION SYSTEM	STEPHEN JIANG	909396		VOC EMISSIONS

149329		AFC CABLE SYSTEMS FULLERTON FACILITY	462973	ASSIGNED TO ENGINEER - CLASS I	284455	POLYVINYL CHLORIDE EXTRUSION SYSTEM	STEPHEN JIANG	909396		VOC EMISSIONS
2825	2087	MCP FOODS INC	470895	ASSIGNED TO ENGINEER - CLASS I		BAGHOUSE, AMBIENT TEMP (>500 SQ FT)	TRACY NGUYEN	9093962427		The emissions from A/N 470895 are considered negligible (in comparison to A/N 446682); plus, we do not have stack parameters for the dust collector since it is yet to be constructed. (Todd from ABC firm)
2825	2087	MCP FOODS INC	446682	ASSIGNED TO ENGINEER - CLASS I	514349	FEED AND FOOD MISC DRYING	TRACY NGUYEN	9093962427	x	included in cumulative modeling
4615	8062	WESTERN MEDICAL CTR, UNIT 1	472969	ASSIGNED TO ENGINEER - CLASS I	11003	BOILER (5-20 MMBTU/HR) NAT GAS ONLY	VICKY LEE	9093962284		outside 6 miles, administrative change
151532	1311	LINN WESTERN OPERATING INC	467335	APPLICATION ON HOLD		FLARE, OTHER	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	467338	APPLICATION ON HOLD	320101	NATURAL GAS ODORIZING UNIT	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	467326	APPLICATION ON HOLD	210900	STORAGE TANK AMMONIA	VICKY LEE	9093962284		storage tank
151532	1311	LINN WESTERN OPERATING INC	467327	APPLICATION ON HOLD	13608	TURBINE ENGINE (<=50 MW) PROCESS GAS	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	469339	APPLICATION ON HOLD	535	LPG TREATING UNIT	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	469332	APPLICATION ON HOLD	44901	I C E (50-500 HP) EM FIRE FGHT-DIESEL	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	469343	APPLICATION ON HOLD	555012	TVRECLAIM REVISION-NOEVAL	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	467324	APPLICATION ON HOLD	13608	TURBINE ENGINE (<=50 MW) PROCESS GAS	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	467337	APPLICATION ON HOLD	43901	I C E (50-500 HP) EM ELEC GEN-DIESEL	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	467395	APPLICATION ON HOLD	555011	TITLE V-C/O	VICKY LEE	9093962284		TITLE V PERMIT APPLICATION
151532	1311	LINN WESTERN OPERATING INC	467321	APPLICATION ON HOLD	415	AIR STRIPPING	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	469338	APPLICATION ON HOLD	19001	HEATER/FURNACE (<5 MMBTU/HR) NAT GAS	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	467320	APPLICATION ON HOLD	231809	Crude Oil/Gas/Water Separation >=400 BPD	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	467330	APPLICATION ON HOLD	251112	BULK LOADING TNK TRK (1 RACK) HYDROCARBS	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	469342	APPLICATION ON HOLD	231809	Crude Oil/Gas/Water Separation >=400 BPD	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	467334	APPLICATION ON HOLD		SELECTIVE CATALYTIC REDUCTION	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	467331	APPLICATION ON HOLD	297900	STORAGE TANK LPG	VICKY LEE	9093962284		storage tank
151532	1311	LINN WESTERN OPERATING INC	467322	APPLICATION ON HOLD		ACTIVATED CARBON ADSORBER OTHER	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	467332	APPLICATION ON HOLD	231809	Crude Oil/Gas/Water Separation >=400 BPD	VICKY LEE	9093962284		change of operator
151532	1311	LINN WESTERN OPERATING INC	469334	APPLICATION ON HOLD	297900	STORAGE TANK LPG	VICKY LEE	9093962284		storage tank
151532	1311	LINN WESTERN OPERATING INC	467325	APPLICATION ON HOLD		SELECTIVE CATALYTIC REDUCTION	VICKY LEE	9093962284		change of operator
149235	3444	AMF ANAHEIM LLC	473461	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH/ENCLOSURE, POWDER COATING SYSTEM	WILMA M WILSON	9093962444		spray booth - VOC source
149235	3444	AMF ANAHEIM LLC	473462	ASSIGNED TO ENGINEER - CLASS I		SPRAY BOOTH/ENCLOSURE, POWDER COATING SYSTEM	WILMA M WILSON	9093962444		spray booth - VOC source
104015	1311	AERA ENERGY LLC	462711	ASSIGNED TO ENGINEER - CLASS I	231161	CRUDE OIL WELLS-R-1148.1 (41-44)	WINNIE Y CHO	9093962547	?	
113444		R M MYERS CORPORATION	462192	ASSIGNED TO ENGINEER - CLASS I		NEGATIVE AIR MACHINE/HEPA,ASBES <=15 GAL	WINNIE Y CHO	9093962547		ASBESTOS RELATED

	received data from Jay Chen or company directly
	received data from SCAQMD
	not sure if it needs to be included to cumulative analysis
x	included in cumulative modeling

BACKGROUND

The Canyon Power Plant Applicant stated during an April 24, 2008 site visit that four transmission lines will need to be installed beneath Carbon Creek Channel by jack and bore drilling. In the AFC, jack and bore drilling is discussed and states that a federal Clean Water Act Section 404 permit may need to be obtained from the U.S. Army Corps of Engineers (USACE) for this work. Energy Commission staff needs to know the status of the USACE Section 404 Permit process to complete its analysis.

Technical Area: Biological Resources

Data Request 6-BIO: Please provide a summary of your communication with the USACE regarding the need for a Section 404 permit.

Response: A representative (Stephanie Hall) from the U.S. Army Corps of Engineers (USACE) was contacted on May 28, 2008. A summary of the communication includes:

1) Re-introducing the Canyon Power Plant project and describing the AFC process.
2) Information regarding the Project design that entails a jack and bore drilling under the culvert section of Carbon Creek Channel at the intersection of Miraloma Blvd.
3) The project design does not include any impacts to Carbon Creek; therefore, there will be no areas subject to USACE jurisdiction and a federal Clean Water Act Section 404 permit will not need to be obtained from the USACE.

Technical Area: Biological Resources

Data Request 7-BIO: If the USACE indicates that a permit will be needed, please provide information about when the application for the permit was filed with the USACE and, based upon USACE comments, an estimation of when the permit is likely to be provided to the project developer.

Response: Because Project design entails jack and bore drilling under a culvert section of Carbon Creek at the intersection of Miraloma Ave., no areas that are subject to USACE jurisdiction within Carbon Creek will be impacted by the Project. Therefore, no permanent impacts to Carbon Creek are anticipated as a result of the proposed Project. Although no permanent impacts to Carbon Creek are anticipated, temporary impacts could occur in the event of a frac-out during the boring process.

Therefore no USACE permit is required. As described in Data Response 9, a frac-out plan will be implemented, thereby reducing potential impacts to Carbon Creek.

BACKGROUND

For the jack and bore drilling operation, the applicant stated that there will be four sending pits approximately 8 feet wide by 20 feet long and four receiving pits approximately 8 feet wide by 10 feet long. All pits will be approximately 26.5 feet deep, which would place the casing 5 feet below the culvert base. Energy Commission staff needs more information regarding the plans for the jack and bore drilling to complete the analysis.

Technical Area: Biological Resources

Data Request 8-BIO: Please provide a detailed description of the jack and bore drilling operation and all proposed measures to be implemented to avoid impacts to Carbon Creek Channel.

Response: To clarify the background provided by the CEC, only two sending pits approximately 8 feet wide by 20 feet long and two receiving pits approximately 8 feet wide by 10 feet long will be dug.

Description

The work specified in this response describes the typical construction methods, procedures, and materials for Jack and Bore (J&B), also known as auger boring. J&B is a method for installing a product (often called a casing) that may serve as a direct conduit for liquids or gases, or as a duct for carrier (pipe, cable, or wire line products). It is a multi-stage process consisting of constructing a temporary horizontal jacking platform and a starting alignment track in an entrance pit at a desired elevation. The product is then jacked by manual control along the starting alignment track with simultaneous excavation of the soil being accomplished by a rotating cutting head in the leading edge of the product's annular space. The ground up soil (spoil) is transported back to the entrance pit by helical wound auger flights rotating inside the product. J&B typically provides limited tracking and steering as well as limited support to the excavation face.

Removal and disposition of excess material varies. For the CPP, material will be transported off-site daily.

Construction Site Requirements

Site Conditions:

a) Sump pits are required to contain auger fluids if vacuum devices are not operated throughout the boring operation.

b) Within 48 hours of completing installation of the boring product, the work site will be cleaned of all excess auger fluids or spoils. The contractor will ensure that the work site is restored to pre-construction conditions or as identified on the plans.

c) Ensure that equipment does not impede visibility of the roadway user without taking the necessary precautions of proper signing and Maintenance of Traffic Operations.

When there is any indication a leak has occurred, work will stop and appropriate personnel will investigate to assess the quality of the leak.

Augering Fluids: A mixture of bentonite clay or other approved stabilizing agent is mixed with potable water with a minimum pH of 6.0 to create the drilling fluid for lubrication and soil stabilization. Other chemicals or polymer surfactants in the drilling fluid are not typically used. Any chemicals to be added are environmentally safe and not harmful or corrosive. Any water source used other than potable water may require a pH Test.

Jack and Bore Operations

Continuous pressure is applied to the face of the excavation to balance groundwater and earth pressures. Shafts are of sufficient size to accommodate equipment, the pipe selected, and to allow for safe working practices. Entry and exit seals are provided at shaft walls to prevent inflows of groundwater, soil, slurry and lubricants. Thrust blocks designed to distribute loads

in a uniform manner are used so that any deflection of the thrust block is uniform and does not impart excessive loads on the shaft itself or cause the jacking frame to become misaligned.

The jacking system must have the capability of pushing the pipe in J&B operations through the ground in a controlled manner and be compatible with the anticipated jacking loads and pipe capacity. The jacking force applied to the pipe is monitored so as not to exceed the pipe manufacturer's recommendations. The pipe lubrication system shall be ensured to be functional at all times and sufficient to reduce jacking loads. Pipe lubrication systems will be used that include a mixing tank, holding tank and pumps to convey lubricant from the holding tank to application points at the rear of the operations. Maintain sufficient fluids on-site to avoid loss of lubrication.

Excess Material and Fluids: Monitoring of the pumping rate, pressures, viscosity, and density of the boring fluids will ensure adequate removal of soil cuttings and the stability of the borehole. Containment of excess drilling fluids, slurry and soil cuttings at entry and exit points in pits will be employed until they are recycled or removed from the site.

All boring fluids are disposed of or recycled in a manner acceptable to the appropriate local, state or federal regulatory agencies. When jacking and boring in suspected contaminated ground, the boring fluid is tested for contamination and disposed of appropriately. Excess material upon completion of the bore is removed.

Boring Failure: If an obstruction is encountered which prevents completion of the installation in accordance with the design location and specifications; the pipe may be taken out of service and left in place at the discretion of the Engineer.

Immediately fill the product left in place with excavatable flowable fill. Submit a new installation procedure and revised

plans to the Engineer for approval before resuming work at another location. If damage is observed to any property, cease all work until a plan of action to minimize further damage and restore damaged property is submitted and approved by the Engineer.

Documentation Requirements

Boring Path Report: Furnish a Bore Path Report to the Engineer within 14 days of the completion of each bore path.

As-built Plans: Provide the Engineer with a complete set of As-built Plans showing all bores (successful and failed) within 30 calendar days of completion of the work.

Avoidance Measures

The operator shall have a Biological monitor on-site during all drilling and boring activities. If a frac-out occurs during the boring, the Biological monitor will order the equipment to be shut down. The biological monitor's duties shall include: Visual inspection along the drill path, including monitoring the water body (if present) for evidence of release and continuous examination of drilling fluids pressures and return flows, approving drilling/boring setup locations, verifying that the perimeter of the work site is adequately flagged prior to equipment set up to prevent impacts to the adjacent Carbon Creek.

Other measures include:

- Prior to start up containment measures will be installed to prevent drilling fluids or hazardous materials from spilling.
- All drilling fluids and additives stored on-site must be in closed containers.
- All sump and exit pits must be capable of containing at least 100 percent of the drilling fluids being used, and adequate capacity in on-site vac trucks or tanks must be available to handle any frac-out cleanup.

- Every member of the contractor's drilling crew and each inspector is responsible for reporting spills or frac-outs. An observed loss in drilling pressure or a slow down or loss of returned drilling mud should trigger an immediate survey of the work area for frac-outs.
- Buckets, sump pumps or vac trucks will be used to remove and dispose of any drilling fluids. Adequate containment materials (straw bales, waddles, silt fence, etc.) will be stored on-site or within minutes of the site. Vac-trucks or tanks should have sufficient hose length to reach at least half the distance of the bore.
- All equipment will be staged outside the 20-foot exclusion from Carbon Creek, in the road shoulder, inside the right-of-way.

Technical Area: Biological Resources

Data Request 9-BIO: Please provide a description of the procedures to be implemented in the event of a frac-out.

Response: The operator shall have a Biological monitor on-site during all drilling and boring activities. If a frac-out occurs during the boring, the Biological monitor will order the equipment to be shut down. The biological monitor's duties shall include: Visual inspection along the drill path, including monitoring the water body (if present) for evidence of release and continuous examination of drilling fluids pressures and return flows, approving drilling/boring setup locations, verifying that the perimeter of the work site is adequately flagged prior to equipment set up to prevent impacts to the adjacent Carbon Creek. Other measures include:

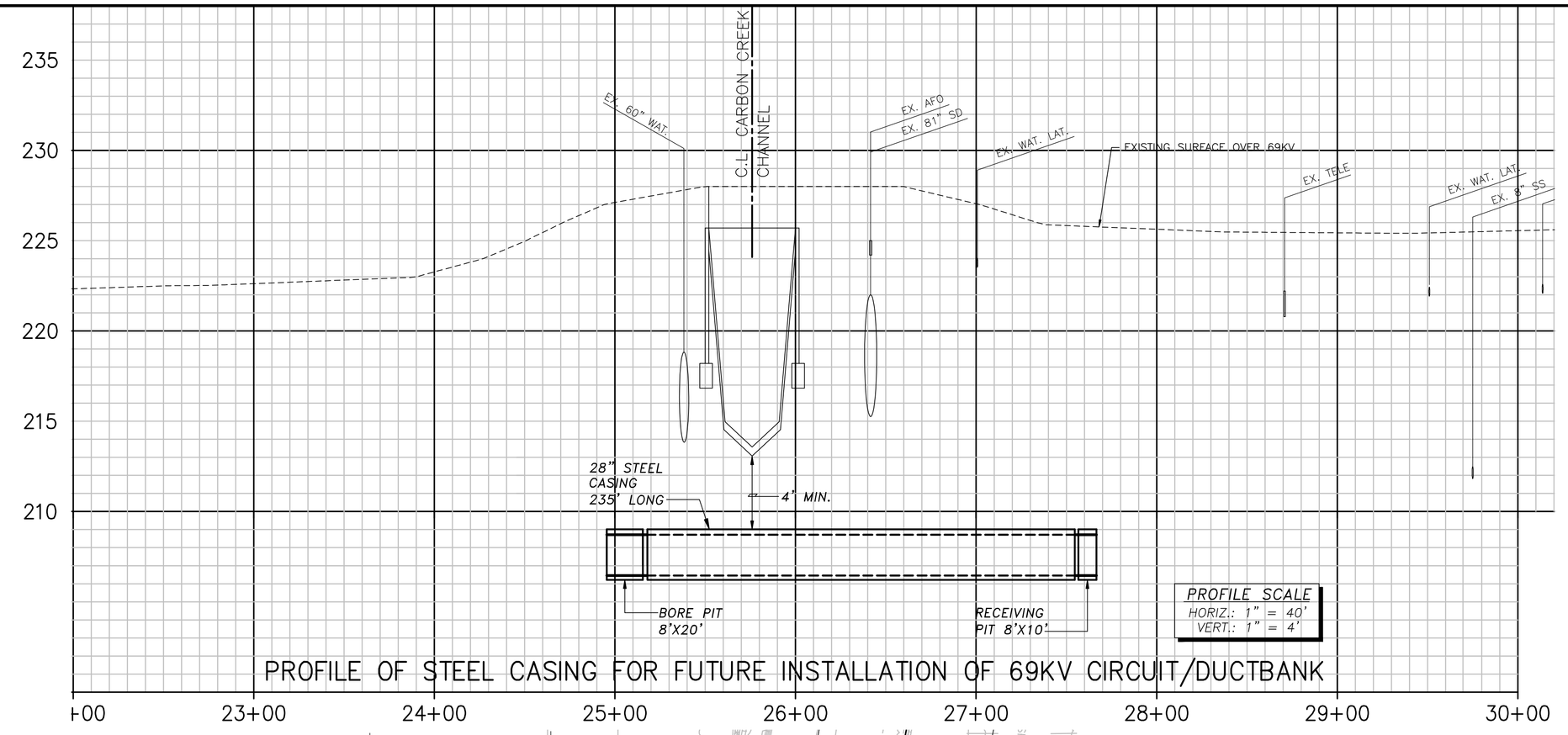
- Prior to start up, containment measures will be installed to prevent drilling fluids or hazardous materials from spilling.
- All drilling fluids and additives stored on-site must be in closed containers.
- All sump and exit pits must be capable of containing at least 100 percent of the drilling fluids being used, and adequate capacity in on-site vac trucks or tanks must be available to handle any frac-out cleanup.
- Every member of the contractor's drilling crew and each inspector is responsible for reporting spills or frac-outs. An observed loss in drilling pressure or a slow down or loss of returned drilling mud should trigger an immediate survey of the work area for frac-outs.
- Buckets, sump pumps or vac trucks will be used to remove and dispose of any drilling fluids. Adequate containment materials (straw bales, waddles, silt fence, etc.) will be stored on-site or within minutes of the site. Vac-trucks or tanks should have sufficient hose length to reach at least half the distance of the bore.

- All equipment will be staged outside the 20-ft exclusion from Carbon Creek, in the road shoulder, inside the right-of-way.

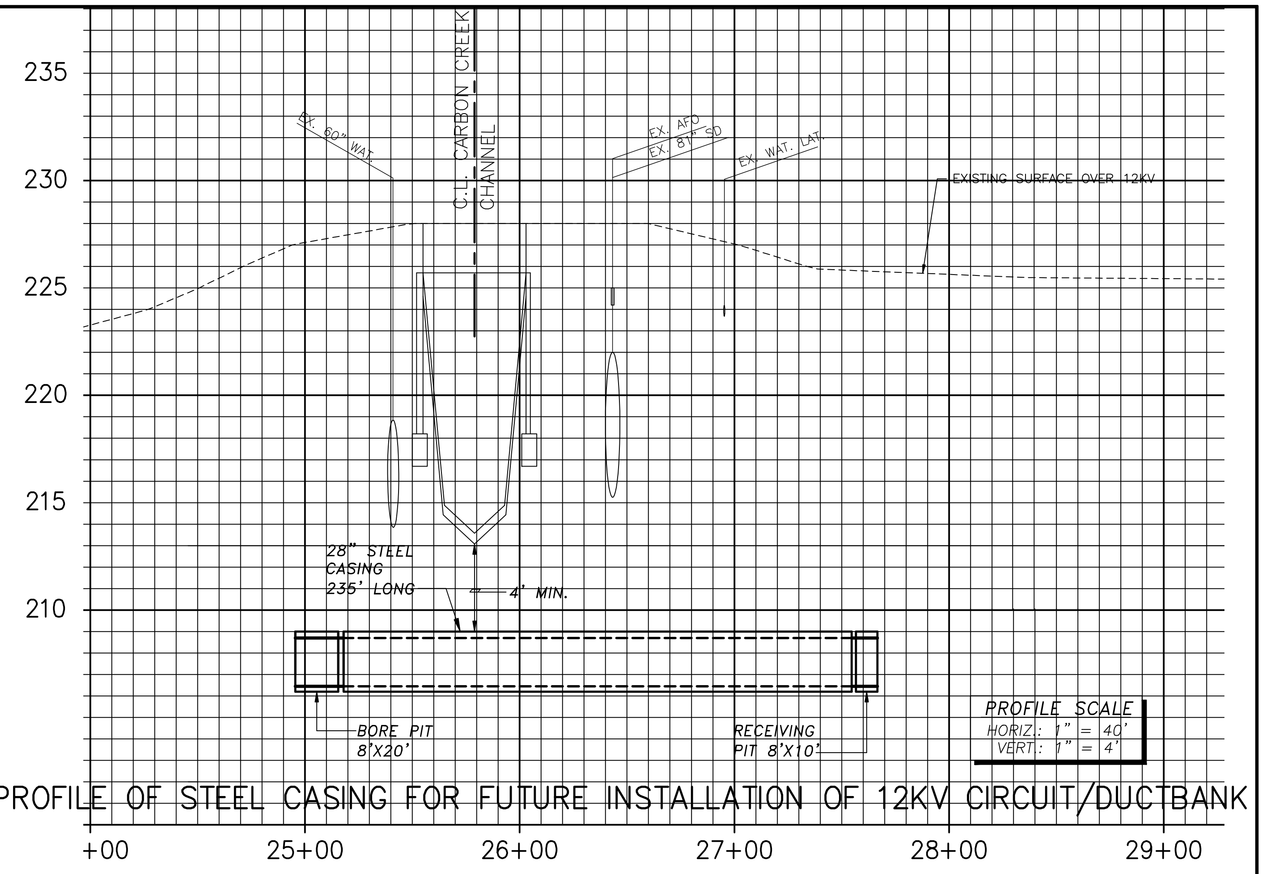
Technical Area: Biological Resources

Data Request 10-BIO: Please provide a map showing where the launching and receiving pits will be located in relation to the creek banks.

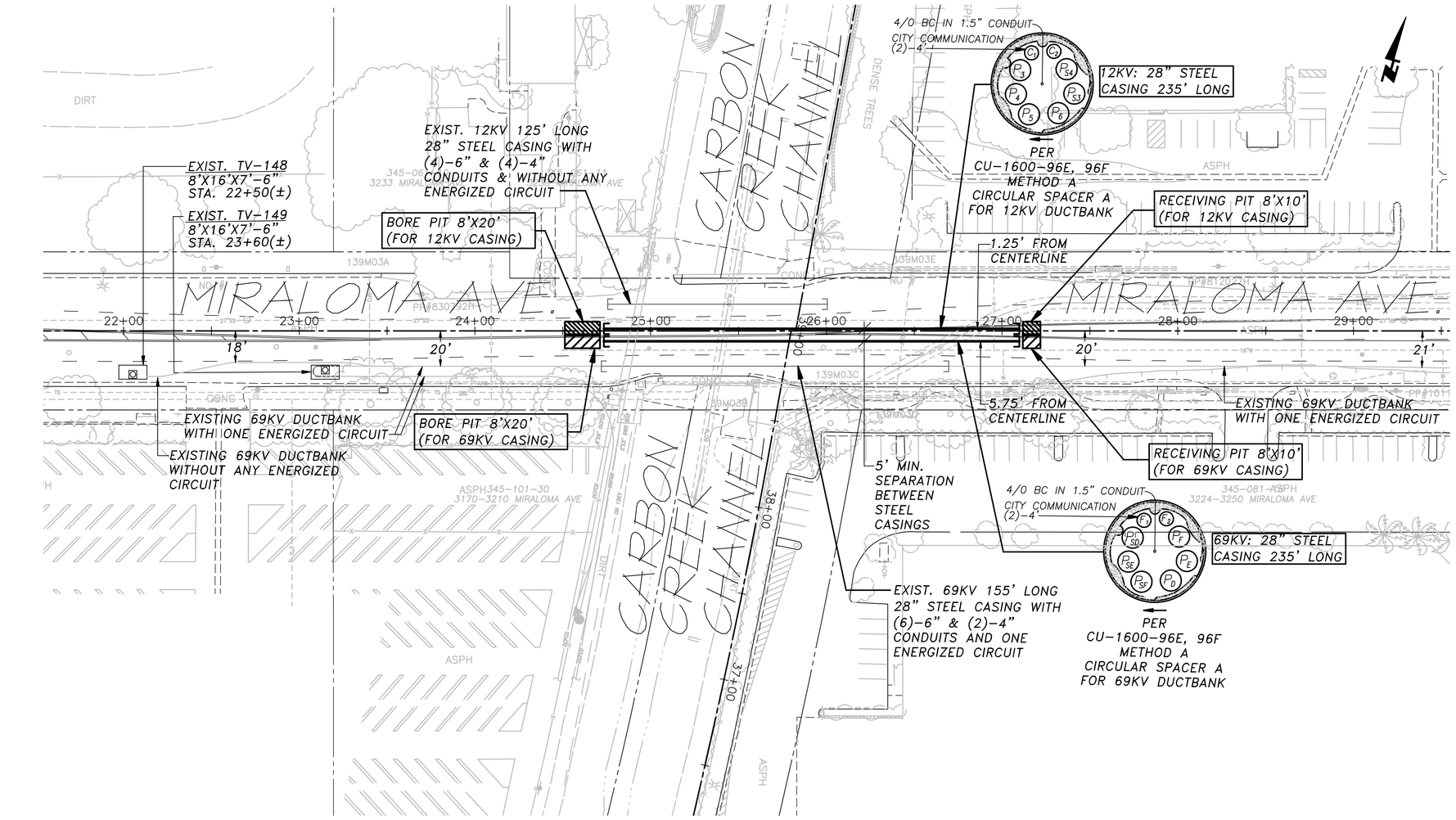
Response: See Figure ES-1A, attached.



PROFILE OF STEEL CASING FOR FUTURE INSTALLATION OF 69KV CIRCUIT/DUCTBANK



PROFILE OF STEEL CASING FOR FUTURE INSTALLATION OF 12KV CIRCUIT/DUCTBANK



ORANGE COUNTY FLOOD CONTROL GENERAL NOTES

1 SEDIMENT FROM AREAS DISTURBED BY CONSTRUCTION SHALL BE RETAIN ON SITE USING STRUCTURAL CONTROLS TO MAXIMUM EXTENT PRACTICABLE.

2 STOCKPILES OF SOIL SHALL BE PROPERLY CONTAINED TO ELIMINATE OR REDUCE SEDIMENT TRANSPORT FROM THE SITE TO THE STREETS, DRAINAGE OF FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TRACKING, OR WIND.

3 APPROPRIATE BMPs FOR CONSTRUCTION-RELATED MATERIALS, WASTES, SPILLS OR RESIDUES SHALL BE IMPLEMENTED TO MINIMIZE TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES, OR ADJOINING PROPERTIES BY WIND OR RUNOFF.

4 RUNOFF FROM EQUIPMENT AND VEHICLE WASHING SHALL BE CONTAINED AT CONSTRUCTION SITES UNLESS TREATED TO REDUCE OR REMOVE SEDIMENT AND OTHER POLLUTANTS.

5 ALL CONSTRUCTION CONTRACTOR AND SUBCONTRACTOR PERSONNEL ARE TO BE MADE AWARE OF THE REQUIRED BEST MANAGEMENT PRACTICES AND GOOD HOUSEKEEPING MEASURES FOR THE PROJECT SITE AND ANY ASSOCIATED CONSTRUCTION STATING AREAS.

6 AT THE END OF EACH DAY OF CONSTRUCTION ACTIVITY ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND PROPERLY DISPOSED IN TRASH OR RECYCLE BINS.

7 CONSTRUCTION SITE SHALL BE MAINTAINED IN SUCH CONDITION THAT A STORM DOES NOT CARRY WASTES OR POLLUTIONS OFF THE SITE. DISCHARGERS OTHER THAN STORMWATER (NON-STORMWATER DISCHARGE) AE AUTHORIZED UNDER CALIFORNIA'S GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY ONLY WHERE THEY DO NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF ANY QUALITY STANDARD AND ARE CONTROLLED THROUGH IMPLEMENTATION OF APPROPRIATE BMPs FOR ELIMINATION OR REDUCTION OF POLLUTANTS. NON-STORMWATER DISCHARGES MUST BE ELIMINATED OR REDUCED TO THE EXTENT FEASIBLE.

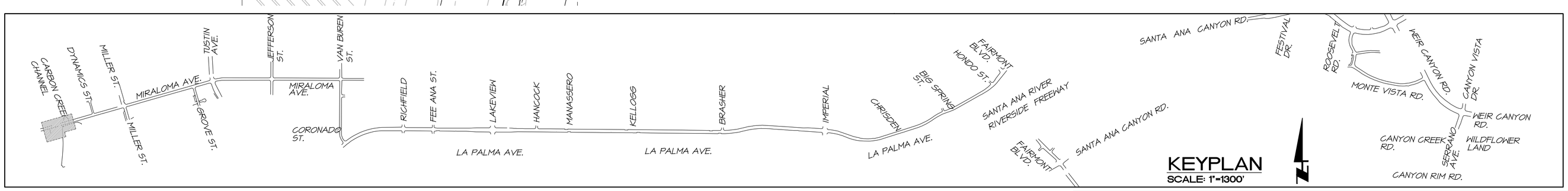
POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SOLID OR CHEMICAL SPILLS: WASTES FROM PAINTS, STAINS, SOLVENTS, DETERGENTS, GLUES, LIME, PESTICEDS, HERBICIDES, FERTILIZERS, WOOD, PRESERVATIVES, AND ASBESTOS FIBERS, PAINT FLAKES OR STUCCO FRAGMENTS; FUELS, OILS, LUBRICANTS AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS; CONCRETE AND RELATED CUTTING OR CURING RESIDUES; FLOATABLE WASTES, WASTES FROM ANY ENGINE/EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING; WASTES FROM STREET CLEANING; AND SUPERCHLORINATED POTABLE WATER LINE FLUSHING AND TESTING.

DURING CONSTRUCTION, DISPOSAL OF SUCH MATERIALS SHOULD OCCUR IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ON-SITE PHYSICALLY SEPARATED FROM POTENTIAL STORMWATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.

8 DISCHARGING CONTAMINATED GROUND WATER PRODUCED BY DEWATERING GROUNDWATER THAT HAS INFILTRATED INTO CONSTRUCTION SITE IS PROHIBITED. DISCHARGING OF CONTAMINATED SOILS VIA SURFACE EROSION IS ALSO PROHIBITED. DISCHARGING OF NON-CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING ACTIVITIES REQUIREDS A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FROM THE SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD.

9 ANY SPILLAGE OF FUEL, OIL OR HAZARDOUS MATERIALS FROM CONSTRUCTION EQUIPMENT OR VEHICLES OR SIGNIFICANT RELEASES OF SEDIMENT DUE TO CONSTRUCTION ACTIVITIES OR BMP FAILURES IMPACTING DOWNSTREAM STORMDRAIN AREAS MUST BE IMMEDIATELY AND PROPERLY CLEANED UP AND REMOVED FROM THE OCFCD'S RIGHT-OF-WAY. FOR SPILLS OF SIGNIFICANT VOLUME, NOTIFICATIONS MUST BE IMMEDIATELY MADE TO RDMD/ENVIRONMENTAL RESOURCES FOR ASSESSMENT OF BEST CORRECTIVE ACTION. CONTAMINATED WATER, SOIL, SAND OR MATERIAL AND HAZARDOUS WASTES GENERATED FROM THE CLEANUP MUST BE DISPOSED BY APPROVED METHODS. PERMITTEE ASSUMES FULL RESPONSABILITY FOR COSTS TO INVESTIGATE EXTENT OF CONTAMINATION, CLEANUP, WASTE REMOVAL AND IMPLEMENTATION OF AN APPROVED REMEDIAL ACTION PLAN FOR THE RELEASE OF ANY WASTES OR HAZARDOUS MATERIALS THAT RESULT IN SOIL AND GROUND WATER CONTAMINATION.

NOTIFICATIONS OF SPILLS AND SIGNIFICANT RELEASES OF SEDIMENT DUE TO CONSTRUCTION ACTIVITIES OR BMP FAILURES IMPACTING DOWNSTREAM AREAS OR STORMDRAINS MUST BE IMMEDIATELY MADE TO RDMD/ENVIRONMENTAL RESOURCES, ATTENTION: DUC NGUYEN (714) 973-6690. AFTER-HOURS SPILL NOTIFICATION SHOULD BE MADE THROUGH ORANGE COUNTY SHERIFF'S COMMUNICATIONS CONTROL 1 BY DIALING 911.



KEYPLAN
SCALE: 1"=1300'

Underground Service Alert of Southern California
Call: TOLL FREE 1-800 422-4133
TWO WORKING DAYS BEFORE YOU DIG

NOTICE TO CONTRACTOR:
THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES WAS OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS. ADDITIONAL UNDERGROUND FACILITIES MAY EXIST, OR THE LOCATION OF THE FACILITIES MAY DIFFER FROM THE LOCATIONS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, DETERMINE THE EXACT LOCATION OF ALL SUCH UNDERGROUND FACILITIES PRIOR TO COMMENCEMENT OF ANY WORK OR ANY ACTION WHICH MAY DAMAGE SUCH FACILITIES OR INTERFERE WITH THEIR CONTINUOUS AND PROPER OPERATION.

DWG NO.	REFERENCE	NO.	DATE	REVISION	W/O	DRAWN BY	DSNR.	ENGR.	P.E.	FLD. SUPT.	INSP	ENGR. MGR.
ES-1	REFER TO ES-1 FOR PROFILES OF EXIST. TWO STEEL CASINGS		5/12/08	INSTALL TWO NEW STEEL CASINGS ACROSS CCC		RY	RY					

CITY OF ANAHEIM
PUBLIC UTILITIES DEPARTMENT
ELECTRICAL ENGINEERING DIVISION

CANYON POWER PROJECT
TRANSMISSION AND DISTRIBUTION

12KV AND 69KV SUBSTRUCTURE CONSTRUCTION PLAN
MIRALOMA AVENUE
FROM STA. 22+00 TO STA. 30+00

PROJ. NO:
SUBPROJ. NO:
SCALE: 1"=40'
SH. 1 OF 1
ACCT NO. —

DRAWING NO. ES-1A
REV. 0

G:\T&D\PROJECT\P0000000211_PARK SUB T&D\69KV AS-BUILT\

BACKGROUND

The Canyon Power Plant Application for Certification (AFC) indicates that the volume of soil that will be removed and the volume that will be re-used on-site should be about the same (p. 3-39), such that off-site soil disposal should not be necessary. An anticipated excess of some 3,600 cubic yards of removed soils is to be used in the plant's final grading plan to avoid the need for soil disposal. In case the project must dispose of soils off-site, staff seeks assurance that a disposal site is available to the applicant that is either a commercial disposal site or that has been previously surveyed and found to contain no significant cultural resources.

Technical Area: Cultural Resources

Data Request 11-CUL: Please identify a soil disposal site, available to the project if needed, that is either a commercial disposal site or a site that has been previously surveyed and found to contain no significant cultural resources.

Response: The background to the data request suggests that the CPP is planning to dispose of excavated soils off-site. Other than the soil remediation activities discussed in Response to Data Request Number 12 below, the CPP will not require disposal of off-site soil as part of its overall grading plan. The excavated soils will be recompacted as engineered fill and used on-site, and therefore the CPP will not be using an off-site soil disposal site.

A Phase II ESA of the site has indicated areas of potential contamination. These areas are limited (URS Corporation, Additional Phase II Environmental Investigation Report City of Anaheim Proposed Power Generation/Peaker Site, Anaheim, California. November 14, 2007). Most of the soil removed from the site will be re-used at the facility. Allied Waste, located in Wilmington, California, has been identified as the commercial disposal site for all excess soil recovered from the site not containing contamination. Disposal of soil to the Allied Waste facility will prevent any impact onto cultural resources from disposal.

As indicated in the AFC, some of the soil sampled during the initial Phase II evaluation showed to be potentially impacted by petroleum hydrocarbons and lead. Excess soils identified to contain Total Petroleum Hydrocarbon (TPH) contamination of 1,000 mg/kg or above will be excavated and sent for thermal disposal. All soil following the aforementioned criteria will be taken to the TPST Soil Recyclers facility in Adelanto, California where it will be appropriately thermally disposed. All excess soils showing lower levels of TPH concentrations will also be sent to the TPST Soil Recyclers facility for disposal. No cultural resources will be impacted from these soil disposal proceedings.

Excess soils identified to contain lead contamination during construction will be evaluated to determine requirements for removal. Soil showing high concentration levels of lead will be disposed of at the Chemical Waste Management Kettleman Hills landfill facility. The Kettleman facility is a Class I/II/III landfill, and is therefore capable of accepting liquid and solid hazardous wastes. The disposal of lead contaminated soil from the site at the Chemical Waste Management Kettleman Hills landfill facility will ensure no significant cultural resources are impacted from project activities.

BACKGROUND

The AFC identifies the presence of one to two feet of artificial fill (under the surface paving) on the proposed project site (p. 6.7-5). The AFC also mentions soil remediation activities planned for the project site as a means of limiting the City of Anaheim's environmental liability for future uses of the site (p. 6.7-1), but no details are provided, and AFC Appendix M, which is supposed to contain information on soil remediation at the site, is incomplete. The project's Geotechnical Report recommends that the project place five feet of engineered fill under mat or spread foundations for the major structures on the project site. To fully assess the project's potential impacts to archaeological resources possibly buried in native soils on the plant site and along the underground linear facilities, staff needs additional information on the planned soil remediation, on the recommended soil replacement and compaction, and on the extent of excavation into previously undisturbed soils.

Technical Area: Cultural Resources

Data Request 12-CUL: Please describe all planned soil remediation activities on the proposed site and include:

a) Depth of extant artificial fill to be removed over the entire site, provided as a range in actual elevation

b) Depth of native alluvium to be removed over the entire site, provided as a range in actual elevation

Response: The background to this data request identifies that the City of Anaheim will be engaging in soil remediation activities to limits its environmental liability and for future uses of the site. As discussed further in Section 6.7 of the AFC, these soil remediation activities are not part of the CPP as the City of Anaheim is required as the current owner of the property to conduct these activities whether or not the CPP is licensed. So with that understanding, the following is provided for informational purposes only and should not be the subject of Conditions of Certification and may be performed prior to licensing of the CPP.

Based on the findings of a Phase I Environmental Site Assessment (ESA) of the site, a Phase II assessment and a supplemental Phase II ESA were performed in 2006 and 2007,

respectively. The analyses identified the presence of Total Petroleum Hydrocarbon (TPH) and lead chemical constituents in various areas of the site (URS Corporation Additional Phase II Environmental Investigation Report City of Anaheim Proposed Power Generation/Peaker Site, Anaheim, California. November 14, 2007). Due to the presence of this soil contamination, the COA intends to perform soil remediation activities to deal with each identified contaminant.

As an initial remediation activity, the COA will remove and dispose of all on-site underground structures including septic tanks, USTs, clarifiers, and hydraulic hoists, prior to conducting any site redevelopment. All underground structures removed from the site will be sampled and analyzed to determine the appropriate means of disposal (i.e., hazardous waste or non-hazardous waste). Additional confirmation testing will also be performed following removal, per applicable regulations.

Based on findings from the Phase II ESA, the site contains three areas that will be excavated and meet the generally accepted level of 1,000 mg/kg for TPH heavier-range compounds. These areas are located in the northern portion of the site where the former automotive garage operations occurred. The TPH impacted areas are identified in Figure 3 as Area 1, Area 2, and Area 3. Soil remediation activities for each area will consist of the following:

- Area 1 – Excavation of 400-ft^2 area. Area will be excavated to a depth of approximately 28 feet.
- Area 2 – Excavation of 200-ft^2 area. Area will be excavated to a depth of approximately 20 feet.
- Area 3 – Excavation of 36-ft^2 area. Area will be excavated to a depth of approximately 3 feet.

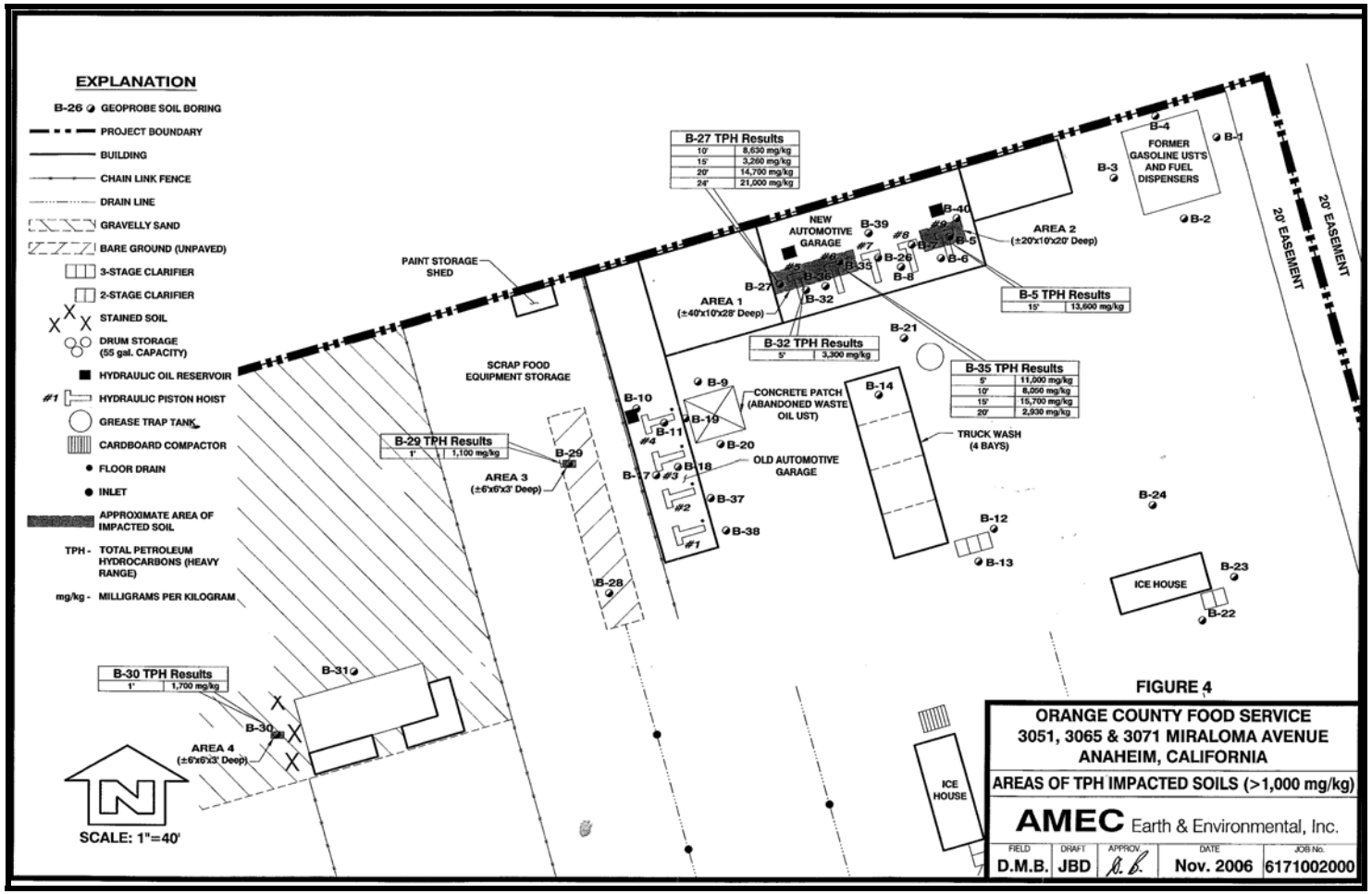
Depths of excavation provided for each area are an estimate based on concentrations identified from the Phase II ESA and best industry practices. The actual depth of excavation required

will be based on the cleanup level agreed to with the lead agency and field conditions encountered during excavation.

No remediation is anticipated for site locations with lead based soil contamination. SCPPA does not intend on conducting any exaction or soil disturbing activities along the southwestern portion of the site, where the lead based contamination was identified through the Phase II ESA. In the event that a need arises for grading or excavating of the lead impacted area, it is anticipated that a small volume of soil will be removed. The shallow soil removed would likely be classified as non-RCRA, California designated hazardous waste because of the STLC lead concentrations. An estimated maximum depth of 3 feet is anticipated for any excavation conducted for the lead impacted soil. The actual depth of excavation required will be based on the cleanup level agreed to with the lead agency and field conditions encountered during excavation.

Quantities of extant artificial fill and native alluvium soils that will be removed from the site will range from 10,800 ft^3 to 11,200 ft^3, depending on the area of excavation. The Canyon Power Plant site is located in the alluvial plain of the Santa Ana River and its near-surface soils (consisting of artificial fill) extends from one to two feet in depth. Areas impacted with petroleum hydrocarbons will include the removal of all artificial fill and native alluvial soil to a depth of 28 feet (for Area 1), 20 feet (for Area 2), and 3 feet (for Area 3). Removal of artificial fill and native alluvial soils in areas with lead impacted soils are anticipated to be to a maximum depth of 3 feet. The actual depth of excavation for any of the impacted areas will be based on the cleanup level agreed to with the lead agency and field conditions encountered during excavation, which will ultimately determine the amounts of artificial fill and native alluvium soil that will be removed from the site. The COA will develop a soil management plan prior to commencement of excavation and/or soil remediation activities to define the absolute quantities of artificial fill and native alluvium that will be removed form the site. See Figure 3.

FIGURE 3
AREAS OF TPH IMPACTED SOILS (>1,000 MG/KG)



Technical Area: Cultural Resources

Data Request 13-CUL: Please identify the elevation of the finished grade for the proposed project and provide:

a) The proposed thickness of the engineered fill layer over the entire site, provided as a range in actual elevation

b) The proposed elevation of the top of the remaining native alluvium over the entire site

Response:

13a

The engineered fill in those areas other than disturbances for foundations or underground utilities will be on the order of one foot for paved areas and graveled areas. No engineered fill is planned for the laydown area since it will remain undeveloped.

13b

Finished elevations will be generally as shown on AFC Figure 3-9 representing little change from the existing finished grades. Thus the top of the remaining native alluvium elevations will be approximately 1 to 2 feet below the original site elevations.

Technical Area: Cultural Resources

Data Request 14-CUL: Please provide the elevation of the greatest depth into intact alluvium to which proposed project excavations would extend at the plant site and along the trenches for the linear facilities (all water and sewer pipelines, the natural gas pipeline, and the transmission line duct banks).

Response: The following table indicated the depth of disturbance into the native alluvium layer.

SCPPA Canyon Power Plant			
Item	Disturbance Depth (In Feet)	Alluvium Depth (Ave.)	Depth Into Alluvium layer[1]
CTG	10	1	9
SCR	10	1	9
FG compressor skid area	3	1	2
GSUs	11	1	10
Chiller unit	7	1	6
Main electrical bldg.	2	1	1
Air compressor	2	1	1
POB/maintenance bldg.	2	1	1
Ammonia tank	3	1	2
Raw water tank	9	1	8
Demin storage tank	9	1	8
Water treatment area	3	1	2
GIS switchyard	4	1	3
GIS switchyard meter enclosure	2	1	1
Perimeter sound wall	5	1	4
OWS process drains sump	25	1	24
Black start diesel generator	6	1	5
Auxiliary & station transformers	4	1	3
Natural gas metering station	3	1	2
WQ treatment chamber	12	1	11
Stormwater Infiltration chamber	12	1	11
Construction laydown area	0.5	2	0

SCPPA Canyon Power Plant			
Item	Disturbance Depth (In Feet)	Alluvium Depth (Ave.)	Depth Into Alluvium layer[1]
On-site trenching:			
GWRS Water Line	5	1	4
Sanitary Sewer	5	1	4
HV Duct Banks	6	1	4
LV Duct Banks	5	1	4
Natural Gas Line	5	1	4
Potable & Fire Water Lines	5	1	4
Off-site trenching:[1]			
Off-Site Trenching:			
GWRS Water Line	5	Unknown	5
GWRS Pump Station	11	Unknown	11
Sanitary Sewer	5	Unknown	5
HV Duct banks (normal depth)	6	Unknown	6
HV transmission vault	13	Unknown	13
HV jack & bore pit (under Carbon Creek Channel)	26	Unknown	26
Natural Gas Line	5	Unknown	5
Potable & Fire Water Lines	5	Unknown	5

[1] Worst-case estimate since the actual depth of Alluvium layer is unknown.

BACKGROUND

The AFC is ambiguous in identifying the landform on which the CPP would be built, with both river terrace and alluvial fan specified (pp. 6.3-11 and 3.3-12). Staff needs clarification on the landform on which the proposed CPP site is located.

Technical Area: Cultural Resources

Data Request 15-CUL: Please clarify the landform or landforms that serve as the site for the proposed power plant and its ancillary features.

Response: The Geologic Section (6.3) of the AFC provides a summary of the geology, seismicity, and geologic resources of the project site and related facilities, including linear facilities. Section 6.3.1.2 Site Geologic Conditions states the following:

> *The CPP site is located on a broad alluvial plane, locally underlain by approximately 2,000 feet of unconsolidated, stratified silt, sand, and gravel deposits based on extrapolated well data interpreted by OCWD (O'Connor-Patel and Woodside, 2004) deposited by the Santa Ana River (Figure 6.3-2). The project area is located within the southeastern portion of the central block of the Los Angeles Basin, on a relatively flat plane sloping about 16 feet per mile (250:1) to the southwest. The central block is structurally characterized as an elongated trough, overlain by at least 32,000 feet of marine and nonmarine Cretaceous to Pleistocene rocks, including Miocene volcanic rocks (Morton, 2004). This stratigraphy is exposed on the western flanks of the Santa Ana Mountains (Norris and Webb, 1990). Geotechnical borings to depths up to 50 feet below ground surface (bgs) indicate the site is underlain by stratified alluvial deposits consisting of medium dense to very dense silty sand and poorly graded sand with intermittent layers of sandy silt. The upper one to 2.5 feet was comprised of artificial fill material (see Appendix F).*

Figure 6.3-2 shows a detailed description of the project area (inclusive of all linear facilities proposed) and the existing geologic conditions. As described in Section 6.3.1.2 and Figure 6.3-2 "The CPP site is located on a broad alluvial plane…".

The Data Request identifies pages 6.3-11 and 3.3.12. Page 6.3-11 describes slope stability and liquefaction of the project area. Section 6.3.1.6.6 describes the CPP site as "geologically designated as young alluvial fan deposits…". Page 6.3-12 (page 3.3-12 describes the transformers and it is believed that this page identification was an error) relates to the natural resources occurring within the general area which is described as including alluvial deposits.

The AFC has been consistent with the geologic landform descriptions for the CPP site and linear locations.

BACKGROUND

A Native American burial (site CA-OR-517) was found at a depth of 5 to 6 feet in river sand about 0.8 mile from the proposed project site, in the Santa Ana River flood plain. Beth Padon's 1998 review of the known archaeological sites along the Santa Ana River, starting near the proposed project's location and extending 13 miles downriver, additionally identified six important prehistoric habitation sites on the bluffs on either side of the Santa Ana River and another burial in the flood plain, discovered while excavating for a swimming pool. Further, the existence of three prehistoric food processing sites in a canyon mouth about a mile from the proposed project location suggests that all of the landforms associated with the Santa Ana River—the flood plain, the bluffs, and the tributary creeks—were used in prehistory.

To complete the applicant's data submission required for staff to assess the possibility of buried archaeological deposits at the project site, staff needs a geoarchaeological perspective on the prehistoric use of the Santa Ana River landform or landforms on which the proposed project site is located.

Technical Area: Cultural Resources

Data Request 16-CUL: Please review the extant literatures for archaeology, geoarchaeology, and Quaternary science and provide a summary of what is currently known of the archaeology, paleoenvironment, and historical geomorphology of the landforms or landforms in the vicinity of the project site. The primary emphasis of the summary should be the present state of geoarchaeological knowledge regarding the archaeological resources that are characteristically found on landforms in the Santa Ana River watershed that are analogous to those of the proposed CPP project site.

The fewer archaeological data available, the more emphasis should be given to the paleoenvironment and the historical geomorphology of the project site to provide a more substantive context for interpreting the possible presence of buried archaeological deposits. Where the data are available, please emphasize the kinds of buried archaeological deposits that have been found, the stratigraphy in, above, and below the

deposits, and the depths at which the archaeological deposits in the area typically occur.

Response:

No geoarchaeological studies have been conducted for the area encompassing the project site. However, it is known that the project site is located in the flood plain west of the Santa Ana River. Doig (1962) has described the area west of the Santa Ana River as an area subjected to seasonal floods during the 1800's, which created swamps and sloughs. Prehistorically these types of environmental conditions would have been the same. This type of environment would have provided abundant food and tool making resources, and served as a food procurement area for the prehistoric population, but it is unlikely that this type of environment would have served as a long term village-type settlement. Most of the well-documented prehistoric village sites in Orange County are situated on bluffs or mesas, around costal bays and estuaries, or on knolls above springs.

The 1896 historic map shows there were small tributaries throughout the area, including Carbon Canyon Creek and the Santa Ana River, which since that time have been channelized.

Historic maps verify the project area has been subjected to period flooding and changes in the course of the Santa Ana River. This natural activity may have destroyed evidence of early human activity, or it may have preserved the evidence by burying it under sand and silt.

Four prehistoric archaeological sites were identified within a one-mile radius of the project site. Three of these sites consisted of artifacts associated milling and food processing activities. These three sites are located north of the project site. The fourth site is a human burial located within one-mile of the project site. It is located south of the project site, located approximately 0.5 mile north of the Santa Ana River.

Regionally, the site is in the northern portion of the Peninsular Ranges geomorphic province. This province extends

northwesterly from Baja California to the north edge of the Los Angeles Basin and westerly into the offshore area, including Santa Catalina, Santa Barbara, San Clemente and San Nicolas islands. The northern boundary of the province is the Transverse Ranges along the Malibu, Santa Monica, Hollywood, Raymond, Sierra Madre, and Cucamonga faults. The eastern boundary of the province is the Colorado Desert geomorphic province along the San Jacinto fault system. The Peninsular Range province is characterized by northwest/ southeast trending alignments of mountains and hills and intervening basins, reflecting the influence of northwest trending major faults and folds, such as the nearby Whittier fault zone, located approximately 5.1 miles northeast of the site, controlling the general geologic structural fabric of the region.

The site is situated on an alluvial plain of the Santa Ana River, west of the Peralta Hills. The relationship of the site to local geologic features is depicted in Figure 6.3-2.

The nearest known habitation and food processing sites seem to correspond to 100- to 500-year flood zone potential of the site. Nearby known sites are located upstream and inland from the Santa Ana River, likely to avoid being down slope of large bodies of water that would be impacted in the event of a major inundation. However, these food processing sites are located close enough to the Santa Ana River, which would have enabled the indigenous population to exploit its abundant resources.

BACKGROUND

Page 3-28 of the AFC indicates that Table 6.15-1 identifies each chemical by type and intended use and estimates the quantity to be stored on-site. However, this table does not contain the amount of these hazardous materials to be stored on-site. Furthermore, some hazardous materials listed in this table are not identified by chemical name and CAS number (e.g., corrosion inhibitor, non-oxidizing biocide, etc.). In order to properly assess the management of hazardous materials at the proposed power plant, staff needs to know the chemical identity, concentration if a liquid, and maximum amount of each hazardous material proposed for use and storage on the site. If the project is certified by the Energy Commission, the project owner will be limited to using only those hazardous materials, strengths, and amounts listed on this table.

Technical Area: Hazardous Materials Management

Data Request 17-HAZ: Please revise Table 6.15-1 to include the identity, CAS number, and amount of each chemical expected to be stored on-site.

Response: Table 6.15-1 was revised as requested. The chemical name and CAS number were updated in the table (the identity and CAS number of each chemical are based on typical chemical composition). In addition, Table 6.15-2 was revised to provide information of the estimated chemical storage amount (Assumptions are made based on typical power plant storage amount). Please see Tables 6.15-1 and 6.15-2.

TABLE 6.15-1
TOXICITY OF HAZARDOUS AND ACUTELY HAZARDOUS MATERIALS ON-SITE

Hazardous Materials	Project Phase	Toxicity	OSHA	DOT Class	NFPA[1]			CAS Number
					Health	Flammability	Instability	
Acetylene	Construction & Operation	No known toxic effects.	N/A	Flammable	1	4	3	74-86-2
Antiscalant (Acrylate polymers and Phosphonate)	Operation	Low toxicity	N/A	N/A	1	0	0	Mixture
Aqueous Ammonia (19%)	Operation	Corrosive to eyes and skins, very toxic by inhalation and ingestion.	50 ppm	Nonflammable	2	0	0	7664-41-7
Diesel Fuel #2	Construction & Operation	Low-toxicity	N/A	Flammable liquid	0	2	0	Mixture
Dispersant/Corrosion Inhibitor (Acrylic polymer)	Operation	N/A	N/A	N/A	N/A	N/A	N/A	9011-14-7
Dryer desiccant	Operation	Dust may cause irritation. Dust is irritating to the respiratory tract. Expected to be ingestion hazardous. Possible cancer hazard.	N/A	Not regulated	2	0	0	Silica, amorphous 7631-86-9 Cobaltous chloride 7646-79-9
Ferric Chloride (38%)	Operation	Corrosive. Causes severe eye and skin burns, digestive and respiratory tract burns.	1 mg/m^3	Corrosive	2	0	0	10025-77-1

TABLE 16.15-1 (CONTINUED)
TOXICITY OF HAZARDOUS AND
ACUTELY HAZARDOUS MATERIALS ON-SITE

Hazardous Materials	Project Phase	Toxicity	OSHA	DOT Class	NFPA[1]			CAS Number
					Health	Flammability	Instability	
Hydraulic Oil	Construction & Operation	Not expected to be an irritant.	5 mg/m^3	Not regulated	0	1	0	Mixture
Hydrochloric Acid (38%)	Operation	Corrosive. Causes eye and skin burns. Causes digestive and respiratory tract burns. Corrosive to metal. May be fatal if inhaled or swallowed.	7 g/m^3	Corrosive	3	0	1	7647-01-0
Lubrication Oil	Construction & Operation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Magnesium Sulfate (30%)	Operation	May cause eye and skin irritation. May cause respiratory and digestive tract irritation.	400 g/m^3	Not regulated	0	0	0	7487-88-9
Mineral Oil	Operation	Causes eye and skin irritation. Inhalation of a mist of this material may cause irritation of the lungs.	N/A	N/A	0	1	0	8042-47-5
Motor oil EasyMix 2-Cycle Motor Oil	Construction	Hazardous	N/A	N/A	0	2	0	64742-47-8
Natural gas (Methane)	Operation	Flammable. Asphyxiant. Effects are due to lack of oxygen.	Not carcinogenic	Flammable gases	1	4	0	74-82-8
Non-oxidizing biocide(Isothiazolin)	Operation	Corrosive	N/A	N/A	N/A	N/A	N/A	26172-55-4

TABLE 16.15-1 (CONTINUED)
TOXICITY OF HAZARDOUS AND
ACUTELY HAZARDOUS MATERIALS ON-SITE

Hazardous Materials	Project Phase	Toxicity	OSHA	DOT Class	NFPA[1]			CAS Number
					Health	Flammability	Instability	
Oily rags and oil absorbents	Construction & Operation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Paint	Construction & Operation	N/A	N/A	N/A	N/A	N/A	N/A	Mixture
Polymer Thickening Aid (Polymer of Acrylate)	Operation	Low toxicity	N/A	N/A	1	2	0	25085-02-3
Propane	Operation	Low-toxicity	1,000 ppm	Flammable	1	4	0	74-98-6
Propylene-glycol	Operation	Low-toxicity	N/A	Not regulated	0	1	0	57-55-6
RO Membrane Cleaners(Tetrasodium Ethylenediamine Tetraacetate)	Operation	Corrosive	N/A	N/A	3	0	0	64-02-8
Sodium Bisulfite (38%)	Operation	Harmful if swallowed. Contact with acids liberates toxic gas. Irritating to eyes, respiratory system and skin. Possible sensitizer.	15 mg/m^3	Corrosive	2	0	1	7631-90-5
Sodium Carbonate (99%, solid)	Operation	Hazardous. Severe irritating to eyes, skin and respiratory system. Harmful if swallowed.	N/A	Not regulated	1	1	1	497-19-8
Sodium Hypochlorite (12%)	Operation	Toxic and corrosive.	1.5 mg/m^3 as Cl_2	Corrosive	3	0	0	7681-52-9

TABLE 16.15-1 (CONTINUED)
TOXICITY OF HAZARDOUS AND ACUTELY HAZARDOUS MATERIALS ON-SITE

Hazardous Materials	Project Phase	Toxicity	OSHA	DOT Class	NFPA[1]			CAS Number
					Health	Flammability	Instability	
Sodium Hydroxide (25%)	Operation	Irritant and corrosive.	2 mg/m^3	Corrosive	3	0	1	1310-73-2
Sulfuric Acid (93%)	Operation	Irritant to eyes, poisonous via inhalation, and extremely irritant, corrosive and toxic to tissue.	1 mg/m^3	Corrosive	3	0	2	7664-93-9
Sulfur Hexafluoride	Operation	Asphyxiant. Effects are due to lack of oxygen. No other health effects are currently known.	1,000 ppm	Non-flammable gas	1	0	0	2551-62-4
Transmission fluid	Construction	Low toxicity	N/A	N/A	1	1	0	64742-65-0
Unleaded gasoline	Construction	Irritant	5 mg/m^3	Flammable liquid	1	3	0	Mixture
Various detergents	Construction & Operation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Waste fluids (i.e., motor oil, transmission fluid, hydraulic fluid, and antifreeze)	Construction & Operation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Waste paint, thinners and solvents	Construction & Operation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Waste welding materials	Construction & Operation	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[1] NFPA hazardous rating:

- Health: 4-deadly; 3-extreme danger; 2-hazardous; 1-slightly hazardous; 0-normal material

TABLE 16.15-1 (CONTINUED)
TOXICITY OF HAZARDOUS AND
ACUTELY HAZARDOUS MATERIALS ON-SITE

- Fire (Flash Point Temp.): 4-below 73F; 3-73 to 100F; 2- 101 to 200F; 1-over 200F; 0-will not burn
- Reactivity: 4-may detonate; 3-shock or heat may detonate; 2- violent chemical reactivity; 1-unstable if heated; 0-stable

DOT = Department of Transportation
g/m^3 = grams per cubic meter
mg/m^3 = milligrams per cubic meter
N/A = not applicable
NFPA = National Fire Protection Association
OSHA = Occupational Safety and Health Administration
ppm = parts per million

TABLE 6.15-2
SUMMARY OF HAZARDOUS MATERIALS STORED ON-SITE

Hazardous Material	Primary Application	Storage Type	Maximum Storage Quantity
Acetylene	Welding	Cylinder	270 cf
Antiscalant (neat)	RO system	Portable tote tank	400 gal
Aqueous ammonia (19%)	NO_X reduction in SCR	Aboveground tank	10,000 gal
Diesel fuel	Black start generator	Skid Base Mounted Tank	500 gal
Dispersant/corrosion Inhibitor (neat)	Scale/corrosion control (cooling tower water)	Portable tote tank	400 gal
Dryer desiccant	Instrument air	Instrument air dryer	300 lbs
Hydraulic fluid	Misc plant equipment	Drums inside secondary containment	110 gal
Mineral oil	Power Transformers	Transformer internal volume	35,000 gal
Motor oil	Misc vehicles and equipment	Vehicle volume & drum inside secondary containment	110 gal
Natural gas	Fuel for power plant	Pipeline	N/A
Biocide	Biocide for cooling system	Portable tote tank	400 gal
Paint	Painting	Cans in storage locker	50 gal
Propane		Cylinder	75 lbs
Propylene glycol	Auxiliary cooling closed cooling water system	Closed cooling water system	3,000 (initial fill)
RO membrane cleaners (neat)	RO system	Portable tote tank	400 gal
Sodium bisulfite (38%)	Dechlorination (RO system)	Portable tote tank	400 gal
Sodium hypochlorite (12.5%, trade)	Biocide/biofilm control (raw water tank, circulating water, MF system)	Portable tote tank	400 gal
Sulfur hexafluoride	Switchyard SF6 breakers	Stored in equipment	6,000 lbs
Sulfuric acid (93%)	pH Control (Cooling tower makeup, MF system, RO system)	Portable tote tank	400 gal
Transmission fluid	Misc vehicles and equipment	Vehicle volume & drum inside secondary containment	100 gal
Turbine synthetic lube oil	Rotating equipment	Equipment storage tank	600 gal

TABLE 6.15-2 (CONTINUED)
SUMMARY OF HAZARDOUS MATERIALS STORED ON-SITE

Hazardous Material	Primary Application	Storage Type	Maximum Storage Quantity
Generator mineral lube oil	Rotating equipment	Equipment storage tank	2,000 gal
Turbine hydraulic oil	Rotating equipment	Equipment storage tank	200 gal
Unleaded gasoline	Misc vehicles and equipment	Vehicle volume & drum inside secondary containment	200 gal
Various detergents	Combustion turbine cleaning	Drum storage container	220 gal
Various hazardous wastes	Misc waste	Steel drums	45 gal

[1] Expected based on presumed operation conditions. Usage and storage will be optimized during final design.

BACKGROUND

Page 6.15-10 of the AFC states that ammonia would be delivered by a local supply company and describes the delivery route that would be used. The amount and estimated frequency of ammonia deliveries (per month, per year) is not provided. Staff needs to know the amount transported and frequency of the deliveries in order to adequately assess the risks posed by transporting aqueous ammonia to the site. Additionally, the route described on page 6.15-10 is incorrect and differs from the route described in the Traffic and Transportation section of the AFC (page 6.11-21). This discrepancy needs correction.

Technical Area: Hazardous Materials Management

Data Request 18-HAZ: Please provide the tanker truck capacity for ammonia deliveries and the estimated number of deliveries per month.

Response: The Applicant intends to operate the facility 16 hours per day, 5 days per week, for up to 4,006 hours per year total for the 4 CTGs. The usage of aqueous ammonia for four CTG turbines is about 50 gallons per hour (~ 800gal/16hrs). Aqueous ammonia truck deliveries will occur at the facility once every ten days, while the plant is operational, at this rate of ammonia consumption. A typical ammonia delivery truck has a capacity of 6,500 gallons. It is expected that the number of deliveries could be as high as 8 in one year and at 6,500 gallons per delivery, each delivery would represent 65 percent of the tank capacity.

Technical Area: Hazardous Materials Management

Data Request 19-HAZ: Please correct the transportation route description found on page 6.15-10 and confirm that the route described in AFC Section 6.11 is accurate.

Response: The ammonia will be delivered via the most direct route from the regional freeway system. It is via the SR-91/Kraemer Boulevard interchange, north on Kraemer Boulevard, then left on westbound East Miraloma Avenue then right towards the project site at 3071 East Miraloma Avenue and vice versa. Both Kraemer Avenue and East Miraloma Avenue are designated COA truck routes.

BACKGROUND

In Section 6.10-4, "Cumulative Impacts," page 6.10-37, readers are referred to Section 6.18, "Cumulative Impacts," for information about other major proposed projects with potential to result in cumulative socioeconomic impacts. However, Section 6.18 contains only a map (Figure 6.18.1) with the names and locations of seven projects located within a one-mile radius of project site and one-half mile from linear facilities. Energy Commission staff has identified Environmental Justice populations within a one-mile and six-mile radius of Canyon's proposed site.

Technical Area: Socioeconomics

Data Request 20-SOCIO: Please identify: 1) any new or proposed projects, and 2) any existing or proposed power plants within a six-mile radius of Canyon's proposed site including the facilities already identified within a one-mile radius of the proposed site.

Response: Attached is an updated map labeled, "Cumulative Projects Within 6-mile Radius, Canyon Power Plant." Revised Table 6.18-1, below, lists the major proposed projects within 6 miles of the CPP site; these projects are also displayed on the map.

A discussion of proposed power plants is included in Section 6.18.2.4 of the AFC. There are no proposed power plants within 6 miles of the CPP site. There is one existing power plant within 6 miles of the CPP site and this plant is described in Data Request 23.

TABLE 6.18-1
CUMULATIVE PROJECTS LIST

No.	Project Applicant	Project Description	Status/Timing	Location
1	Kaiser Permanente	Orange County Anaheim Medical Center. Proposal to construct a 360 bed hospital, 18,000 square feet administrative offices, 339,000 square feet medical office, two parking structures and utility plant to be built in three phases.	EIR approved by City Council Resolution of November 5, 2007.	3400 E. La Palma Avenue City of Anaheim, CA Parcel Nos. 34512117 and 34512125
2	TR La Palma Real Estate LLC	The Crossings. Mixed-Use Project with 312 condos (including 31 live/work units).	Anticipated construction to begin in 2008.	3530 East La Palma Avenue City of Anaheim, CA
3	Gutherie Development	DRC Development. Industrial Park.	Construction completed in September 2007.	1041 N. Shepard Street City of Anaheim, CA
4	Boeing Realty	Boeing. Redevelopment of Boeing site with new commercial and industrial buildings.	Under Review by City.	Miraloma Avenue and Miller Street City of Anaheim, CA
5	Outer Spring Volcano LP	Concourse Bowling. Two electronic reader board signs, management office addition, and a telecommunications tower addition at an existing bowling facility.	Under Review by City.	3364 East La Palma Ave., City of Anaheim, CA
6	Orange County Water District (OCWD)	La Jolla Groundwater Basin. Construct 5.7 acres La Jolla groundwater recharge basin and perimeter road.	Project Certified by OCWD.	West La Jolla Street, City of Anaheim, CA
7-24	Various Developers	The Platinum Triangle is a master-planned development, intended to replace older industrial developments with high density, mixed-use, office, restaurant, and residential projects.	As of April 2008 a total of 8,045 residential units, and 1,483,355 sq. ft. of commercial and office were pending, approved, or under construction.	Bounded on two sides by the I-5 and SR 57 freeways, it generally surrounds and includes Angel Stadium, Honda Center and The Grove of Anaheim. City of Anaheim, CA

TABLE 6.18-1 (CONTINUED)
CUMULATIVE PROJECTS LIST

No.	Project Applicant	Project Description	Status/Timing	Location
25	The Shopoff Group	Canyon Crest – Request to develop a 367.5-acre site with 165 single family homes.	In public hearings May 2008. Final EIR available.	East end of Carbon Canyon, Northwest of Carbon Canyon Road City of Brea, CA
26	Simon Properties	Request to expand Brea Mall by approximately 200,000 s.f.	Under review by City of Brea. Initial Study complete.	1065 Brea Mall Way City of Brea, CA
27	CWI Development	South Brea Lofts – Request to build 47 residential condominiums (37 live/work and 10 residential).	Approved.	500 S. Brea Blvd. City of Brea, CA
28	Greg Jones	Request to construct a new retail building.	Approved January, 2008.	NE Corner of Site Dr. and Central Ave., City of Brea, CA
29	Olen Development	Request to construct 260 apartments.	Approved July, 2007.	555 Pointe Dr., #4, City of Brea, CA
30	Burke Real Estate Group	Request to construct industrial business park.	Approved May, 2007.	195 N. Puente St., City of Brea, CA
31	Chevron	West Coyote Hills subdivision – Request to construct 135 SFD.	In Application Phase; Draft EIR under review by City of Fullerton.	N. City limit, between Gilbert and Euclid, City of Fullerton, CA
32	The Olson Company	Request to construct 68-unit residential condominium complex.	In Plan Check Phase, Construction plans under review.	1600 W. Commonwealth Ave., City of Fullerton, CA
33	Fullerton Hughes LLC	Request to construct 136 attached residential units.	In Hearing Phase. City Council hearing Spring 2008.	S. side Hughes Dr. between Bastanchury Greenbelt Park and Nicolas, City of Fullerton, CA
34	Grace Ministries Int'l.	Request to construct 2,500-seat church and private school.	Phase I (temp. sanctuary and high school) complete. Phase II (new sanctuary) in construction.	1645 W. Valencia, City of Fullerton, CA
35	Pelican-Laing/ City of Fullerton	Residential and commercial mixed-use development above existing parking lot.	In Hearing Phase. EIR certified March, 2007. Design review by City of Fullerton.	100 block of W. Amerige (S. side), City of Fullerton, CA

TABLE 6.18-1 (CONTINUED)
CUMULATIVE PROJECTS LIST

No.	Project Applicant	Project Description	Status/Timing	Location
36	First Evangelical Free Church of Fullerton	Request to construct new 20,000 sq. ft. multi-purpose room, 22,000 sq. ft. administrative building, and parking structure.	In Construction Phase. Approved July, 2006. Phase I parking structure complete.	2801 Brea Blvd., City of Fullerton, CA
37	Morgan Group	Request to construct Jacaranda Senior Apartments, 131 senior condominium units to replace Sunny Hills Racquet Club.	Grading permits issued, construction plans in review by City.	1900 Camino Loma, City of Fullerton, CA
38	Newcastle Development	Mixed-use development with 28 condominiums and 4,000 sq. ft. commercial.	In Plan Check Phase. Applicant requesting 1-year extension.	345 E. Commonwealth
39	Providence Center	Request to construct new 96,210 sq. ft. medical offices and 20,800 sq. ft. commercial.	Phase I complete. Phase II under construction.	300 W. Bastanchury, City of Fullerton, CA
40	City of Fullerton	Request to construct 700 to 1000 space parking structure for Fullerton Transit Center Parking Expansion Project.	Project is in Hearings Phase for design review.	S. side Santa Fe between Harbor and Malden
41	JPI/Sheldon Group	Request to construct mixed-use Jefferson Commons student housing with retail.	Construction drawings expected in Plan Check Spring 2008.	501 N. Commonwealth, City of Fullerton, CA
42	City of Fullerton Redevelopment and Housing Departments	Request to construct Richman Neighborhood affordable housing projects, rehabilitation and new construction.	In Construction Phase. Demolition and reconstruction underway at several locations in area.	Richman Neighborhood bounded by West, Ford, Valencia, Richman and Truslow
43	Gene Fong Associates	Request to expand existing Embassy Suites hotel/ conference/banquet facilities by adding 17 story, 238-room tower, 56,000 sq. ft. of banquet/meeting rooms, golf range, and parking/ circulation modifications.	Phase I in Plan Check.	11767 Harbor Blvd and 12261 Chapman Ave, City of Garden Grove, CA

TABLE 6.18-1 (CONTINUED)
CUMULATIVE PROJECTS LIST

No.	Project Applicant	Project Description	Status/Timing	Location
44	Orange Co. Flood Control District	Request to relocate existing 15,000 sq. ft. building, add 6,000 sq. ft. new building area, construct a new CNG/gas fill station, and street improvements at Eckhoff and Collins Sts.	County-prepared ND under review by City.	2023 W. Collins St., City of Orange, CA
45	Foxborough	Request to demolish 90 apartment units and construct 260 apartments, a 14,995 sq. ft. commercial building and a parking structure.	Project Incomplete and awaiting revised plans from applicant.	501 E. Katella Ave., City of Orange, CA
46	Citrus Grove Apartments	Request to construct 57 low-income housing units, community room and parking.	At Design Review Committee May, 2008.	1120 N. Lemon St., City of Orange, CA
47	Children's Hospital of Orange County	Request to expand existing hospital by 60 beds, by constructing a seven story building of approximately 425,000 sq. ft.	Under review by City. Pending resubmitted materials.	445 S. Main St., City of Orange, CA
48	Orangethorpe-Van Buren Condominiums	Request to construct 125 attached residential units.	Approved 2007.	W of NW corner of Orangethorpe and Van Buren, City of Placentia, CA
49	Placentia- Yorba Linda Unified School District	Gualberto Valadez Middle School.	Construction start anticipated in Fall of 2008. EIR certified in November, 2006.	West La Jolla Street City of Placentia, CA
50	Shea Homes, et al.	Construct the Tonner Hills mixed-use subdivision with 765 residential units on 810 acres.	Mixed-use commercial construction potential in 2009-2010. Residential units on hold.	North of Lambert Road , bisected by SR 57, on the northern limit of City of Brea (admin. by Orange County)

TABLE 6.18-1 (CONTINUED)
CUMULATIVE PROJECTS LIST

No.	Project Applicant	Project Description	Status/Timing	Location
51-58	Anaheim Resort Projects	The Anaheim Resort area currently includes the Anaheim Resort, Disneyland Resort and Hotel Circle Specific Plans and consists of a variety of visitor-serving and convention commercial, recreation, institutional and residential or timeshare uses.	As of March 2008, a total of 887 residential units, 2,997 hotel or timeshare units, 304,817 sq. ft. hotel accessory uses, and nearly 650,000 sq. ft. of specialty restaurant, entertainment and retail uses, were pending, approved, or under construction.	Generally southwest of the I-5 freeway, bounded by Walnut and West Streets, and portions of Katella, Orangewood and Chapman Avenues; including Disneyland and the Anaheim Convention Center, City of Anaheim, CA

Technical Area: Socioeconomics

Data Request 21-SOCIO: Please provide information about the cumulative socioeconomic impacts (past, present, and reasonably foreseeable future) of those projects in combination with the Canyon project, particularly as they pertain to existing Environmental Justice populations.

Response: The CPP project and other projects identified in Data Request 20 are not expected to result in significant cumulative impacts to air quality, cultural resources, land use, noise, water resources, or traffic and transportation during the construction period or during operation of the CPP. In addition, these projects will not have a cumulatively significant impact to Environmental Justice populations in the six-mile area.

Since the area identified within the six-mile radius is largely developed, new projects are typically redevelopment projects. The new projects are also generally consistent with existing zoning designations and do not represent extensive changes to the adopted General Plans for the specific jurisdictions.

BACKGROUND

In Section 6.10.2.3, "Project Impacts to Population and Housing During Operations," page 6-10-16, text indicates that the new power plant would require nine full-time employees during operation; and later indicates that two employees would be new hires and seven would be existing employees.

Technical Area: Socioeconomics

Data Request 22-SOCIO: Please identify those seven existing employees and where they are currently working.

Response: CTG Station (Anaheim Peaking Plant), LM5000 gas turbine peaker power plant, 1144 N. Kraemer Blvd., Anaheim CA 92806

Generation Technicians: 5 (names withheld from public document)

Office Specialist: 1 (name withheld from public document)

Plant Manager: Charles Byrom

Technical Area: Socioeconomics

Data Request 23-SOCIO: Please indicate the operational status of the 47 MW peaker currently operated by the City of Anaheim once Canyon is operational and assess the socioeconomic impacts of that status.

Response: The current plant is operational, averaging 1,500 hours annually and based on current modeling and load growth projections, the plant is expected to continue operating at this level for the next 10+ years. The 1,500 hours is based on a 9,450 btu/kwhr Heat Rate which is comparable to the new facilities LM6000 units. Our modeling shows that the construction and operation of the CPP will not significantly affect the peaker plant operations and therefore will not result in socioeconomic impacts.

BACKGROUND

In Section 6.10.1.3, "Public Services and Utilities," page 6-10-9, recreational facilities are not included in the analysis. Recreation is identified in the CEQA Guidelines, as an area of analysis for which a project's potential to cause significant socioeconomic impacts should be assessed.

Technical Area: Socioeconomics

Data Request 24-SOCIO: Please identify recreational services such as existing neighborhood and regional parks or other recreational facilities and assess the socioeconomic effects of the proposed project on those facilities, for both the project's construction and operational phases.

Response: Section 6.13.1.2 of the AFC describes the recreational facilities within the CPP area and Figure 6.13-2 includes the locations of existing recreational facilities within the CPP area.

The construction workers for the CPP project could have a very low impact on the recreational facilities in the area. These workers are likely from other areas in the Los Angeles basin and would be commuting to the project site. In addition, the relatively short construction timeframe of approximately 9 months would further reduce any potential for impacts to recreational facilities during construction. For the operation of the CPP there could be 2 new workers. The introduction of 2 potential families into the area would not have a significant impact on the existing recreational facilities in the area of the CPP.

BACKGROUND

In Section 6.10.2.7.2, "Sales Tax," page 6-10-23 and 6-10-24, text indicates that during construction and operation of the project, local expenditures for commodities are expected to be the same for each county in the project area—Orange, Los Angeles, Riverside, and San Bernardino.

Considering the differences in size of each of the four counties; their proximity to the proposed project; and the difference in the number of workers needed during construction (1,741) and those needed during operation (2), some variance in the amount of sales and use tax collected by each of the counties in the project area would seem to occur.

Technical Area: Socioeconomics

Data Request 25-SOCIO: Please revisit the assumptions used on which the amount of sales and use tax for each county was calculated; account for the differences previously listed in this item; and revise the amounts, if necessary. If not necessary, please provide the assumptions used on which the figures in this section were calculated.

Response: Section 6.10.2.7.2 provides estimated sales tax that the CPP would expect to incur for materials and supplies purchased locally during construction and operation. Construction and operation purchases were estimated equally for each county of Orange, Los Angeles, Riverside and San Bernardino. This estimation is based on the availability of vendors and manufacturers supplying the type and quantity of materials required to support the facilities associated with a power plant described in Section 3.4 of the CPP AFC.

During construction, such purchases would range from construction materials (wood, cement, steel, pipes, paints, etc.) to specialized materials (ancillary equipment, instrumentation, bulk chemicals, etc.). During operation, such purchases would include replacement parts and instrumentation, bulk chemicals, etc. Specialized vendors and manufacturers supplying materials required during construction and operation are oftentimes dispersed throughout a general area, and in the case of the

project, are expected to be located in several counties. As a result, the value of construction and operations purchases and their associated sales tax estimates resulting from materials and supplies purchased from each county of Orange, Los Angeles, Riverside, and San Bernardino represent realistic assumptions, and are consistent with estimated tax allocations presented in Section 6.10.2.7.2 of the CPP AFC.

BACKGROUND

In Section 6.10.2.7.2, "Sales Tax," page 6-10-23 and page 6-10-24, sales and use tax collected for each county appears to be based on one year of the plant's operation. A reasonable expectation would be that sales and use tax would be generated for the life of the plant.

Technical Area: Socioeconomics

Data Request 26-SOCIO: After considering the preceding data request please provide an estimate of the total amount of sales tax for the life of the project, assuming a 30-year project life and the amount of sales and use tax held constant to the base year.

Response: The following table provides estimates of the sales tax collected for local purchases of materials and supplies during the estimated 30-year operational life of CPP. As discussed in Section 6.10.2.7.2 of the CPP AFC, local commodities expenditures are expected to be approximately $700,000 annually, with an estimated $175,000 spent in each of the four county areas.

ESTIMATED OPERATIONS SALES TAX FOR THE FOUR COUNTY REGION

County	Tax Rate	Estimated Annual Expenditures	Base Year Sales Tax Estimation	Project 30-Year Sales Tax Allocation[1]
Orange County	7.75	$175,000	$13,563.00	$406,890.00
Los Angeles County	8.25	$175,000	$14,438.00	$433,140.00
Riverside County	7.75	$175,000	$13,563.00	$406,890.00
San Bernardino County	7.75	$175,000	$13,563.00	$406,890.00
Total	--	$700,000	$55,127.00	$1,653,810.00

[1] Assumption: CPP has 30-years project life, and the amount of sales tax is held constant to the base year.

BACKGROUND

In its "Evaluation of Environmental Impacts" section, CEQA Guidelines read, "All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts." In Section 6.10.2.7.4, "Indirect and Induced Economic Effects," pages 6-10-24—6-10-28, text includes information about indirect and induced economic effects of the proposed project during: 1) construction, and 2) the plant's operation. As identified in the text, the analysis of those effects included the project area of Orange, Los Angeles, Riverside, and San Bernardino counties. Effects were identified as the addition of jobs and the purchase of goods, materials, and services. Those indirect or induced impacts may create additional indirect and induced effects as well on people, housing, services, and neighborhoods.

Technical Area: Socioeconomics

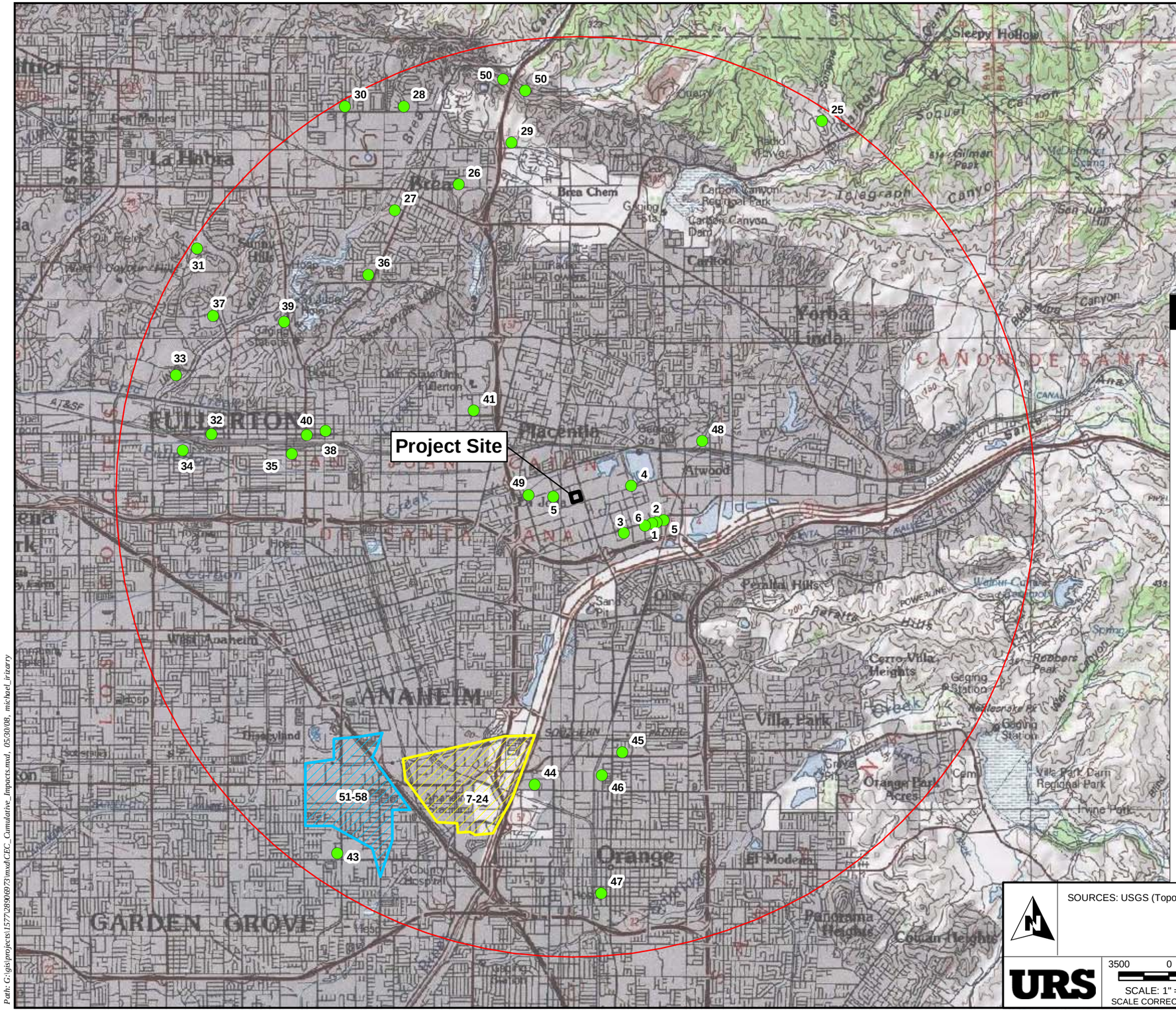
Data Request 27-SOCIO: Please identify and assess those indirect or induced impacts on people, housing, services, and neighborhoods.

Response: The CPP construction and operation indirect and induced economic effects were estimated based on IMPLAN Professional, version 2.0.1025 modeling, as described in Section 6.10.2.7.4 of the CPP AFC. As discussed, indirect effects represent the inter-industry effects caused by the iteration of industries purchasing from industries resulting from direct final demand changes. Induced effects represent the impacts on all industries caused by the expenditures of new household income generated by the direct and indirect effects of direct final demand changes.

As presented in Section 6.10.2.7.4 of the CPP AFC, indirect and induced effects during construction consist of the creation of 12 and 94 jobs respectively, with indirect and induced income effects of $703,460 and $4,193,160, respectively. These employment opportunities and additional funds would cause a temporary beneficial impact by creating the potential for other employment opportunities for local workers in other service areas (including, but not limited to transportation, retail, and potentially recreational services), and would result in

an increased input of employment income into the local economy. People and individual households would benefit from the availability of the employment funds, and local businesses and services would benefit from household spending. Because construction effects are temporary, the project would not be expected to result in appreciable changes in the housing and real estate market.

As provided in Section 6.10.2.7.4 of the CPP AFC, operation of CPP would result in indirect and induced effects consisting of the creation of 1 and 4 jobs respectively, with indirect and induced income impacts of $69,328 and $166,499, respectively. On contrast to construction effects, indirect and induced employment opportunities and additional funds would cause a permanent beneficial impact. Similar to the construction phase, operation of the project would create the potential for other employment opportunities for local workers in other service areas, and would result in an increased input of employment income into the local economy. People and individual households would benefit from the availability of the employment funds, and local businesses and services would benefit from household spending. While operation effects are permanent, the project would result in indirect and induced impacts that would be expected to have negligible effects on housing and real estate value.



OVERVIEW MAP

LEGEND

- Key Developments
- Anaheim Resorts
- Platinum Triangle
- 6 Mile Radius from Project Site
- **Project Site**

NEW MAJOR PROJECTS KEY

1 - Orange Co. Anaheim Med Ctr.
2 - The Crossings
3 - Guthrie DRC Development
4 - Boeing Site Redevelopment
5 - Concourse Bowling
6 - Orange Co. Water Dist. La Jolla Groundwater Recharge Basin
7-24 Platiunum Triangle Projects
25 - Canyon Crest
26 - Simon Properties - Brea Mall Expansion
27 - South Brea Lofts
28 - Greg Jones Retail Building
29 - Olen Development Apartments
30 - Burke Real Estate Group Industrial Park
31 - Chevron West Coyote Hills Subdivision
32 - Olson Company Condominium Complex
33 - Fullerton Hughes Condominium
34 - Grace Ministries Church and School
35 - Pelican-Laing/City of Fullerton Mixed-Use Residential
36 - First Evangelical Free Church Facilities Additions
37 - Jacaranda Senior Apartments
38 - Newcastle Development Mixed-Use Residential
39 - Providence Center Medical/Commercial
40 - Fullerton Transit Center Parking Expansion
41 - Jefferson Commons Student Housing/Commercial
42 - Richman Neighborhood Affordable Housing/Renewal Projects
43 - Embassy Suites - Garden Grove Expansion
44 - Orange County Flood Control District Maintenance Yard
45 - Foxborough Apartments/Commercial
46 - Citrus Grove Apartments
47 - Children's Hospital of Orange County Expansion
48 - Orangethorpe and Van Buren Condominiums
49 - Gualberto Valadez Middle School
50 - Tonner Hills - Orange County
51-58 Anaheim Resort Projects

SOURCES: USGS (Topo 100k).

CUMULATIVE PROJECTS WITHIN 6-MILE RADIUS
CANYON POWER PLANT

URS

3500 0 3500 7000 Feet

SCALE: 1" = 7,000 feet (1:84,000)
SCALE CORRECT WHEN PRINTED AT 11X17

CREATED BY CM	DATE: 5-2007	FIG. NO:
PM: CP	PROJ. NO: 28906973.02004	1

Path: G:\gis\projects\15772\28906973\mxd\CEC_Cumulative_Impacts.mxd, 05/30/08, michael_irizarry

BACKGROUND

AFC §6.11 (p. 6.11-12) and §6.11.2.2.1 (p. 6.11-12) indicate that construction would result in impacts to intersections and roadway segments, related to installation of natural gas, water, wastewater, sewer, and transmission lines, including the potential for detours, lane reductions, and street closures. However, no detailed discussion of these site-specific impacts or proposed traffic control measures is provided.

Technical Area: Traffic and Transportation

Data Request 28-TRAFF: Please discuss the site-specific impacts to intersections and roadway segments that would result during project construction. Identify potential mitigation measures or alternatives to reduce the significance of any potential impacts, including proposed detour or alternate traffic routing and any proposed construction timing or constraints.

Response: The project proponent endeavors to minimize site-specific impacts to intersections and roadway segments during project construction. Length of construction activity by roadway and intersection for the linear facilities are identified in the table provided in Response to Data Request 29.

Pro-active mitigation measures include:

- Construction staging and sequencing to avoid incompatible concurrent work activities on roadways and intersections. This measure will avoid street closures resulting in detours and alternate routing.
- Staggered work hours including early work starts to avoid peak commute hours.
- Schedule construction deliveries during off-peak hours.
- Employ innovative construction solutions such as Jack and bore method, cut and cover technique to maintain traffic flow and roadway function.

Technical Area: Traffic and Transportation

Data Request 29-TRAFF: Please include a table indicating impact by intersection or road segment, estimated length of time the roadway would be affected; mitigation proposed for each location (cite specific code references); and any permit(s) or consultation required (include agency of jurisdiction).

Response: Intersection and roadway construction impacts could potentially occur during the construction of project linears. Trenching and cut and cover techniques will minimize intersection and roadway disturbance. Depending on the extent of construction activities, the COA requires construction permits and preparation of a Traffic Control Plan for construction activities at city intersections, roadways and right of ways.

All construction work is within COA jurisdiction, close coordination with city staff and appropriate permits and approvals (i.e., Traffic Control Plan) will be secured from COA. The Traffic Control Plan can include the following components:

- Advance warning devices
- Cone placement
- Delineators
- Temporary striping
- Placement location of K-rails
- Use of flagmen

Construction of the proposed linears is expected to include only one travel lane except for the jack and bore construction within East Miraloma, which will require two travel lanes. It is expected that traffic will be maintained at all times during construction. Since no roadways will need to be closed, no detours are necessary.

Right-of-way construction requiring traffic control will be implemented during non-peak commute hours. Trenches will be covered with steel plates and traffic will be returned to all travel lanes at the close of each work day as appropriate. Typically, steel plates are keyed and stabilized in place with a low asphalt berm to prevent displacement and exposure of the open or partially backfilled trenches. Access to businesses along linear routes will be maintained at all times.

SCPPA has coordinated with the COA for Traffic Control Plan requirements. The staff person contacted is David Kennedy.

POTENTIAL CONSTRUCTION IMPACTS AT ROADWAYS AND INTERSECTIONS

CPP Activity (Total duration)	Affected Road/Intersection (Duration)	Mitigation
Gas Line (3 months)	N. Kraemer (1.5 months)	Cut and cover, Traffic Control Plan
	E. Miraloma (1.5 months)	Cut and cover, Traffic Control Plan
	Kraemer/Orangethorpe (2 weeks)	Cut and cover, Traffic Control Plan
	Kraemer/Miraloma (2 weeks)	Cut and cover, Traffic Control Plan
69 KV Line (4 months)	E. Miraloma (2 weeks)	Cut and cover, Traffic Control Plan
	Carbon Canyon Diversion Channel (1 month)	Jack and bore, Traffic Control Plan
	E. Miraloma east of Kraemer (1 month)	Cut and cover, Traffic Control Plan
	N. Miller southbound to E. La Palma (2 months)	Cut and cover, Traffic Control Plan
Potable and Fire Water Lines (3 weeks)	E. Miraloma (3 weeks)	Cut and cover, Traffic Control Plan
Sewer Line (3 weeks)	E. Miraloma (3 weeks)	Cut and cover, Traffic Control Plan
GWRS Water Line (2 months)	E. Miraloma (2 months)	Cut and cover, Traffic Control Plan
	Kraemer/Miraloma (2 weeks)	Cut and cover, Traffic Control Plan

BACKGROUND

AFC §6.11.2.2.3 identified a recommended route for construction traffic, including temporary construction workers, that extends from State Route (SR) 91, north along Kraemer Boulevard, then west on East Miraloma Avenue to the project site. The average daily traffic (ADT) and Level of Service (LOS) analyses for freeway/local roadway segment counts, and peak hour intersection analyses and forecasts for the recommended route were provided. The Applicant's Data Adequacy Supplement, Data Request TRAFFIC-2 (p. TRAFFIC-3), identified a secondary route from SR 57 and an alternate route from SR 91, from the Tustin Avenue exit. However, the ADT counts and LOS analyses for freeway/local roadway segments and peak hour intersection analyses and forecasts for the secondary and alternative routes, along with peak hour freeway/local roadway segment LOS analysis and forecasts for all routes are also needed for Energy Commission staff's analysis.

Technical Area: Traffic and Transportation

Data Request 30-TRAFF: Please provide the peak hour LOS analysis and forecasts for the freeway/local roadway segments identified in AFC Tables 6.11-7 and 6.11-8. Identify the forecast percentage increase in traffic counts during construction over existing levels during peak commute hours.

Response: The traffic analysis methodology for roadways required by the COA was not based on peak hour LOS analysis but on daily capacities.

Table 6.11-8 (updated) below shows the forecast percentage increase in traffic counts during construction over existing levels on a daily basis. As shown in the table, the percent increase is negligible and not significant at the worst case.

TABLE 6.11-8
UPDATED FOR DATA REQUEST 30
FREEWAY/ROADWAY SEGMENT LEVEL OF SERVICE
YEAR 2009 PROJECT CONSTRUCTION CONDITIONS

Roadway	Segment	Number and Type of Lanes	2009 + Project ADT	Project Added ADT	LOS	Percent Increase
SR-91	West of Kraemer Ave.	10-Lane Freeway	237,980	279	C	0.12%
SR-91	East of Kraemer Ave.	10-Lane Freeway	236,980	279	C	0.12%
E. Miraloma Ave.	West of Kraemer Ave.	4-Lane Undivided	15,160	558	B	3.68%
N. Kraemer Ave.	South of E. Miraloma Ave.	6-Lane Undivided	31,860	558	A	1.75%
N. Kraemer Ave.[1]	North of E. Miraloma Ave.	4-Lane Divided	25,457	167	B	0.66%
Orangethorpe Ave.[1]	West of N. Kraemer Ave.	4-Lane Divided	25,947	167	B	0.64%

[1] Two roadway segments above were added as part of Data Adequacy Response in February 2008, assuming 30% project routing via Orangethorpe Avenue and SR-57.

Technical Area: Traffic and Transportation

Data Request 31-TRAFF: Please provide the traffic counts, ADT and LOS analyses and forecasts, and the forecast percentage increase in traffic counts during construction over existing levels during peak commute hours for the following secondary and alternate freeway/local roadway segments:

- SR 57 – North of Orangethorpe Ave. exit
- SR 57 – South of Orangethorpe Ave. exit to SR 57/91 interchange
- SR 57 – South of SR 57/91 Interchange
- SR 91 – West of SR 57/91 Interchange
- SR 91 – N. Kraemer Blvd. to Tustin Ave.
- SR 91 – East of Tustin Ave.
- Orangethorpe Ave. – SR 57 EB Orangethorpe Ave. exit to N. Kraemer Blvd.
- Orangethorpe Ave. – N. Kraemer Blvd. to Tustin Ave.
- Tustin Ave. – Orangethorpe Ave. to La Palma Ave.
- Tustin Ave. – La Palma Ave. to SR 91 Interchange

Response: Please refer to Data Request 32.

Technical Area: Traffic and Transportation

Data Request 32-TRAFF: Please provide AM and PM peak hour level of service calculations and forecasts for the following secondary and alternative freeway/local roadway intersections:

- N. Kraemer Blvd./Orangethorpe Ave.
- N. Tustin Ave./La Palma Ave.
- N. Tustin Ave./Orangethorpe Ave.
- Orangethorpe Ave./E. Chapman Ave.
- SR 91/N. Tustin Ave. NB Offramps
- SR 57/Orangethorpe Ave. EB Offramps

Response: The above locations were not analyzed in full detail as they are only part of the alternative access routes. The approved traffic route as analyzed in the AFC was based on a traffic scoping meeting and consultation with the City of Anaheim Traffic Engineering staff and consistent with LORS specifying the shortest route to the project site. The approved route also considered the traffic handling characteristics of Kraemer Boulevard (soon to be widened to its ultimate configuration of 3-lanes in each direction) and as a designated truck route in the COA's General Plan Circulation Element. City of Anaheim staff do not foresee a scenario of a long term total shutdown (with the exception to a natural disaster of epic proportion, short-term accident and emergency closures) of Kraemer Boulevard given the multiple lane configuration of this arterial.

BACKGROUND

AFC §6.11 (p. 6.11-3) and §6.11.2.2.6 (pp. 6.11-16,17) indicate that two off-site parking areas, located at 3150 and 3190 East Miraloma Avenue, at the southeast corner of Kraemer Boulevard and East Miraloma Avenue, would be used as temporary parking areas for workers during the construction phase of the proposed project. AFC §6.9.1.5 (p. 6.9-9) references leased parking would be "provided at an existing parking lot for the duration of the project," as well as a reference to the two off-site parking areas. Additionally, traffic control measures proposed in AFC §6.11.4.1.2, TRAFFIC-1 (pp. 6.11-22, 23) indicate that a pedestrian route will be identified to and from the proposed off-site parking locations. No specific information is available.

Technical Area: Traffic and Transportation

Data Request 33-TRAFF: Please provide a site map depicting the location of all proposed off-site parking areas and the project site. Identify the proposed pedestrian route(s) from all off-site locations to the project site.

Response: Attached Figures 6.11-2 and 6.11-2a show Pedestrian route from the off-site parking locations.

Technical Area: Traffic and Transportation

Data Request 34-TRAFF: Please discuss the existing or proposed temporary parking lot size and design for all off-site locations. The discussion should include:

a) The number of parking spaces, by type (auto, delivery truck, handicapped, etc.)

b) The location of entrance(s)/exit(s) and indicate if there is an existing city-approved encroachment permit for these locations

c) The lot preparation required on any site, including road work for encroachments, and plans for surfacing and striping or existing surfaces

Response: Attached Figures 6.11-2 and 6.11-2a show the off-site parking spaces available for use during project construction. Parking Area 1 (P1) will have a capacity of 150 spaces, Parking Area (P2) 374 spaces, and Parking Area 3 (P3) 224 spaces.

These lots are on existing paved and developed properties and access are from existing curb cuts and driveways.

Technical Area: Traffic and Transportation

Data Request 35-TRAFF: Please identify any on-street parking that may be used by workers or visitors to the site and any impact that project use of these spaces may have on existing businesses.

Response: There is a no parking anytime restriction along Miraloma Avenue fronting the project site. Future workers and visitors to the project site will be directed to use the designated parking locations.

BACKGROUND

Based on the information provided in AFC Table 3.7-2, demolition appears to be scheduled to occur during the first three months of construction. As noted in the Project Description (AFC §3.1, p. 3-1), this includes removal of the existing buildings, foundation, and parking lot asphalt. Data concerning the number of projected truck trips during construction, provided in AFC Table 6.11-6, seems to indicate that truck traffic would be consistent throughout the entire construction process, which is inconsistent with demands of the demolition process. AFC §3.4.8.1.1 (p. 3-26) indicates that hazardous wastes will be either recycled or disposed of in a licensed Class I disposal facility. No other information is provided.

Technical Area: Traffic and Transportation

Data Request 36-TRAFF: Please identify the demolition timeline and number of daily dump truck trips associated with the demolition process.

Response: The demolition process is expected to take 3 to 4 weeks for the buildings and surfacing to be removed. It is anticipated that the demolition debris removal will require approximately 140 truck loads and asphalt removal will require 133 truckloads for over this time period. Refer to Table 3.7-2. If the demolition takes 3 weeks this would equate to an average of 18 round trips daily associated with the demolition.

Technical Area: Traffic and Transportation

Data Request 37-TRAFF: Identify destination and primary route to dump site for rubble, general hours of transport, and whether trucks would be singles or doubles.

Response: The nearest destination for rubble disposal will be at the Olinda Alpha Sanitary Landfill in Brea, California. The primary route will be via eastbound Miraloma Avenue to southbound Kraemer Boulevard to westbound SR-91 Freeway to northbound SR-57 Freeway and to Brea, CA. Generals hours of operation will be from 7 a.m. to 7 p.m. Haul trucks with either be singles or doubles with cover.

Technical Area: Traffic and Transportation

Data Request 38-TRAFF: Please identify the number of trucks, if any, that would be hauling hazardous waste to or from the project during demolition, location of authorized dump site(s), and probable route of travel.

Response: During demolition, approximately one truckload of waste containing asbestos and two truckloads of soil will be hauled from the project to the Clean Harbors Buttonwillow Landfill, a Title 23 Class I facility in Kern County. The primary and most direct route as requires in the LORS will be via eastbound Miraloma Avenue to southbound Kraemer Boulevard to westbound SR-91 Freeway to northbound I-5 Freeway towards Kern County.

BACKGROUND

AFC §6.11.2.2.1 states that all traffic signs, equipment, and control measures shall conform to the provisions specified in the Caltrans Traffic Manual (Red Book) and the California Manual of Uniform Traffic Control Device (CAMUTCD). Primary access for the project site is along city-maintained roads. There is no discussion of City of Anaheim's or Orange County's Public Works requirements for traffic control, other than an expressed intent to abide by applicable provisions. The applicable provisions are not identified.

Technical Area: Traffic and Transportation

Data Request 39-TRAFF: Please identify City of Anaheim or Orange County Public Works requirements that would be applicable to road and right-of-way work for the proposed project and discuss how these requirements would be met.

Response: All project construction and operation activities are within the jurisdiction of the City of Anaheim.

Work activities on city roadways and right-of-way would require a Right-of-Way Permit and a Traffic Control Plan approved by the city. Permits would be obtained prior to the start of construction. A Traffic Control Plan is described in Section 6.11.4 of the AFC and Data Response #29. This plan would be prepared by the applicant and reviewed and approved by the CEC and COA Traffic Engineering staff.

BACKGROUND

AFC §6.11.2.2.7 (p. 6.11-17) identifies bus and Metrolink/Amtrak transit providers for the City of Anaheim, including the general project area, and has indicated that the project's "limited conflicts with transit and rail crossings" would not result in any "significant impacts to public transportation." No other information is provided.

Technical Area: Traffic and Transportation

Data Request 40-TRAFF: Please identify any potential conflicts with existing or proposed public transportation, bicycle, or pedestrian programs, projects, circulation, or operations. Discuss how these potential impacts would be lessened or avoided.

Response: There will be limited conflicts with existing or proposed public transportation as the majority of project generated construction traffic occurs during the early morning and mid afternoon hours outside of the AM (7 a.m. to 9 a.m.) and PM (4 p.m. to 6 p.m.) peak hour commute hours. Public transport capacity will not be severely impacted as the majority of construction workers will not be relying on public transportation to commute to the project site.

Based on field observations and the project's location in an industrial area, there is minimal bicycle and pedestrian activity observed near the vicinity of the project site. Therefore, there is limited conflict with those aforementioned activities near the vicinity of the project site.

The traffic analysis concluded no traffic impacts at the city approved study locations. Potential conflicts with existing or proposed public transportation, bicycle, or pedestrian programs, projects, circulation, or operations could be lessened or avoided by limiting vehicular traffic to designated access roads, construction laydown and worker parking areas, and project construction site, encourage workers to carpool to minimize drive-alone worker trips.

BACKGROUND

As noted above, AFC §6.11.2.2.7 (p. 6.11-17) identifies bus and commuter rail transit providers for the City of Anaheim, including the general project area. There is, however, no discussion of the availability of specific public transportation options for project workers. The City of Anaheim (COA) General Plan (GP) encourages businesses to take advantage of public transportation options to minimize traffic impacts, especially in areas like the Canyon industrial corridor, which contains the proposed project site (COA GP Land Use Element, p. LU-32).

Technical Area: Traffic and Transportation

Data Request 41-TRAFF: Please identify specific bus stops and routes, Metrolink connections, park-and-ride facilities, or other forms of alternative transportation options available to workers arriving/ departing the project site. Discuss how these options could lessen traffic impacts during the construction phase of the project.

Response: Attached Figures 6.11-2 and 6.11-2a show bus stops locations and Metrolink connections. These alternative transportation options could potentially lessen or minimize drive-alone construction worker trips. The CPP will encourage use of public transit and will include copies of Figures 6.11-2 and 6.11-2a in its worker training materials.

BACKGROUND

AFC §6.11.3 (p. 6.11-21, 22) and §6.18.1 (6.18-2, 4, 5) indicate the applicant reviewed a list of major projects proposed, in progress, or recently completed within a five-mile radius of the project site. "Major projects" are defined by the applicant as "…either: 1) …greater than 30,000 square feet; 2) have submitted a defined project application for required approvals or permits; or 3) have been previously approved and may be implemented in the near future." The AFC also indicates that the projects within a five- mile radius are listed on AFC Table 6.18-11 and the locations of these projects are depicted on AFC Figure 6.18-1. However, both Table 6.18-11 and Figure 6.18-1 only identify projects within one mile of the Canyon project site. AFC §6.11.3 (p. 6.11-21, 22) also indicates that cumulative impacts from these projects were included in the Traffic Operations Impact Year 2010 No Project and Project Operations analysis. However, the construction and/or operational schedules for several of the projects identified appear to overlap the Canyon project construction timeline. No traffic analysis was provided for potential cumulative impacts during the construction phase of this project.

Technical Area: Traffic and Transportation

Data Request 42-TRAFF: Please provide a copy of the list of major building projects within a five-mile radius of the CPP project site (June 2006 to the present), cited in AFC §6.18-11 and provided by the City of Anaheim Planning Department.

Response: Data Request 20 includes a list and figure of major building projects within a six-mile radius.

Technical Area: Traffic and Transportation

Data Request 43-TRAFF: Please identify and analyze the potential cumulative impacts from projects identified in AFC Table 6.18-11 and any other projects proposed, in progress, or recently completed within the project study area or at any location where potential cumulative impacts to traffic could occur during the construction phase of the Canyon project.

Response: The cumulative traffic analysis included a consultation with the City of Anaheim Traffic staff and those projects determined by the COA to have a potential impact on the traffic for the CPP area were included in the cumulative modeling analysis described in Section 6.11.3 of the AFC. The projects included in the cumulative project list for Data Request 20 will not have an effect on the traffic within the vicinity of the CPP as described in Section 6.11.1 of the AFC because due to the locations of various projects, workers will not use the same roads. As a result, they are not included in the cumulative assessment for traffic associated with the CPP.

In consultation with COA staff, only two projects have been identified as applicable cumulative projects that may affect the CPP project construction route and were subsequently included in the traffic analysis For additional information on the cumulative traffic analysis please contact David Kennedy at the City of Anaheim.

BACKGROUND

Staff plans to perform a plume modeling analysis for the chiller cooling tower to determine the potential for ground fogging on nearby major roadways, and potentially to determine visible plume frequency. Staff requires additional cooling tower operating information to complete this analysis.

Technical Area: Traffic and Transportation

Data Request 44-TRAFF: Please summarize for the chiller cooling tower the conditions that affect vapor plume formation including cooling tower heat rejection, exhaust temperature, and exhaust mass flow rate. Please provide values to complete the table, and additional data as necessary for staff to be able to determine how the heat rejection load varies with ambient conditions and also determine at what ambient conditions chiller cooling tower cells may be shut down.

Parameter	Chiller Cooling Tower Exhausts		
Number of Cells	4 cells		
Cell Height*	43.5 feet (13.3 meters)		
Cell Diameter*	13 feet (4.0 meters)		
Tower Housing Length*	50 feet (15.2 meters)		
Tower Housing Width*	40 feet (12.2 meters)		
Ambient Temperature	50°F	60°F	70°F
Ambient Relative Humidity			
Number of Cells in Operation			
Heat Rejection (MW/hr)			
Exhaust Temperature (°F)			
Exhaust Flow Rate (lb/hr)			

* Cell diameter and height are from the air quality modeling CD. Tower length and width are from AFC Table 6.13-4.

Additional or different combinations of ambient temperature range can be provided assuming that they accurately represent the range of chiller cooling tower operation and resulting exhaust conditions during ambient conditions when both the cooling tower is operating and when visible plumes could

possibly form (temperatures above which the chiller operates and below approximately 80°F).

Response:

Parameter	Chiller Cooling Tower Exhausts			
Number of cells	4 cells			
Cell height[1]	43.5 Feet (13.3 meters)			
Cell diameter	13 Feet (4.0 meters)			
Tower housing length[1]	50 Feet (15.2 meters)			
Tower housing width[1]	40 Feet (12.2 meters)			
Ambient dry bulb temp, °F	50[2]	60	70	80
Ambient RH, %	74	73	60	48
Cooling tons per hour	N/A	1,776	3,136	4,416
No of cells in operation	N/A	2	3	4
Heat rejection, MW/hr	N/A	7.61	13.41	18.89
Exhaust temp, F	N/A	72.9	79.5	84
Exhaust flow rate, lbs/hr	N/A	1,920,000	2,820,000	3,720,000

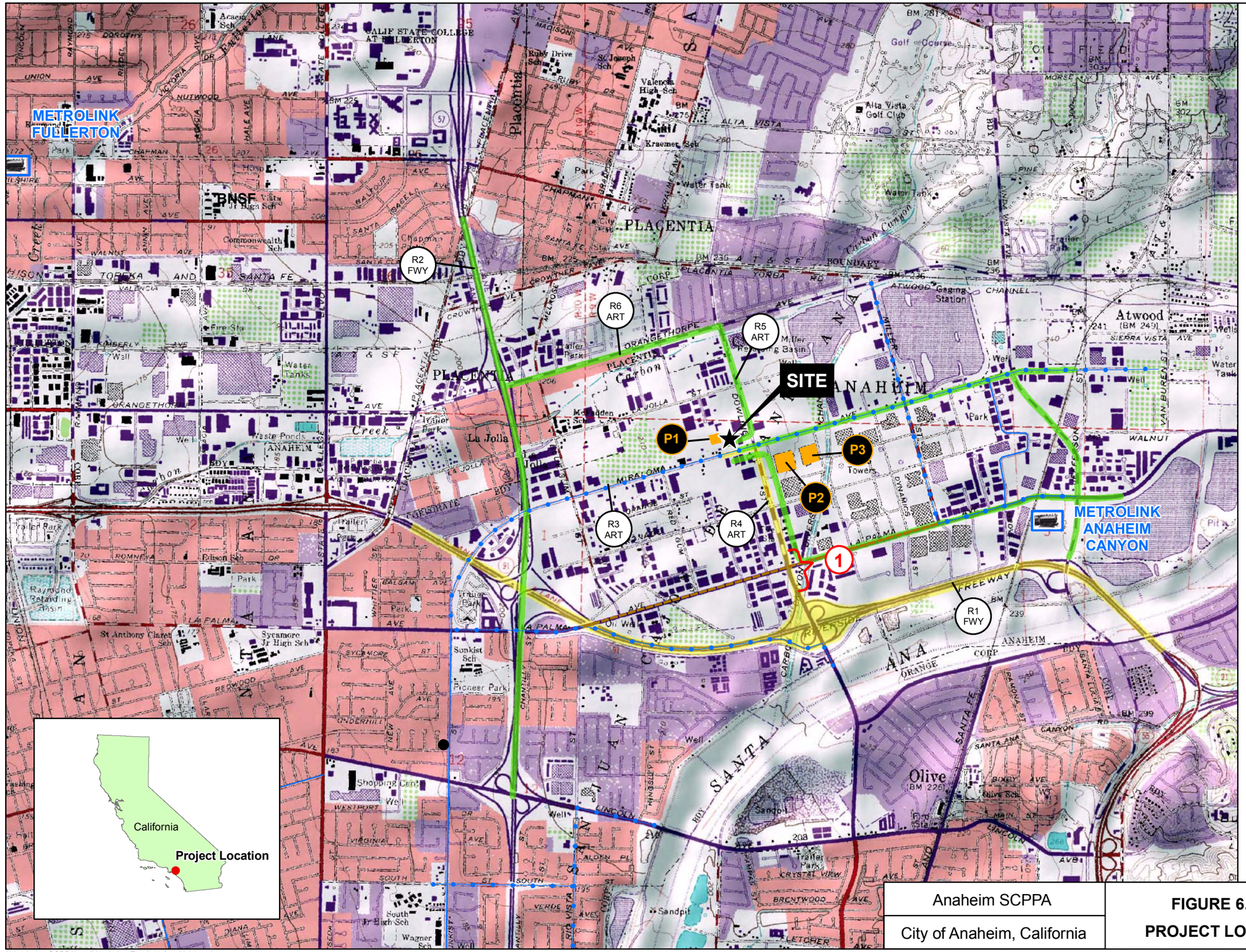
1 Cell diameter and height are from the air quality modeling CD. Tower length and width are from AFC Table 6.13-4.

2 Chiller would not operate under this condition due to minimal benefit at this ambient.

Technical Area: Traffic and Transportation

Data Request 45-TRAFF: Please confirm that the cooling tower fan motors will not have variable speed/flow controllers.

Response: The cooling tower fans will be provided with 2-speed fans. Variable speed fans will not be used.



LEGEND

- (1) Roadway widening of Kraemer Boulevard to ultimate width of three through lanes in each direction
- Project construction/routes and study locations approved by City of Anaheim traffic engineers
- Alternative Routes
- Proposed Off Road Trail Bikeway
- Existing Class II Bikeway
- Proposed Top Priority Class II Bikeway
- Metrolink Stations

R1 FWY SR-91 is an east-west freeway facility located south of the project site. Existing Average Daily Traffic (ADT) is 233,000 vehicles per day. Existing LOS = C, Project Construction LOS = C, Project Operations LOS = C.

R2 FWY SR-57 is a north-south freeway facility located west of the project site. Existing Average Daily Traffic (ADT) on the segment north of Orangethorpe Avenue is 265,000 vehicles per day. Existing LOS = C, Project Construction LOS = C, Project Operations LOS = C.

R3 ART Miraloma Avenue is an east-west Secondary Arterial located directly south of the project site. Existing Average Daily Traffic (ADT) west of Kraemer Avenue is 14,300 vehicles per day. Existing LOS = A, Project Construction LOS = A, Project Operations LOS = A.

R4 ART Kraemer Avenue is a north-south Primary Arterial located to the east of the project site. Existing Average Daily Traffic (ADT) between SR-91 and Miraloma Avenue is 30,700 vehicles per day. Existing LOS = A, Project Construction LOS = A, Project Operations LOS = A.

R5 ART Kraemer Avenue is a north-south Primary Arterial located to the east of the project site. Existing Average Daily Traffic (ADT) between Orangethorpe Avenue and Miraloma Avenue is 25,050 vehicles per day. Existing LOS = A, Project Construction LOS = A, Project Operations LOS = A.

R6 ART Orangethorpe Avenue is an east-west Major Arterial located to the north of the project site. Existing Average Daily Traffic (ADT) between SR-57 and Kraemer Avenue is 25,530 vehicles per day. Existing LOS = B, Project Construction LOS = B, Project Operations LOS = B.

P1 Off Site Parking Option 1 (3001 Miraloma) Parking Capacity = 275' x 290' (~150 Spaces)

P2 Off Site Parking Option 2 (3150 Miraloma-PDS) Parking Capacity = ~374 Spaces

P3 Off Site Parking Option 3 (3190 Miraloma-TDK) Parking Capacity = ~224 Spaces

N

0 2,000 4,000 Feet

Scale 1:24,000

Anaheim SCPPA	**FIGURE 6.11-2**	September 2007
City of Anaheim, California	**PROJECT LOCATION**	28906973

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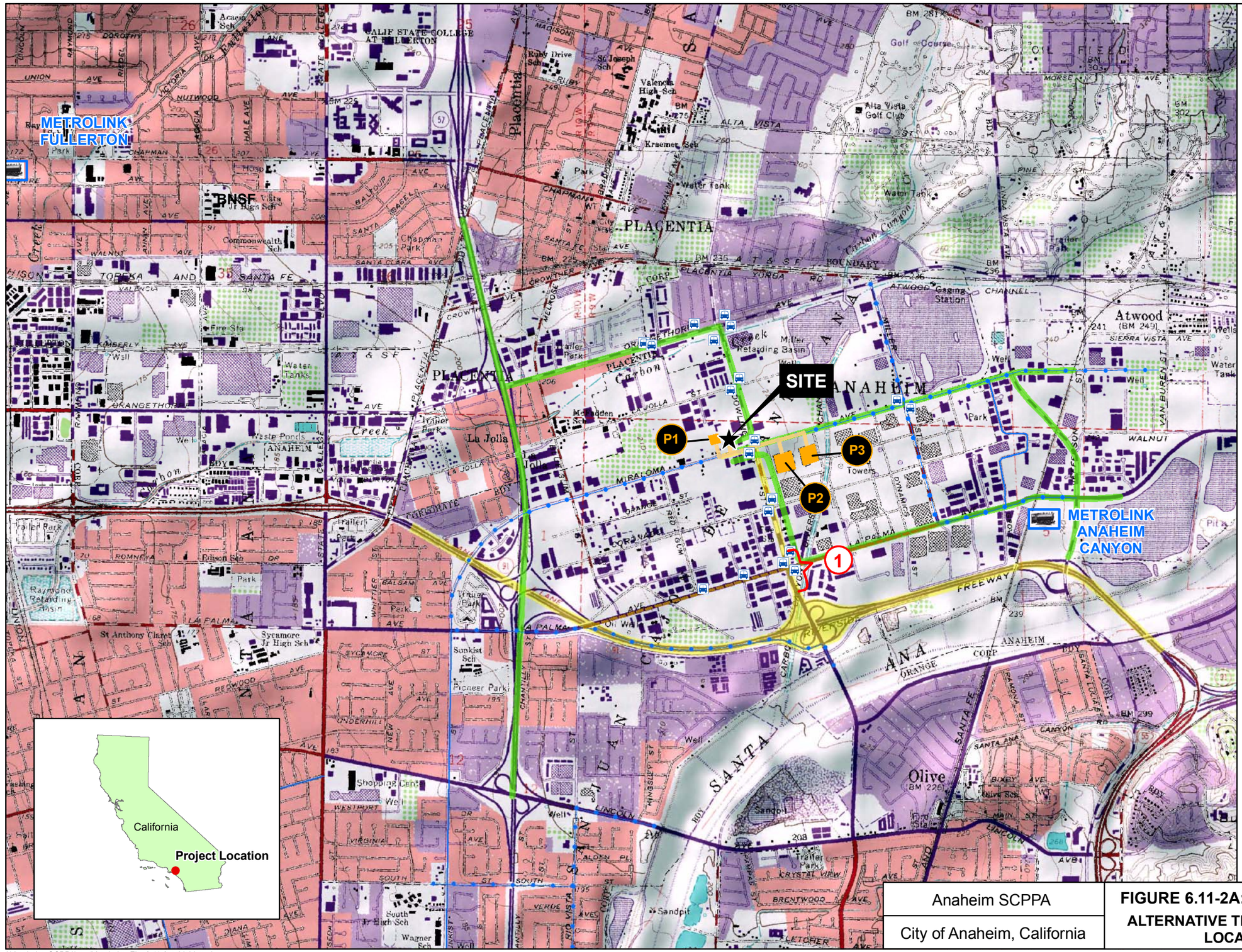

LEGEND

- 1 — Roadway widening of Kraemer Boulevard to ultimate width of three through lanes in each direction
- Project construction/routes and study locations approved by City of Anaheim traffic engineers
- Alternative Routes
- Proposed Off Road Trail Bikeway
- Existing Class II Bikeway
- Proposed Top Priority Class II Bikeway
- Construction Personnel Pedestrian Route
- OCTA Bus Stop Locations
- Metrolink Stations
- P1 — Off Site Parking Option 1 (3001 Miraloma) Parking Capacity = 275' x 290' (~150 Spaces)
- P2 — Off Site Parking Option 2 (3150 Miraloma-PDS) Parking Capacity = ~374 Spaces
- P3 — Off Site Parking Option 3 (3190 Miraloma-TDK) Parking Capacity = ~224 Spaces

N

0 2,000 4,000 Feet

Scale 1:24,000

Anaheim SCPPA	**FIGURE 6.11-2A: DATA REQUEST**	May 2008
City of Anaheim, California	**ALTERNATIVE TRANSPORTATION LOCATIONS**	28906973

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BACKGROUND

The Southern California Public Power Authority (SCPPA) is proposing to construct and operate the Canyon Power Plant (CPP). For plant operation, the applicant proposes for the project to use recycled water for all non-potable uses. As an emergency backup supply for SCPPA proposes using potable water from the City of Anaheim. The estimated maximum consumption of potable water as a backup supply for industrial purposes has not been provided.

During construction of the CPP, water will be used for dust control, soil compaction, concrete curing, and hydrostatic testing. The average daily water demand for construction is estimated to be 13,000 gallons per day, with the annual demand estimated to be approximately 3.5 million gallons or 11 acre-feet. The source and quality of water proposed for CPP construction has not been identified.

Technical Area: Soil and Water Resources

Data Request 46-SOILS: Please provide an estimate of the maximum potable water consumption in gallons per day for CCP industrial purposes in the event of a recycled water delivery interruption and the expected duration of the interruption in hours or days.

Response: The CPP will only use potable water during emergencies and when the recycled water from the GWRS system is unavailable. As discussed in the Soil and Water Resources section of the AFC, the CPP will be the first industrial user of the recycled GWRS water and therefore there is no available history of interruptions upon which to base an estimate of potable water use during interruptions and emergencies. However, since the Orange County Sanitation District (OCSD) treats a large amount of water and generates approximately 72,000 acre feet of recycled water per year, it appears that interruptions due to lack of supply would be unforeseeable. In order to reduce the use of potable water during an interruption or emergency, the CPP is designed with a recycled water tank that will allow up to 16 hours of operation at full load before the CPP would require the use of potable backup water.

Technical Area: Soil and Water Resources

Data Request 47-SOILS: Please provide an itemized estimate in tabular format of daily and annual average water consumption for plant construction and hydrostatic testing for the CPP project.

Response: See the construction water usage table below.

CONSTRUCTION WATER USAGE (GALLONS)

	Averages	
Usage	Daily	Annual
Watering truck for general area watering	10,000	2,692,300
Localized spot watering	2,600	708,700
Hydrostatic	400	99,000
Totals	13,000	3,500,000

Technical Area: Soil and Water Resources

Data Request 48-SOILS: Please specify whether potable or recycled water will be used for CPP construction and hydrostatic testing. If potable water is proposed for these purposes, please provide a discussion and a justification for its use given the availability of recycled water.

Response: As discussed in the AFC, the CPP is facilitating the extension of the GWRS recycled water system within the City of Anaheim and will be the first industrial user of the system. Therefore, the CPP will be constructing both the pipeline and the pumping station necessary to deliver the recycled water to the CPP site. Unfortunately, the CPP will not be able to use recycled water for construction because the construction and commissioning of the recycled water pipeline and pumping station will not be completed until after the end of the construction activities such as grading that require the majority of construction water use.

PRELIMINARY
WATER QUALITY MANAGEMENT PLAN (WQMP)

For:

CANYON POWER PLANT

Assessor Parcel Numbers:
344-221-003, 344-221-004, and 344-221-009

Prepared for:
Southern California Public Power Authority
225 South Lake Avenue, Suite 1250
Pasadena, California 91101

Prepared by:
URS Corporation
2020 East First Street, Suite 400
Santa Ana, CA 92705
(714) 835-6886

May 2008

OWNER'S CERTIFICATION

WATER QUALITY MANAGEMENT PLAN

Permit/Planning Application No. [To be Determined]

Assessors Parcel Nos. 344-221-003, 344-221-004, and 344-221-009

This Water Quality Management Plan (WQMP) has been prepared for Southern California Public Power Authority (SCPPA) by _____ [*to be completed with name of preparer of final WQMP*]. The WQMP is intended to comply with the requirements of the City of Anaheim, Public Works Department, Development Services Division, Assessors Parcel Nos. 344-221-003, 344-221-004, and 344-221-009, Condition Number(s) _____, and/or Site Development Permit/Application Number _____, Condition Number(s) _____ requiring the preparation of a WQMP. The undersigned is aware that Best Management Practices (BMPs) are enforceable pursuant to the City's Anaheim Municipal Code, Chapter 10.09.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the current Orange County Drainage Area Management Plan (DAMP), and the intent of the stormwater and urban runoff NPDES Permit and Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County under the jurisdiction of the Santa Ana Regional Water Quality Control Board. A copy of this WQMP will be maintained at the project site or project office.

This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party having responsibility for implementing portions of this WQMP. At least one copy of the approved and certified copy of this WQMP shall be available on the subject property in perpetuity. Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the WQMP.

Signed: _____

Name: _____

Title: _____

Company: Southern California Public Power Authority

Address: _____

Telephone #: _____

Date: _____

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Appendices

Section Discretionary Permit(s) and Water Quality Conditions

In process.

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Section Project Description

The project description information provided in this Preliminary WQMP is from the Application for Certification (AFC) document prepared by URS Corporation in December 2007. The information will be verified and revised as appropriate to reflect final project design and to provide additional detail for the stormwater Best Management Practices (BMPs), including locations, implementation, operation, and maintenance procedures and schedules.

The CPP will be owned by the Southern California Public Power Authority (SCPPA) and the City of Anaheim will be the Project Manager and Operator once the plant is built. The proposed CPP will be constructed on a developed 10-acre site and will consist of a nominal 200-megawatt (MW) simple-cycle plant, using four natural gas-fired General Electric LM 6000PC Sprint combustion turbines and associated infrastructure. Total on-site land disturbance will be approximately 6.5 acres. The remainder of the 10-acre site will be used as construction laydown areas. The location of the project site is shown on the Vicinity Map, which is included as Figure 1 in Section VI. Aerial views of the existing site and the proposed project are shown in Figure 2 in Section VI.

The project will include demolition of all structures and associated pavement currently on site, as well as off-site installation of power lines, natural gas lines, communications cable lines, electrical interconnection line, and process water lines. The 3.5-acre paved area on the west side of the site will be retained for construction laydown and vehicle and equipment storage. The plant will utilize a main access gate and an auxiliary access gate off East Miraloma Avenue. The main gate will be used for routine plant access as well as for fire access. The auxilary gate will normally be locked, however, can be used for secondary fire access and also for non-routine plant maintenance access when needed. An additional maintenance gate will be provide on the east side of the site.

The site will be contained within a 20-foot perimeter/sound wall that will be landscaped along the frontage of East Miraloma Avenue. Landscaping proposed along the frontage will consist of drought-tolerant plantings in conformance with the City of Anaheim zoning code. Landscaping will include 18 California oak trees *(Quercus Agrifolia*) spaced every 30 feet, and cat claw (*Macfadyena Unguis-cati*) planted every five feet. Groundcover will be dwarf coffeeberry (*Rhamnus Californica*) in spaced as needed. No landscaping is proposed for the industrial area within the perimeter wall.

The Orange County Drainage Area Management Plan (DAMP) requires the preparation and implementation of a WQMP for Priority Projects to manage the quality of stormwater runoff from a project during its operational phase (post-construction). The CPP qualifies as a Priority Project since it is:

- An industrial development of greater than 100,000 square feet including parking areas; and
- Significant Redevelopment that is creating or replacing 5,000 square feet or more of impervious surface on an already developed site.

The proposed stormwater management system will meet quality and quantity requirements defined in the Orange County DAMP, the Model WQMP, and the 1986 Orange County Hydrology Manual. The Standard Industrial Classification (SIC) code for the CPP is 4911, Electrical Services,

which is applicable to facilities engaged in the generation, transmission, and/or distribution of electric energy for sale. This facility does not require coverage under the California General Permit for Stormwater Discharges Associated with Industrial Activities.

On-Site Project Features

On-site structures to be constructed for the CPP include:

- Four natural gas-fired GE LM 6000PC Sprint gas turbines;
- Four generator step-up transformers (GSUs);
- A 69 kilovolt (kV) switchyard;
- Five on-site fuel gas compressors;
- A gas pressure control and metering station;
- Fuel gas filters;
- A packaged chilled water system for combustion turbine engine (CTG) power augmentation with associated heating ventilation and air conditioning (HVAC)-type four-cell cooling tower;
- Four selective catalytic reduction system (SCR) emission control systems;
- An aqueous ammonia storage tank;
- Two auxiliary transformers;
- Two station service transformers;
- Two electrical equipment enclosure buildings;
- A compressed air skid;
- Deionized water treatment equipment,
- Two water tanks;
- A plant operations building;
- A stormwater vault;
- Internal roadways; and
- A 20 foot perimeter security/sound wall.

These features are shown on the Plot Plan (Figure 3) and the Grading and Drainage Plan (Figure 4) provided in Section VI.

Utilities

Natural Gas. Natural gas will be provided via a new 3,240-foot-long, 12-inch, 350 pound per square inch gauge (psig) gas line owned and maintained by the Southern California Gas Company (SCGC), which will be connected to new onsite fuel gas compressors that will be part of the CPP

facility. From the CPP site, this new pipeline will run approximately 580 feet west in East Miraloma Avenue to Kraemer Boulevard, then north 2,660 feet in Kraemer Boulevard to East Orangethorpe Avenue where it will connect into SCGC's transmission line L-1218 in East Orangethorpe Avenue. The natural gas line will cross the Carbon Canyon Diversion Channel about 200 feet south of East Orangethorpe Avenue.

Process Water. Process water for the CPP will be recycled water supplied from the Groundwater Replenishment System (GWRS) via a new 2,185-foot-long, 14-inch pipeline utilizing a new offsite booster pump station. The water pipeline will run east of the site on the north side of East Miraloma Avenue for 1,850 feet to the new pumping station located north of the curb in the City of Anaheim-owned easement of East Miraloma Avenue, then north 210 feet in new easement from the Orange County Water District (OCWD), then 125 feet easterly in new easement to the GWRS line on the western side of the Carbon Creek Diversion Channel. There, it will connect to the 60-inch-diameter GWRS line at an existing 36-inch stub up. On-site, raw water from the GWRS will be stored in a 350,000-gallon storage tank to be used as process water.

Electrical Interconnection. Underground 69 kV cables will connect from GSUs to the onsite switchyard, which will use gas-insulated switchgear (GIS). There will be four new underground 69 kV circuits leaving the site. Two will proceed underneath and to the south side of East Miraloma Avenue approximately 100 feet to rise up and connect to the existing 69 kV overhead Vermont-Yorba lines via two new transition structures. The second two 69 kV underground circuits will proceed eastward approximately 4,000 feet in East Miraloma Avenue, turn south on Miller, then proceed approximately 3,000 feet to connect to the Dowling-Yorba 69 kV line at East La Palma Avenue.

Communications. Fiber optic cable will run in a common trench with the approximately 7,000-foot 69 kV electric cables, where it will tie into existing underground fiber optic cable for the supervisory control and data acquisition (SCADA) system.

Wastewater

Wastewater discharge from the CPP will consist primarily of process wastewater such as blowdown water from the chilled water system cooling tower, reverse osmosis reject water from the production of deionized water, as well as a minor amount of domestic sewage. Wastewater will be discharged to the Orange County Sanitation District (OCSD) sewer system connection in East Miraloma Avenue.

Stormwater

The CPP site is 10 acres, of which the new facilities will have an area of approximately 6 acres. The site is currently considered 100% impervious with a developed runoff coefficient of 0.90.

The CPP site will consist of paved equipment areas, paved roads and paved surface parking areas. Concrete equipment pads will be set a minimum of six inches (preferably one foot) above adjacent pavement elevations. The site will be graded such that sheet flow away from buildings and structure foundations is at a one percent slope. Gutter/swale areas will be graded at a minimum

0.5 percent slope. The stormwater drainage system will be designed to handle a 25-year storm event in accordance with City of Anaheim standards. Stormwater flows in excess of the design 25-year event will be directed (via an overflow pipe system) to the existing City of Anaheim's municipal storm drain system in East Miraloma Avenue. The elevation of plant buildings and equipment will be such that the buildings and equipment do not flood in the event of a 100-year storm. The site grading and drainage plan for the project is shown on Figure 4.

To manage stormwater quality from the improved site, the project includes both a water quality multi-chamber treatment vault and infiltration chamber/trench. The system will be sized to collect and treat stormwater flows for the 25-year storm event. Post-construction stormwater from areas of the CPP not containing industrial activities (employee parking areas, switchyards, administration buildings, landscape areas, open space) will infiltrate or flow off site to Miraloma Avenue as overland sheet flow. Stormwater from those portions of the CPP site that do contain industrial activities (generating equipment, chilling system cooling towers, materials and equipment storage and laydown areas) will be conveyed as overland sheet flow and collected using a network of catch basins that will be conveyed directly to the infiltration trench/chamber. Stormwater that has the potential to come into contact with plant equipment or to be effected by industrial activities will be directed to catch basins that will flow through an underground piping system to an underground multi-chamber vault treatment device that will remove sediment, coarse materials, and oil from the runoff. The soils underlying the CPP are suitable for infiltration of stormwater. Therefore, following pretreatment for sediment and oil removal, the stormwater will flow to an on-site underground chamber (infiltration trench) to allow for infiltration. This chamber will be filled with rock and have an open bottom for discharging runoff directly to the ground. The infiltration vault will include an overflow outlet to allow for runoff in excess of the 25-year storm event to flow to the existing municipal storm drain system in East Miraloma Avenue.

The site layout is depicted on Figure 3 (Plot Plan) and site elevations are depicted on Figure 4 (Grading and Drainage Plan) provided in Section VI. The CPP facilities have been arranged for optimum use of property and cost as well as to ensure ease of operation and maintenance. Investigations and evaluations have been conducted to define the specific facility equipment requirements and the suitability of the proposed project site to accommodate these facilities.

Materials Delivery and Storage

Chemicals and other materials required for operation of the CPP will be delivered to the site via the main access gate off Miraloma Avenue. The site does not contain a loading dock, however, some chemicals and other materials will be delivered to the plant operations building which houses a warehouse and maintenance shop. Most bulk chemicals will be delivered by truck to be pumped into the specific storage tank.

A list of chemicals to be used during CPP operations is provided in Appendix A, Tables 1 and 2 as provided in the AFC for the CPP. The storage, handling and use of all chemicals will be conducted in accordance with applicable laws, ordinances, regulations and standards. Bulk chemicals will be stored in storage tanks, and most other chemicals will be stored in returnable delivery containers. Chemical storage and chemical feed areas will be designed to contain leaks and spills. Berms will allow a full-tank-capacity spill without overflowing the berms. For multiple tanks located within

the same bermed area, the capacity of the largest single tank will determine the volume of the bermed area and drain piping.

Aqueous ammonia will be stored in a single 10,000-gallon, carbon steel, aboveground storage tank located at the center of the property, west of the power station turbine area. The tank will be surrounded by a secondary containment berm having a capacity of 16,325 gallons to contain any release from the tank plus precipitation from the 24-hour, 25 year storm event. The tank will be partially enclosed with a drain-like cover to minimize evaporation should there be a release. The ammonia storage area will be equipped with an ammonia delivery truck unloading zone adjacent to the tank. The proposed unloading zone will have a concrete pad and be equipped with its own spill containment system. The unloading zone concrete pad will be sloped to drain toward the containment system to allow for any ammonia spills to reach the containment system by gravity flow.

Personnel will be properly trained in handling of all chemicals and instructed in the procedures to follow in the case of a chemical spill or accidental release. Adequate supplies of absorbent material will be stored onsite for spill clean-up.

Waste Management

Operation of the facility will generate wastes resulting from process, routine facility maintenacne, and office activities. Non-hazardous waste during operation of the facility will be recycled to the greatest extent practical, and the remainder removed on a regular basis by a certified waste-handling contractor. The following types of non-hazardous solid waste may be generated: paper, wood, plastic, cardboard, broken and rusted metal and machine parts, defective or broken electrical materials, empty non-hazardous containers, and other miscellaneous solid wastes including the typical refuse generated by workers. Solid waste will be segregated, where practical, for recycling. Non-recyclable waste will be placed in covered dumpsters and removed on a regular basis by a certified waste handling contractor for disposal at a Class III landfill.

Some hazardous solid waste, such as welding materials and paint, may also be generated. The hazardous waste will be collected in satellite acccumulation containers near the points of generation. The waste will be moved daily to the 90-day hazardous waste storage area, and removed by an authorized hazardous waste hauler before the 90-day storage limit. All hazardous wastes will be handled and disposed of in accordance with applicable laws, ordinances, regulations, and standards.

Plant start-up will produce wastes typical of normal operation plus initial cleaning wastes such as rags, consumable materials and failed components.

Non-hazardours liquid wastes that are non-recoverable, such as RO reject water and chilled water system cooling tower blowdown will be delivered to the OCSD sewer system. Sanitary wastes will also be sent to the OCSD sewer system. Plant equipment that contains oil by design such as power transformers, lub oil storage tanks and fuel gas filter separates will be located iwthin concrete spill-containment berms. These containment stuctures will collected a small amount of stormwater and plant washdown water. Drains from this type containment structure will gravity flow to a plant

process wastewater oil-water separator. This oil-water separator will be a highly efficient corrugated plant interceptor (CPI) spearator designed to remove oil residue down to 10 parts per million. After passing through the oil-water separator the wastewater will then flow to the plant wastewater lift station for eventual transfer to the OCSD sanitary sewer system.

CTG wash water can contain solvents or biodegradable detergents. This wastewater stream can be considered hazardous when it contains solvent-based cleaning solutions and will not be sent ot the santiary swer system. Underground 2,000–gallon wash water tanks will be provided to collect and store CTG solvent-based wastewater. These tanks can accommodate up to approximately 10 water wash operations on each CTG. These underground tanks will be of fiberglass construction for long-term corrosion protection and will be provided with secondary containment with leakage alarms. When the cleaning solution is a biodegradable detergent, the CTG washwater waste will be sent directly to the OCSD sanitary sewer.

The project will not include car washing, auto repair or vehicle fueling features and those activities will be prohibited onsite.

Based upon Table 7.II-2 of the Model WQMP and that the CPP is an industrial development, the potential stormwater runoff pollutants for the proposed project include heavy metals, organic compounds, trash & debris, and oil & grease. All of the potential sources of these pollutants have structural source control BMPs included in the project design. Additionally, the non-structural BMPs that will be implemented will further reduce the potential for the entrainment of pollutants into stormwater runoff from the CCP.

Section Site Description

Facility Location

The 10-acre CPP site located at 3071 East Miraloma Avenue, and is bounded by East Miraloma Avenue on the south and by adjacent properties to the north, east and west of the site. Figure 2 is an aerial photograph showing the existing and proposed project views, including the surrounding areas. The site is located within the lower Santa Ana River Watershed.

Land Use

The project site was previously use for food catering for a fleet of approximately 75 to 100 trucks, formerly operated by Orange County Food Service. Existing on-site structures include a kitchen/warehouse building, maintenance garage (9 service bays), truck wash facility (bays), two ice manufacturing buildings, several storage sheds, and an outdoor truck repari shop which includes storage lockers and petroleum products, all of which will be demolished as part of the CPP project.

The project site is designated Industrial Area under the Land Use Element of the City of Anaheim General Plan. The project site and linears are are located within the boundaries of the City's Northeast Area (Anaheim Canyon Business Center) Specific Plan 94-1). The Northeast Specific Plan designates the zoning in the area, including the project site which is zoned Industrial Area (Development Area 1). The land use and development standards for the Industrial Area zoning designation in the Northeast Area Specific Plan allow for the permitting under a conditional use permit (CUP) of public utilities operated by mutual agencies consisting of electrical substations, gas or conversion plants with necessary buildings, apparatus, or appurtenances.

Soil Types

The CPP site is located on a broad alluvial plane, locally underlain by approximately 2,000 feet of unconsoilidated, stratified silt, sand and gravel deposits that will deposited historically by the Santa Ana River. Geotechnical borings to depths up to 50 feet below ground surface indicate the site is underalin by stratified alluvial deposits consisting of medium dense to very dense silty sand and poorly graded sand with intermitten layters of sandy silt. The upper one to 2.5 feet was comprised of artificial fill material. The site is an existing developed site (100 percent impervious). Upon redevelopment of the site into the CPP, the site will be approximately 65 percent impervious surface. The precise reduction in impervious surface area will be determined during final project design and reflected in the final WQMP.

Site Drainage and Receiving Waters

As shown in Figure 2, the CPP site is currently fully developed and predominantly paved (concrete and asphalt). Therefore, the site is considered to be nearly 100 percent impervious surface area. The site elevation is approximately 218 feet above mean sea level and has a very slight slope in a southerly direction.

No storm drains currently exist on the site. Runoff from the site drains as sheet flow to East Miraloma Avenue and into the City of Anaheim's muncipal storm drain system. Stormwater from the municipal storm drain system discharges to Reach 2 of the Santa Ana River, located approximately 1.5 miles south of the CPP site. The Santa Ana River flow in Reach 2 contains natural flow (including stormwater runoff from upstream areas), reclaimed water, and imported water. The beneficial uses of Reach 2 as designated in the Water Quality Control Plan for the Santa Ana River (Basin Plan) are Agricultural Supply, Groundwater Recharge, Water Contact Recreation, Non-contact Water Recreation, Warm Freshwater Habiat, and Wildlife Habiat, including Rare, Threatened, or Endangered species. Notably, Reach 2 is exempted from the Municipal Supply beneficial use designation. Also, Reach 2 of the Santa Ana River is not considered an impaired water body (that is, it is not included in the 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments), and no Total Maximum Daily Loads (TMDLs) have been established for Reach 2. Therefore, there are no primary pollutants of concern associated with stormwater discharges from the CPP. The CPP site in not located within or directly adjacent to (within 200 feet) an Environmentally Sensitive Area and does not discharge directly into a receiving water within an Environmentally Sensitive Area.

Hydrologic Conditions of Concern

The CPP site is located within an urbanized drainage area with curb and gutter drains that discharge underground storm drains and lined channels for ultimate discharge to the Santa Ana River. The project will result in a decrease in runoff from the site, as the impervious surface area will be reduced overall, and industrial area runoff will be treated and allowed to infiltrate into the ground. Thus, post-development runoff from the site will not create a hydrologic condition of concern (e.g., increased volume or velocity of flows) to downstream areas.

Groundwater

The CPP site is within the Main Basin of the Orange County Water Basin (OCWB). The OCWB is managed by the OCWD which manages water recharge systems and groundwater quality in the Orange County region. Numerous abandoned gravel quarry pits along the Santa Ana River, including those adjacent to the CPP site, are part of the OCWD recharge facilities.

Section Best Management Practices (BMPs)

IV.1 Site Design BMPs

Table 1 shows Site Design BMPs that are included in this project. A description of how each BMP technique was incorporated into project design follows the table.

Table 1. Site Design BMPs

Technique	Included?		If no, state reason.
	Yes	No	
Minimize Impervious Area/Maximize Permeability (C-Factor Reduction)	X		
Minimize Directly Connected Impervious Areas (DCIAs) (C-Factor Reduction)		X	Roof drainage will be addressed during final design.
Create Reduced or "Zero Discharge" Areas (Runoff Volume Reduction)	X		
Conserve Natural Areas (C-Factor Reduction)		X	No natural areas on site. Site is already fully developed from past land uses.

Minimize Impervious Area/Maximize Permeability (C-Factor Reduction)
Currently all runoff from fully paved site drains as sheetflow to the municipal storm drain system. Thus, the site currently has a high C-Factor (runoff coefficient). Development of the CPP site will reduce the amount of paved surface, as the industrial process areas and areas used for construction laydown will be covered in crushed miscellaneous base (or similar material) which has a lower C-Factor. Also, drainage from the industrial areas will be collected, treated and discharged to an infiltration chamber for percolation into the ground.

Create Reduced or "Zero Discharge" Areas (Runoff Volume Reduction)
Currently all runoff from the site is discharged to the municipal storm drain system. With the CPP project, stormwater from industrial process areas will be collected, treated and then conveyed to an infiltration trench/chamber for percolation into the ground. This will reduce runoff from the site for storm events up to the 25-year storm event. See also the discussion for the Infiltration Trench/Chamber.

IV.2 Source Control BMPs

Table 2 shows the Routine Non-Structural source control BMPs included in this project and those that were not included.

Table 2. Routine Non-Structural Source Control BMPs

Identifier	Name	Check One		If not applicable, state brief reason
		Included	Not Applicable	
N1	Education for Property Owners, Tenants and Occupants		X	There are no subsequent owners, tenants, or occupants contemplated for the project. See BMP N12, Employee Training.
N2	Activity Restrictions	X		
N3	Common Area Landscape Management	X		
N4	BMP Maintenance	X		
N5	Title 22 CCR Compliance	X		
N6	Local Water Quality Permit Compliance		X	The City of Anaheim does not issue water quality permits
N7	Spill Contingency Plan	X		
N8	Underground Storage Tank Compliance	X		
N9	Hazardous Materials Disclosure Compliance	X		
N10	Uniform Fire Code Implementation	X		
N11	Common Area Litter Control	X		
N12	Employee Training	X		
N13	Housekeeping of Loading Docks		X	No loading docks included in the project. The aqueous ammonia unloading zone will be addressed by BMPs N7, N9, N10, and N12.
N14	Common Area Catch Basin Inspection	X		
N15	Street Sweeping Private Streets and Parking Lots	X		
N16	Commercial Vehicle Washing		X	No commercial vehicle washing to be conducted onsite
N17	Retail Gasoline Outlets		X	A retail gas outlet is not part of this project.

N2 – Activity Restrictions

Dumpster lids will be closed at all times, except when trash is being deposited, to prevent trash and debris from escaping and potentially entering the storm drain system. The Plant Manager will ensure that CPP staff and maintenance contractors, if any, are made aware that the dumpster lid is to remain closed unless trash is being deposited.

Vehicle washing, maintenance, or repair will be prohibited onsite.

Aqueous ammonia shall only be unloaded on the concrete ammonia unloading pad. All aqueous ammonia deliveries will be unloaded in the designated unloading area to prevent accidental releases that would enter the existing drainage area. The Plant Manager will ensure all ammonia deliveries are directed to the designated unloading pad and will supervise all deliveries.

N3 – Common Area Landscape Maintenance

The Plant Manager will direct landscape maintenance staff to implement the following practices for landscaped areas:

- Apply organic fertilizers to increase soil porosity and water retention.
- Apply only the minimum amount of fertilizer required by the vegetation and incorporate it directly to the soil around the plant to reduce potential for runoff.
- Prohibit the use of fertilizers prior to a predicted rain event.
- Use pesticides only according to label instructions, including safe equipment handling such as eye protection, gloves, respiratory gear and impervious full-body, chemical resistant clothing when required by chemical label.
- Instruct landscape maintenance staff to bring only the amount of fertilizer or pesticide needed and to use the minimum amount necessary.
- Weather conditions (e.g. high winds or rain) will be considered before applying fertilizers or pesticides.
- Restrict application of pesticides to bare or eroded ground areas.
- Require proper licensing for supervision and training of staff to use and apply pesticides.
- Remove and replace dead vegetation promptly.
- The irrigation system will be inspected weekly to identify and correct excessive overspray, poorly directed sprinkler heads, and broken sprinkler heads or irrigation lines.
- Comply with the City of Anaheim's Water Conservation Ordinance by properly using and maintaining the irrigation systems and preventing wasteful water use.

N4 – BMP Maintenance

BMP maintenance, implementation schedules, and responsible parties are included with each specific BMP narrative, and are listed in the BMP Inspection and Maintenance Matrix provided in Section V of this Preliminary WQMP.

N5 – Title 22 CCR Compliance

All hazardous waste will be properly containerized, labeled prior to removal by a certified hazardous waste hauler. Appropriate advisory signs will be posted in areas where hazardous materials are stored. The Plant Manager will arrange for pick-up of hazardous waste as needed for site operations and allow only properly trained personnel to handle or have access to hazardous waste containers. Once a week, the Plant Manager will inspect the various areas where hazardous waste is stored (satellite collection areas and the 90-day hazardous waste storage area) to verify no

residues, trash, or spills are present. If a leak or spill is detected, it will be immediately cleaned using spill kit supplies. These areas will be swept as needed to prevent trash and debris from accumulating. The Plant Manager will be responsible for implementation of this BMP.

N7 – Spill Contingency Plan

A Spill Prevention, Control, and Countermeasure (SPCC) Plan will be prepared for the CPP and will be kept in the _____ [*location to be identified in final WQMP*]. The SPCC Plan provides guidelines that will be adhered to by all employees working on-site for the prevention, containment, clean up, and disposal of spills. The SPCC Plan will be reviewed annually by the Plant Manager. The Plant Manager is responsible for ensuring implementation of this BMP and for keeping the SPCC Plan current in accordance with all applicable regulations.

N8 – Underground Storage Tank Compliance

To be developed for final WQMP.

N9 – Hazardous Materials Disclosure Compliance

The CPP will use various quantities of hazardous materials during operations including natural gas, lubrication oils, hydraulic and insulation oils, aqueous ammonia, small amounts (less than 1 gallon) of chemicals, solvents, and calibration gases. The Plant Manager is responsible for making appropriate disclosures of the on-site storage of hazardous materials in accordance with requirements of the City of Anaheim Fire Department, Hazardous Materials Section. A Hazardous Materials Business Emergency Plan and Chemical Inventory Forms listing all hazardous, flammable, and combustible liquids, solids, and gases to be stored, used, or handled on-site will be submitted to the City of Anaheim Fire Department. On an annual basis, the Plant Manager will ensure that the list and associated plans are amended as necessary to include the current status of hazardous materials being used, handled, or stored on-site.

N10 – Uniform Fire Code Implementation

The CPP facility will have various hazardous materials in quantities of greater than 55 gallons stored on-site. To conform to the Uniform Fire Code, the Plant Manager will maintain an inventory of all hazardous materials stored on-site. All new hazardous materials brought on-site in quantities greater than 55 gallons will be added to the inventory and reported to the City of Anaheim Fire Department within thirty days. Material Data Safety Sheets (MSDSs) will be available in the electric switchgear building for all hazardous materials used on-site. All hazardous materials stored on-site will be labeled according to the US Department of Transportation and City of Anaheim Fire Department guidelines.

N11 – Common Area Litter Control

To be developed for final WQMP.

N12 – Employee Training

The Plant Manager will ensure that employees working at the facility are trained to properly implement, operate, and maintain all BMPs. The Plant Manager will instruct new employees of their duties with regard to BMP maintenance and annually thereafter. The Plant Manager will train employees in general stormwater pollution prevention measures and specifically to:

- Report spills, leaks, or litter that has the potential to enter the stormwater drainage system.

- Inspect structural BMPs on a fixed schedule (e.g., monthly) as well as during and after storm events.
- Note any extended ponding or flooding of the multi-chamber pretreatment vault and the infiltration trench/chamber during storm events and report to Plant Manager.

Additionally, the following educational materials are included in Appendix C of this Preliminary WQMP:

- The Ocean Begins at Your Front Door
- IC3 – Building Maintenance
- IC10 – Outdoor Loading/Unloading of Materials
- IC11 – Outdoor Process Equipment Operations & Maintenance
- IC12 – Outdoor Storage of Raw Materials, Products, & Containers
- IC15 – Parking & Storage Area Maintenance
- IC17 – Spill Prevention & Cleanup
- IC19 – Vehicle & Equipment Maintenance & Repair
- IC21 – Waste Handling & Disposal
- IC23 – Fire Sprinkler Testing/Maintenance
- IC24 – Wastewater Disposal

Educational and training materials included in Appendix C will be provided to employees upon hiring and annually thereafter.

N14 – Common Area Catch Basin Inspection
To be developed for final WQMP.

N15 – Street Sweeping of Private Streets and Parking Lots
The parking area will be swept at least annually in September (prior to the rainy season). Also, the parking area will be swept as needed as determined by the Plant Manager.

Table 3 shows the Routine Structural Source Control BMPs included in this project and those that were not included.

Table 3. Routine Structural Source Control BMPs

Identifier[(a)]	Name	Check One		If not applicable, state brief reason
		Included	Not Applicable	
SD-13	Provide storm drain system stenciling and signage	X		
SD-34	Design and construct outdoor material storage areas to reduce pollution introduction	X		
SD-32	Design and construct trash and waste storage areas to reduce pollution introduction	X		
SD-10 and SD-12	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	X		
SD-10b	Protect slopes and channels and provide energy dissipation		X	No hill slopes on the property.
Incorporate requirements applicable to individual features:				
SD-31	Dock areas & maintenance bays		X	None included in Project. However, materials delivery areas are discussed as part of BMP SD-34, Outdoor Materials Storage.
SD-33	Vehicle wash areas		X	None included in Project.
SD-36	Outdoor processing areas		X	None included in Project.
--	Equipment wash areas		X	None included in Project.
SD-30	Fueling areas		X	None included in Project.
SD-10a	Hillside landscaping		X	No hillsides on the property
--	Wash water control for food preparation areas		X	None included in Project.
--	Community car wash racks		X	None included in Project.

Note: The BMP Identifier corresponds to those used in the California Stormwater BMP Handbook – New Development and Redevelopment (January 2003).

SD-13, Provide storm drain system stenciling and signage

A stencil reading "NO DUMPING-DRAINS TO OCEAN" with 2-inch high letters and black paint will be placed on or immediately adjacent to the on-site catch basins. The Plant Manager will inspect the painted stencil annually to make sure the lettering is legible. If the lettering needs to be re-stenciled, the Plant Manager will have the signage re-stenciled by a site technician.

SD-34, Design and construct outdoor material storage areas to reduce pollution introduction

Hazardous materials will be stored in designated hazardous materials storage areas that include appropriate design features such as signage, impervious pavement, secondary containment berms,

dikes, or curbs, and a roof or canopy. *[The specific locations and features will be determined during final design.*]

SD-32, Design and construct trash and waste storage areas to reduce pollution introduction
Trash and waste storage areas will include appropriate design features such as signage, impervious pavement, final grade that precludes run-on into the area or runoff out of the storage area, a roof or canopy or containers the attached lids. *[The specific locations and features will be determined during final design.*]

SD-10 and SD-12, Use efficient irrigation systems and landscape design; water conservation, smart controllers and source control
[The specific locations and features will be determined during final design.] It is likely that the irrigation system will include the following elements:

- A rain shutoff device will be employed to prevent irrigation during precipitation events.
- The landscape irrigation system will be designed according to each landscaped area's specific water requirements.
- Sprinkler heads will have a check valve and pressure regulating stem feature to prevent water loss in the event of a broken sprinkler head or line.
- The landscaping irrigation controller device will utilize a master shut-off valve and flow sensor that senses high flow for each irrigation valve. The irrigation timer will be a 'smart' type device which downloads daily weather data to alter the irrigation schedule on a real time basis.
- The timing and application of irrigation water will be designed to minimize excess irrigation water runoff utilizing a landscape irrigation controller with multiple start times.
- Efficient rotary type stream spray irrigation heads will be used to apply water at a slower rate than standard spray nozzles reducing irrigation water runoff.
- A thick covering of mulch will be applied to all newly installed landscape areas to minimize sediment in runoff and to help the soil retain moisture.

IV.3 Treatment BMPs

Table 4 shows treatment BMPs that are included in this project.

Table 4. Treatment Control BMPs		
Name	**Check One**	
	Included	**Not Applicable**
Vegetated (Grass) Strips		X
Vegetated (Grass) Swales		X
Proprietary Control Measures	X	
Dry Detention Basin		X
Wet Detention Basin		X
Constructed Wetland		X
Detention Basin/Sand Filter		X
Porous Pavement Detention		X
Porous Landscape Detention		X
Infiltration Basin		X
Infiltration Trench	X	
Media Filter		X

Proprietary Control Measures.

Stormwater from those portions of the CPP site that contain industrial activities (generating equipment, chilling system cooling tower, material and equipment storage and laydown areas) will be collected in catch basins and will flow through an underground storm drain system. This system will discharge to an underground vault-type multi-chamber pretreatment device to remove sediment, coarse materials, and oil from runoff.

Infiltration Trench/Chamber.

Following pretreatment for sediment and oil removal as described previously stormwater will flow to an onsite underground chamber to allow for infiltration. The chamber will be filled with rock and will have an open bottom for infiltrating stormwater runoff directly to the soil. The infiltration chamber will prevent discharges of stormwater runoff from the industrial areas of the site. The infiltration chamber will include an overflow outlet to allow for stormwater in excess of the 25-year storm event to flow to the existing municipal storm drain system in East Miraloma Avenue.

Infiltration trenches/chambers are shown to have high effectiveness for trash & debris and medium effectiveness for sediment, nutrients, metals, bacteria, oil & grease, and organics.[1] Additionally, all of the potential sources of these pollutants have structural source control BMPs included in the

[1] California Stormwater BMP Handbook, New Development and Redevelopment. January 2003. BMP Fact Sheet TC-10, Infiltration Trench. http://www.cabmphandbooks.com/Development.asp

project design as well as non-structural BMPs that will be implemented to further reduce the potential for the entrainment of pollutants into stormwater runoff from the CPP.

The DAMP and Model WQMP for Orange County, the Cities of Orange County and the Orange County Flood Control District requires that post-construction structural or treatment control BMPs be designed for the volume of runoff produced from a 24-hour 85th percentile rainfall event as determined from the local historical rainfall record. Therefore, the site's post-construction infiltration trench/chamber is sized to capture 85% of the annual stormwater runoff from the industrial areas of the site.

Treatment Control BMP sizing calculations will be updated during final design in conformance with the Orange County DAMP and the Model WQMP and will be incorporated into the final WQMP. The assumptions made in the preliminary design of the infiltration chamber (as provided in the AFC) are as follows:

- According to Exhibit C of the City of Anaheim Storm Drainage Manual, the design storm frequency for this site shall be the 25-year storm, since the site is tributary to the Santa Ana River watershed.
- Figure B-3 from the Orange County Hydrology Manual (Mean Precipitation Intensities for Nonmountainous Areas) was used to obtain the rainfall intensities (in inches/hour) used in the Rational Method Equation to determine the design storm runoff rates.
- Figure D-l from the Orange County Hydrology Manual (Time of Concentration Nomograph for Initial Subarea) was used to obtain the time of concentration (in minutes) used in the Rational Method Equation to determine the design storm runoff rates.
- The runoff coefficient used in the Rational Method Equation is 0.90, since the site is entirely impervious. It is presumed that after development of the power plant site, the runoff coefficient will remain 0.90.
- The Water Quality volume for the site was determined using the Basin Sizer program. Basin Sizer is a software tool developed for the California Department of Transportation. The software computes water quality volumes (WQVs) and water quality flows (WQFs) by methods approved for Caltrans. Basin Sizer uses data from more than 1,000 California rainfall stations, and allows computation of the depth of rain that falls over a drainage area.
- Equation 1 and 2 on page B-68 of the Caltrans Stormwater Quality Handbooks were used to size the multi-chamber treatment train BMP.

The size of the Infiltration Trench/Chamber was estimated as follows:

- The area of the site which falls inside the perimeter wall was computed (372,874 ft2).
- The 25-year storm event depth of rainfall was computed for the site by using Figure B-1 of the Orange County Hydrology Manual (Mean Precipitation Depths for Nonmountainous Areas). The time of concentration for the site was assumed at 30 minutes, and the corresponding depth is 0.875 inches (0.073 ft.).

The area of the site inside the perimeter wall is 372,874 ft^2. The rainfall depth is 0.073 ft.

Area x Depth = Volume. 372,874 ft^2 x 0.073 ft = 27,183 ft^3

This volume was used with Equation 2 on Page B-20 of the Caltrans Stormwater Quality Handbooks - Project Planning and Design Guide, "Estimate the area required for an Infiltration Basin."

$A_{est} = (C \times SF \times WQV)/(k_{est} \times t)$

A_{est} = estimated area of invert of Infiltration Basin (ft^2)

C = conversion factor (as for inches to ft)

SF = safety factor of 2

WQV = Water Quality Volume (the computed 25-year storm volume rather than the WQV is used here)

k_{est} = estimated infiltration rate (6 inches/hour)

t = drawdown time (48 hours)

A_{est} = 2,265 ft^2

The area of the infiltration chamber has been sized at 25 ft x 90 ft or, 2,250 ft^2.

Treatment Control BMP Operation, Maintenance, and Inspection

For the final WQMP, an inspection checklist will be developed for both the multi-chamber pretreatment device and the infiltration trench/chamber. Inspections will be conducted monthly throughout the year, as well as before and after each storm event.

[*Specific operation and maintenance procedures will be developed in conjunction with final design and will be incorporated into the final WQMP*.] In general, operation, maintenance, and inspection for the multi-chamber pretreatment device and the infiltration trench/chamber will include:

- Frequent inspection and maintenance will be concentrated on the multi-chamber pre-treatment device to ensure that sediment does not reach the infiltration trench/chamber. Monthly inspections will be used to determine if the pre-treatment device requires routine maintenance, such as cleaning for sediment, oil/grease, and debris.

- Maintenance of the infiltration trench/chamber will include the following:
  - Inspections to ensure the water infiltrates into the subsurface completely at a recommended infiltration rate of 72 hours of less[2].
  - Annually, clean out sediment trap, inlet, outlet, overflow, or bypass structures (as applicable) ,
  - Clean infiltration trench/chamber when loss of infiltrative capacity is observed. If drawdown time is observed to have increased significantly over the design drawdown time, removal of sediment and replacement of rock may be necessary.
  - If the infiltration trench/chamber has failed, total rehabilitation should be conducted to maintain storage capacity within 2/3 of the design treatment volume and 72-hour exfiltration rate limit. All of the crushed rock must be removed. Accumulated sediment should be stripped from the trench bottom. At this point, the bottom may be scarified or tilled to help induce infiltration. New crushed rock should be refilled.

[2] Maintenance details derived from the California Stormwater BMP Handbook, Industrial and Commercial, January 2003.

Section Inspection/Maintenance Responsibility for BMPs

The Plant Manager will be responsible for the implementation, operation, maintenance, and inspection of the BMPs identified in this Preliminary WQMP. SCPPA shall retain all maintenance and inspection records for a period of five years. Long term funding for implementation, operation, maintenance, and inspection of the BMPs identified in this Preliminary WQMP will be provided through operating revenues of the CPP.

SCPPA contact information is for the CPP is:

Name:
Title:
Address:
Telephone:
Fax:
Email address:

The matrix provided in the remainder of this section provides BMP implementation, maintenance, and inspection procedures, the frequency/schedule for implementation, maintenance, and inspection, and identifies the party with operation, maintenance, and inspection responsibility. The name and telephone number of the Plant Manager will be identified prior to operation of the facility.

BMP Inspection and Maintenance Matrix [*Details to be verified and revised with final design.]*

BMP Name and Designator Code (1)	BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Party with Operation and Maintenance Responsibility
Activity Restrictions, N2	The dumpster lid will be closed at all times, except when trash is being deposited, to prevent trash and debris from escaping and potentially entering the storm drain system. The Plant Manager will ensure that CPP staff and contractors are made aware that the dumpster lid is to remain closed unless trash is being deposited.	Plant Manager will inspect dumpster area during each site visit.	Plant Manager
	Vehicle washing, maintenance, or repair will be prohibited on-site.	Upon hire and annually thereafter, employees will be informed that no vehicle washing, maintenance, or repair is to be conducted on-site.	
	Aqueous ammonia shall only be unloaded on the concrete ammonia unloading pad. All aqueous ammonia deliveries will be unloaded in the designated unloading area to prevent accidental releases that would enter the existing drainage area. The Plant Manager (or designated employee) will ensure all ammonia deliveries are directed to the designated unloading pad and will supervise all deliveries.	Aqueous ammonia deliveries will only be permitted when the Plant Manager is on-site (or designated employee) to ensure aqueous ammonia is unloaded at designated unloading pad.	
Common Area Landscape Maintenance, N3	– Apply organic fertilizers to increase soil porosity and water retention. – Apply only the minimum amount of fertilizer required by the vegetation and incorporate it directly to the soil around the plant to reduce potential for runoff. Prohibit the use of fertilizers prior to a predicted rain event. – Use pesticides only according to label instructions, including safe equipment handling such as eye protection, gloves, respiratory gear and impervious full-body, chemical resistant clothing when required by chemical label. – Instruct landscape maintenance staff to bring only the amount of fertilizer or pesticide needed and to use the minimum amount necessary. – Weather conditions (e.g. high winds or rain) will be considered before applying fertilizers or pesticides.	Weekly inspection of the irrigation system and vegetation. Application of fertilizer and pesticides as needed.	Landscape Maintenance Contractor under the direction of the Plant Manager

BMP Name and Designator Code [(1)]	BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Party with Operation and Maintenance Responsibility
Common Area Landscape Maintenance, N3 (continued)	– Restrict application of pesticides to bare or eroded ground areas. – Require proper licensing for supervision and training of staff to use and apply pesticides. – Remove and replace dead vegetation. The irrigation system will be inspected weekly to identify and correct excessive overspray, poorly directed sprinkler heads, and broken sprinkler heads or irrigation lines. – Comply with the City of Anaheim's Water Conservation Ordinance by properly using and maintaining the irrigation systems and preventing wasteful water use.	Weekly inspection of the irrigation system and vegetation. Application of fertilizer and pesticides as needed.	Landscape Maintenance Contractor under the direction of the Plant Manager
BMP Maintenance, N4	BMP maintenance, implementation schedules, and responsible parties are included with each specific BMP narrative.	See specific BMP implementation, maintenance, and inspection descriptions.	Plant Manager
Title 22 CCR Compliance, N5	All hazardous waste will be properly containerized, labeled prior to removal by a certified hazardous waste hauler. Appropriate advisory signs will be posted in areas where hazardous materials are stored. The Plant Manager will arrange for pick-up of hazardous waste as needed for site operations and allow only properly trained personnel to handle or have access to hazardous waste containers. Once a week, the Plant Manager will inspect the various areas where hazardous waste is stored (satellite collection areas and the 90-day hazardous waste storage area) to verify no residues, trash, or spills are present. If a leak or spill is detected, it will be immediately cleaned using spill kit supplies. These areas will be swept as needed to prevent trash and debris from accumulating. The Plant Manager will be responsible for implementation of this BMP.	Weekly.	Plant Manager

BMP Name and Designator Code (1)	BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Party with Operation and Maintenance Responsibility
Spill Contingency Plan, N7	A Spill Prevention, Control, and Countermeasure (SPCC) Plan will be prepared for the CPP and will be kept in the _____ [*location to be identified in final WQMP*]. The SPCC Plan provides guidelines that will be adhered to by all employees working on-site for the prevention, containment, clean up, and disposal of spills. The SPCC Plan will be reviewed annually by the Plant Manager. The SPCC Plan will be kept current in accordance with all applicable regulations.	SCPPA will ensure that a SPCC Plan is prepared before site operations begin. The SPCC Plan will be reviewed annually by the Plant Manager.	Plant Manager
Underground Storage Tank Compliance, N8	*To be developed for final WQMP.*		
Hazardous Materials Disclosure Compliance, N9	The CPP will use various quantities of hazardous materials during operations including natural gas, lubrication oils, hydraulic and insulation oils, aqueous ammonia, small amounts (less than 1 gallon) of chemicals, solvents, and calibration gases. The Plant Manager is responsible for making appropriate disclosures of the on-site storage of hazardous materials in accordance with requirements of the City of Anaheim Fire Department, Hazardous Materials Section. A Hazardous Materials Business Emergency Plan and Chemical Inventory Forms listing all hazardous, flammable, and combustible liquids, solids, and gases to be stored, used, or handled on-site will be submitted to the City of Anaheim Fire Department. On an annual basis, the Plant Manager will ensure that the list and associated plans are amended as necessary to include the current status of hazardous materials being used, handled, or stored on-site.	On an annual basis, the Plant Manager will ensure that the list and associated plans are amended as necessary to include the current status of hazardous materials being used, handled, or stored on-site.	Plant Manager

BMP Name and Designator Code (1)	BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Party with Operation and Maintenance Responsibility
Uniform Fire Code Implementation, N10	The CPP facility will have various hazardous materials in quantities of greater than 55 gallons stored on-site. To conform to the Uniform Fire Code, the Plant Manager will maintain an inventory of all hazardous materials stored on-site. All new hazardous materials brought on-site in quantities greater than 55 gallons will be added to the inventory and reported to the City of Anaheim Fire Department within thirty days. Material Data Safety Sheets (MSDSs) will be available in the electric switchgear building for all hazardous materials used on-site. All hazardous materials stored on-site will be labeled according to the US Department of Transportation and City of Anaheim Fire Department guidelines.	The Plant Manager will ensure new employees are made aware of the proper handling, reporting, and BMP implementation procedures upon hiring and annually thereafter.	Plant Manager
Common Area Litter Control, N11	*To be developed for final WQMP.*	*To be developed for final WQMP.*	Plant Manager
Employee Training, N12	The Plant Manager will ensure that employees working at the facility are trained to properly implement, operate, and maintain all BMPs. The Plant Manager will instruct new employees of their duties with regard to BMP maintenance and annually thereafter. The Plant Manager will train employees in general stormwater pollution prevention measures and specifically to: – Report spills, leaks, or litter that has the potential to enter the stormwater drainage system. – Inspect structural BMPs on a fixed schedule (e.g., monthly) as well as during and after storm events. – Note any extended ponding or flooding of the multi-chamber pretreatment vault and the infiltration trench/chamber during storm events and report to Plant Manager.	The Plant Manager will instruct employees of their duties with regard to BMP maintenance upon hiring and annually thereafter.	Plant Manager
	Educational materials included in Appendix C will be reviewed with employees upon hire and annually thereafter.	Upon hire and review annually thereafter.	Plant Manager
Common Area Catch Basin Inspection, N14	*To be developed for final WQMP.*	*To be developed for final WQMP.*	Plant Manager

BMP Name and Designator Code [(1)]	BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Party with Operation and Maintenance Responsibility
Street Sweeping of Private Streets and Parking Lots, N15	The parking area will be swept at least annually in September (prior to the rainy season). Also, the parking area will be swept as needed as determined by the Plant Manager.	Annually in September and as needed.	Plant Manager
Storm Drain Stenciling, SD13	A stencil reading "NO DUMPING-DRAINS TO OCEAN" with 2-inch high letters and black paint will be placed on or immediately adjacent to the on-site catch basins. The Plant Manager will inspect the painted stencil annually to make sure the lettering is legible. If the lettering needs to be re-stenciled, the Plant Manager will have the signage re-stenciled by a site technician.	Annual inspection with re-stenciling as needed.	Plant Manager and Site Technician
Outdoor Materials Storage, SD34	Hazardous materials will be stored in designated hazardous materials storage areas that include appropriate design features such as signage, impervious pavement, secondary containment berms, dikes, or curbs, and a roof or canopy. [The specific locations and features will be determined during final design.]	See BMPs N5 (Title 22 CCR Compliance), N7 (Spill Contingency Plan), N9 (Hazardous Materials Disclosure Compliance), and N10 (Uniform Fire Code Implementation).	Plant Manager
Outdoor Waste Storage, SD32	Trash and waste storage areas will include appropriate design features such as signage, impervious pavement, final grade that precludes run-on into the area or runoff out of the storage area, a roof or canopy or containers the attached lids. [*The specific locations and features will be determined during final design.*]	See BMPs N5 (Title 22 CCR Compliance), N7 (Spill Contingency Plan), N9 (Hazardous Materials Disclosure Compliance), and N10 (Uniform Fire Code Implementation).	Plant Manager

BMP Name and Designator Code (1)	BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Party with Operation and Maintenance Responsibility
Use Efficient Irrigation Systems and Landscape Design, Including Hillside Landscaping, SD10 and SD12	[*The specific locations and features will be determined during final design.*] It is likely that the irrigation system will include the following elements: – A rain shutoff device will be employed to prevent irrigation during precipitation events. – The landscape irrigation system will be designed according to each landscaped area's specific water requirements. – Sprinkler heads will have a check valve and pressure regulating stem feature to prevent water loss in the event of a broken sprinkler head or line. – The landscaping irrigation controller device will utilize a master shut-off valve and flow sensor that senses high flow for each irrigation valve. The irrigation timer will be a 'smart' type device which downloads daily weather data to alter the irrigation schedule on a real time basis. – The timing and application of irrigation water will be designed to minimize excess irrigation water runoff utilizing a landscape irrigation controller with multiple start times. – Efficient rotary type stream spray irrigation heads will be used to apply water at a slower rate than standard spray nozzles reducing irrigation water runoff. – A thick covering of mulch will be applied to all newly installed landscape areas to minimize sediment in runoff and to help the soil retain moisture.	The Plant Manager will ensure the rain shutoff device is functioning post-storm events. Inspect for broken sprinkler heads and lines as needed. Inspect drip irrigation system as needed to ensure it is functioning as designed. Inspect for dead or dying plant materials as needed. The Plant Manager will ensure the mulch layer is maintained at __-inch thick as needed. The Plant Manager will ensure landscape contractors are using fertilizer as directed.	Plant Manager

BMP Name and Designator Code (1)	BMP Implementation, Maintenance, and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Party with Operation and Maintenance Responsibility
Multi-Chamber Pretreatment Device and Infiltration Trench/Chamber	[*Specific operation and maintenance procedures will be developed in conjunction with final design and will be incorporated into the final WQMP*.] In general, operation, maintenance, and inspection for the multi-chamber pretreatment device and the infiltration trench/chamber will include: – Frequent inspection and maintenance will be concentrated on the multi-chamber pre-treatment device to ensure that sediment does not reach the infiltration trench/chamber. Monthly inspections will be used to determine if the pre-treatment device requires maintenance, such as cleaning for sediment, oil/grease, and debris. – Maintenance of the infiltration trench/chamber will include the following: – Inspections to ensure the water infiltrates into the subsurface completely at a recommended infiltration rate of 72 hours of less. – Annually, clean out sediment trap, inlet, outlet, overflow, or bypass structures (as applicable) , – Clean infiltration trench/chamber when loss of infiltrative capacity is observed. If drawdown time is observed to have increased significantly over the design drawdown time, removal of sediment and replacement of rock may be necessary. – If the infiltration trench/chamber has failed, total rehabilitation should be conducted to maintain storage capacity within 2/3 of the design treatment volume and 72-hour exfiltration rate limit. All of the crushed rock must be removed. Accumulated sediment should be stripped from the trench bottom. At this point, the bottom may be scarified or tilled to help induce infiltration. New crushed rock should be refilled.		Plant Manager

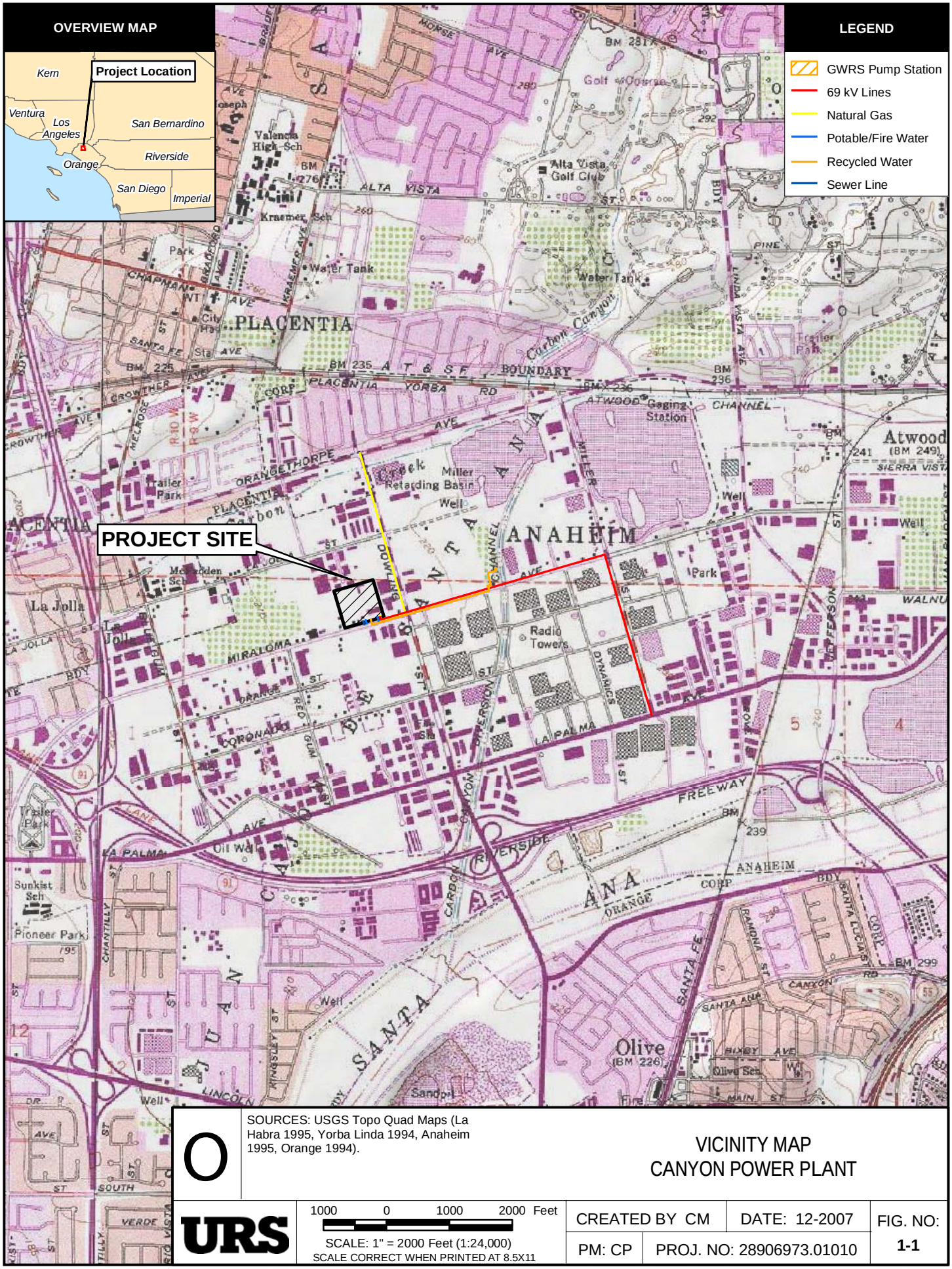
Note: (1) The BMP Identifier corresponds to those used in the California Stormwater BMP Handbook – New Development and Redevelopment (January 2003).

Section Vicinity Map, Plot Plan & BMP Details

The following is a list of Drawings and Maps included in this Preliminary WQMP:

- Figure 1, Vicinity Map
- Figure 2, Existing and Proposed Aerial Views
- Figure 3 Plot Plan
- Figure 4 Grading and Drainage Plan

Figure 4 Grading and Drainage Plan shows proposed BMPs, including catch basins, vault-type multi-chamber treatment system, the infiltration trench/chamber, and other structural BMPs. [*Some locations and BMP details will be determined during final design.*]



SOURCES: USGS Topo Quad Maps (La Habra 1995, Yorba Linda 1994, Anaheim 1995, Orange 1994).

VICINITY MAP
CANYON POWER PLANT

URS

1000 0 1000 2000 Feet
SCALE: 1" = 2000 Feet (1:24,000)
SCALE CORRECT WHEN PRINTED AT 8.5X11

CREATED BY CM	DATE: 12-2007	FIG. NO: 1-1
PM: CP	PROJ. NO: 28906973.01010	

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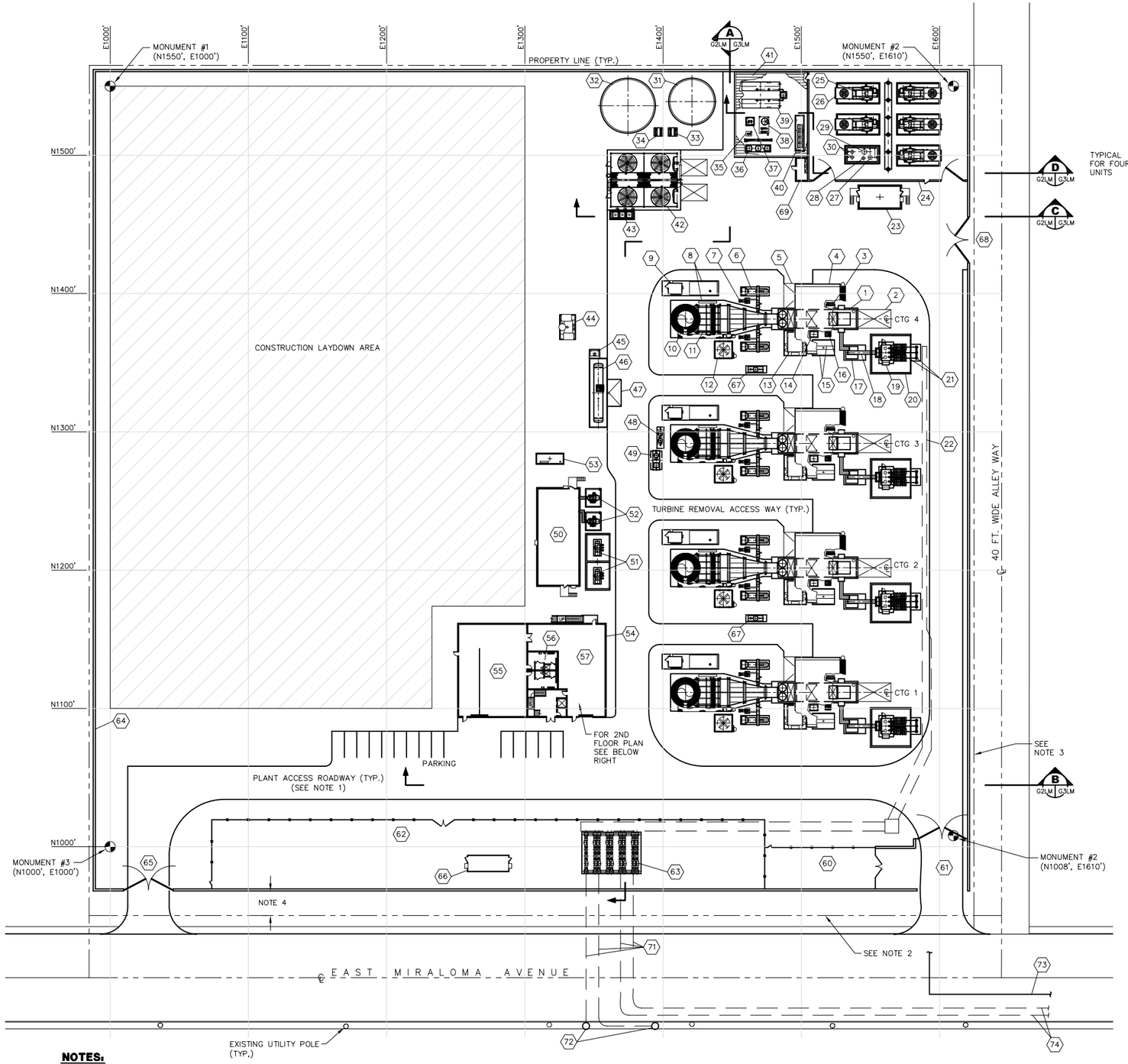
Existing

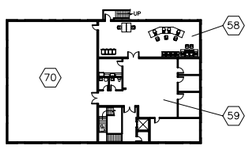
Proposed

Canyon Power Plant URS Corporation	**Figure 1-2.** EXISTING AND PROPOSED AERIAL VIEWS OF CPP FACILITY	December 2007



LEGEND:

1. LM6000 COMBUSTION TURBINE GENERATOR
2. GENERATOR ROTOR REMOVAL AREA
3. CTG FIRE PROTECTION CO2 SKID
4. CTG AIR INTAKE FILTER SYSTEM
5. TURBINE REMOVAL/MAINTENANCE AREA
6. TEMPERING/PURGE AIR FAN (TYP. 2)
7. SEAL AIR FANS (TYP. 2)
8. AMMONIA DILUTION SKID AND AIG
9. CEMS SHELTER
10. STACK/SILENCER
11. SCR
12. FIN FAN LUBE OIL COOLER
13. TURBINE AUXILLIARY SKID
14. SPRINT SYSTEM SKID
15. NOX WATER INJECTION SKIDS
16. AIR INTAKE CONDENSATE COLLECTION RECEIVER
17. GENERATOR BREAKER
18. 13.8kV CABLE BUS
19. 13.8kV/69kV GSU
20. SPILL CONTAINMENT
21. 69kV BUS AND POTHEADS
22. 69kV DUCTBANK
23. BOP ELECTRICAL EQUIPMENT ENCLOSURE (EEE)
24. GAS COMPRESSOR AREA SOUND WALL
25. FUEL GAS COMPRESSOR SKID (TYP. 5)
26. GAS COMPRESSOR COOLING RADIATOR (TYP. 5)
27. NATURAL GAS INLET SCRUBBER
28. HYDROCARBON DRAIN TANK
29. FUEL GAS ACCUMULATOR
30. DISCHARGE FILTER SCRUBBERS
31. DI WATER STORAGE TANK (180,000 GAL.)
32. RAW WATER TANK (350,000 GAL.)
33. DI WATER TRANSFER PUMPS
34. RAW WATER TRANSFER PUMPS
35. RESIN FILTERS
36. LEASED MIXED BED DEMINERALIZERS
37. RO CARTRIDGE FILTERS
38. CARBON FILTER
39. RO SYSTEM
40. WATER TREATMENT CHEMICAL FEED
41. WATER TREATMENT SYSTEM SUN SHADE ROOF
42. DUPLEX CHILLER/COOLING TOWER PACKAGE
43. COOLING TOWER CHEMICAL SYSTEM
44. AIR COMPRESSOR SKID
45. AMMONIA TRANSFER PUMPS
46. AQUEOUS AMMONIA STORAGE TANK
47. AMMONIA DELIVERY HOSE SPILL CONTAIMNENT
48. PROCESS DRAIN OIL/WATER SEPARATOR (UG)
49. WASTE WATER SUMP AND LIFT STATION
50. MAIN ELECTRICAL EQUIPMENT ENCLOSURE (EEE)
51. 13.8kV/4.16kV AUXILIARY TRANSFORMERS
52. 480V STATION SERVICE TRANSFORMERS
53. BLACK START DIESEL GENERATOR
54. PLANT OPERATIONS BUILDING
55. MAINTENANCE SHOP
56. SHOWER/LOCKER ROOM
57. WAREHOUSE
58. CONTROL ROOM
59. ADMINISTRATION AREA
60. GAS METERING STATION
61. PLANT MAIN ENTRANCE (30 FT. WIDE)
62. SWITCHYARD AREA (400 FT. x 50 FT.)
63. 69kV GIS SWITCHGEAR
64. PLANT PERIMETER SECURITY WALL (20 FT. HIGH)
65. PLANT AUXILLIARY ENTRANCE (30 FT. WIDE)
66. GIS SWITCHYARD RELAY ENCLOSURE (EEE)
67. TURBINE WATER WASH DRAIN TANK (U.G.)
68. PLANT EMERGENCY ENTRANCE (30 FT. WIDE)
69. WATER LAB ENCLOSURE
70. STORAGE/FUTURE SPACE
71. U.G. 69kV TRANSMISSION
72. NEW 85 FT. TALL TRANSMISSION POLES
73. RAW WATER (GWRS) SUPPLY FROM NEW PUMP STATIC
74. U.G. 69kV TRANSMISSION TO TIE-IN AT E. LA PALMA AVE. & N. MILLER ST.



2ND FLOOR PLAN

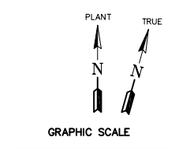
NOTES:

1. ALL PLANT ACCESS ROADWAYS ARE 24 FT. WIDE WITH 40 FT. INSIDE TURNING RADIUS UNLESS OTHERWISE NOTED.
2. 45 FT. EASEMENT FROM CENTER OF E. MIRALOMA AVENUE.
3. 20 FT. ALLEY WAY EASEMENT FROM PROPERTY LINE.
4. 15 FT. MINIMUM FROM E. MIRALOMA AVENUE EASEMENT LIMIT TO EXTERIOR FACE OF SOUND WALL.

PLOT PLAN

PROJECT CONTROL MONUMENT LOCATIONS

MONUMENT NO.	PLANT GRID		ELEVATION (NGVD88)	NAD-83	
	EASTING	NORTHING		EASTING	NORTHING
1	1000	1550	219.01'	6,071,829.74'	2,259,980.96'
2	1610	1550	219.01'	6,072,416.23'	2,260,148.70'
3	1000	1000	216.01'	6,071,980.99'	2,259,452.16'
4	1610	1008	218.24'	6,072,565.27'	2,259,627.60'



PB Power, Inc.
A Parsons Brinckerhoff Company
303 SECOND STREET, SUITE 700 NORTH, SAN FRANCISCO, CALIFORNIA 94107

SCPPA SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY

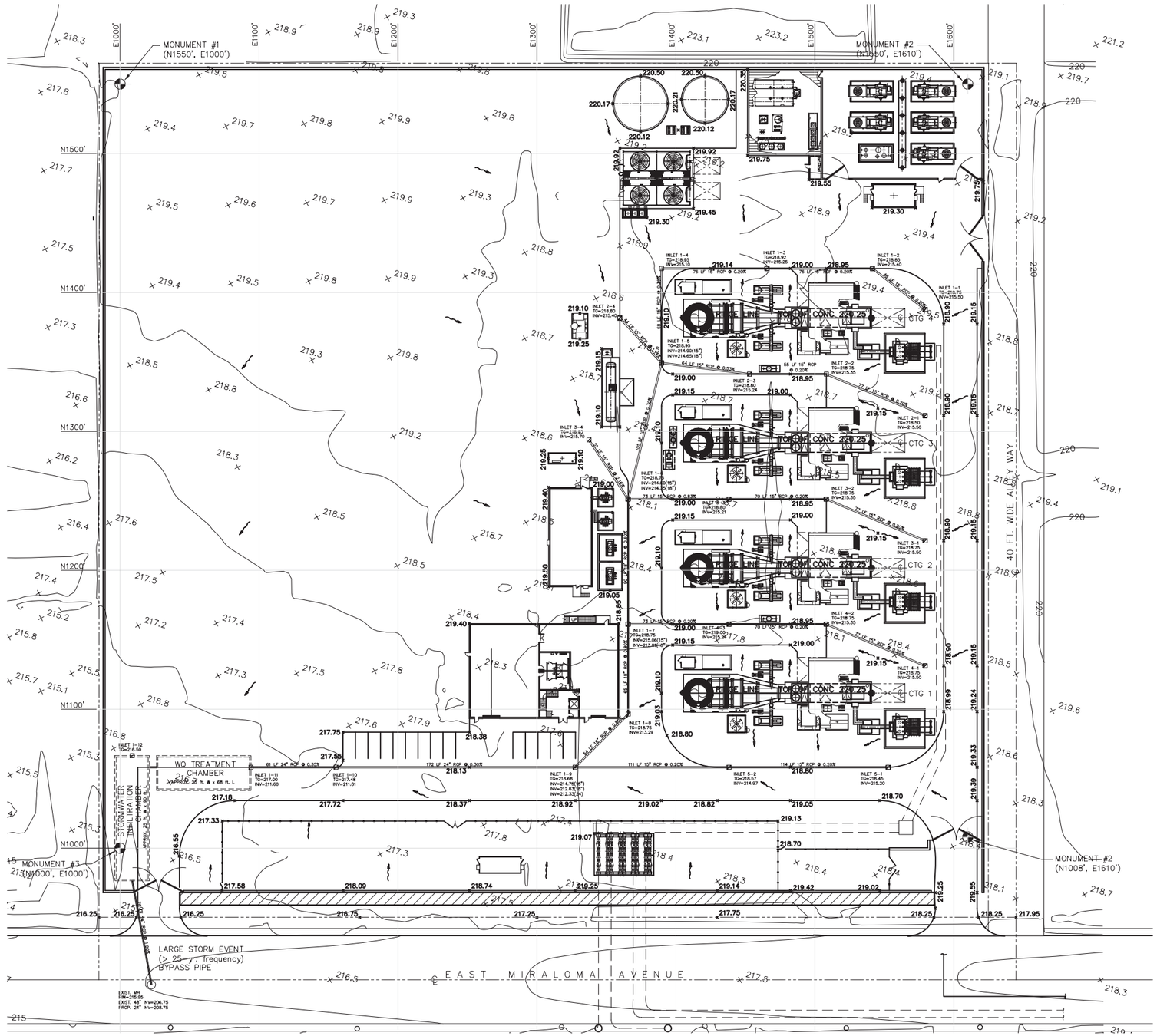
CANYON POWER PLANT PROJECT
ANAHEIM, CALIFORNIA

PLOT PLAN
FIGURE 3-7

DR. JJB			DECEMBER 2007
DES. JJB	APPROVED	DATE	
CHK. SB	PRINCIPAL IN CHARGE	DATE	SHEET 8 OF

N:\Anaheim\AFC FIGURES\FIGURE 3-7.dwg
Date 12-11-07 04:27pm Tuesday Plotted by: wongl

NONE



GRADING & DRAINAGE PLAN

URS Notes for WQMP

Landscaping (approximate area)

Source Control BMPs to be shown on final WQMP site plan

- Hazardous Materials Storage Areas
- Hazardous Waste Storage Areas
- Trash Bin Enclosures
- Irrigation System and Controllers

LEGEND :

EXIST.	EXISTING	⧈	PROP. INLET (STORMWATER CATCH BASIN)
RCP	REINFORCED CONCRETE PIPE	═══	PROP. DRAIN PIPE
INV.	INVERT ELEVATION	-x-x-	CHAIN LINK FENCE
LF	LINEAR FOOT	218.65 x	FINISHED GRADE
TG	TOP OF GRATE	~~~→	FLOW ARROW

PRELIMINARY – NOT FOR CONSTRUCTION

PLANT TRUE N N

GRAPHIC SCALE 0' 10' 20' 30' 60' 90'

PB Power, Inc.
A Parsons Brinckerhoff Company
303 SECOND STREET, SUITE 700 NORTH, SAN FRANCISCO, CALIFORNIA 94107

SCPPA SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY

CANYON POWER PLANT PROJECT
ANAHEIM, CALIFORNIA

GRADING & DRAINAGE PLAN
FIGURE 3-9

DR. MG			DECEMBER 2007
DES. MG	APPROVED	DATE	
CHK. JK	PRINCIPAL IN CHARGE	DATE	SHEET 8 OF

N:\Anaheim\AFC FIGURES\FIGURE 3-9.dwg
Date: 12-12-07 03:01pm Wednesday Plotted by: wongl

NONE

Section Educational Materials Included

The Plant Manager will communicate the following stormwater pollution prevention concepts to employees:

- Good housekeeping,
- Preventive maintenance,
- Spill response,
- Proper materials and waste management (handling and storage), and
- Elimination of non-stormwater discharges.

The following is a list of educational materials included in Appendix C of this WQMP. The Plant Manager will review these educational materials and this WQMP with employees upon hiring and annually thereafter.

- The Ocean Begins at Your Front Door
- IC3 – Building Maintenance
- IC10 – Outdoor Loading/Unloading of Materials
- IC11 – Outdoor Process Equipment Operations & Maintenance
- IC12 – Outdoor Storage of Raw Materials, Products, & Containers
- IC15 – Parking & Storage Area Maintenance
- IC17 – Spill Prevention & Cleanup
- IC19 – Vehicle & Equipment Maintenance & Repair
- IC21 – Waste Handling & Disposal
- IC23 – Fire Sprinkler Testing/Maintenance
- IC24 – Wastewater Disposal

APPENDIX A. LIST OF CHEMICALS TO BE USED ON SITE

Table 1

CANYON POWER PLANT

SUMMARY OF HAZARDOUS MATERIALS APPLICATION AND STORAGE TYPE

Hazardous Material	Primary Application	Storage Type
Acetylene	Welding	Cylinder
Paint	Painting	Can
Aqueous Ammonia (19 percent)	NO_X reduction in SCR	Aboveground Tank
Sodium Hypochlorite (12.5%, Trade)	Biocide/Biofilm Control (Raw Water Tank, Cooling Tower Circulating Water)	Aboveground Tote
Sulfuric Acid (93%)	pH Control (Cooling Tower Circulating Water, RO System)	Aboveground Tote
Dispersant/Corrosion Inhibitor (neat)	Scale/Corrosion Control (Cooling Tower Circulating Water)	Aboveground Tote
Natural gas	Fuel for power plant	Pipeline
Mineral Oil	Transformers	Steel Drum
Sulfur Hexafluoride	Switchyard breakers	Cylinders
Turbine & Generator Lube Oil	Rotating equipment	Steel Drum
Hydraulic Oil	Rotating equipment	Steel Drum
Hydraulic Fluid	Construction vehicles and equipment	Steel Drums
Transmission Fluid	Construction vehicles and equipment	Steel Drums
Unleaded gasoline	Construction vehicles	Aboveground Tank
Motor Oil	Construction vehicles and equipment	Steel Drums
Propane	Miscellaneous Heating Activities	Cylinder
Non-oxidizing biocide	Biocide for cooling system	Aboveground Tote
Dryer Desiccant	Instrument air	Instrument air dryer
Various detergents	Combustion turbine cleaning	Manufacturer Container
Diesel fuel	Black Start Generator	Tank
Antiscalant (neat)	RO System	Aboveground Tote
Sodium Bisulfite (38%)	Dechlorination (RO System)	Aboveground Tote
RO Membrane Cleaners (neat)	RO System	Aboveground Tote
Various Hazardous Wastes	Waste	Steel Drums

[1] Expected based on presumed operation conditions. Usage and storage will be optimized during final design.

Table 2

CANYON POWER PLANT

TOXICITY OF HAZARDOUS AND ACUTELY HAZARDOUS MATERIALS ONSITE

Hazardous Materials	Project Phase	Toxicity	OSHA	Caltrans Class	NFPA[1]			CAS Number
					Health	Flammability	Instability	
Acetylene	Construction & Operation	No known toxic effects.	N/A	Flammable	1	4	3	74-86-2
Antiscalant (neat)	Operation	N/A						
Aqueous Ammonia-19%	Operation	Corrosive to eyes and skins, very toxic by inhalation and ingestion.	50 ppm	Nonflammable	2	0	0	7664-41-7
Diesel Fuel #2	Construction & Operation	Low-toxicity	N/A	Flammable Liquid	0	2	0	Mixture
Dispersant/Corrosion Inhibitor (neat)	Operation	N/A						
Dryer desiccant	Operation	Dust may cause irritation. Dust is irritating to the respiratory tract. Expected to be ingestion hazardous. Possible cancer hazard.	N/A	Not Regulated	2	0	0	Silica, amorphous 7631-86-9 Cobaltous chloride 7646-79-9
Hydraulic Oil	Construction & Operation	Not expected to be an irritant.	5 mg/m^3	Not Regulated	0	1	0	Mixture

Hazardous Materials	Project Phase	Toxicity	OSHA	Caltrans Class	NFPA[1]			CAS Number
					Health	Flammability	Instability	
Lubrication Oil	Construction & Operation	N/A						
								7487-88-9
Mineral Oil	Operation	Causes eye and skin irritation. Inhalation of a mist of this material may cause irritation of the lungs.	N/A	N/A	0	1	0	8042-47-5
Motor oil EasyMix 2-Cycle Motor Oil	Construction	Hazardous	N/A	N/A	0	2	0	64742-47-8
Natural gas (Methane)	Operation	Flammable. Asphyxiant. Effects are due to lack of oxygen.	Not Carcinogenic	Flammable Gases	1	4	0	74-82-8
Non-oxidizing biocide	Operation	N/A						
Oily rags and oil absorbents	Construction & Operation	N/A						
Paint	Construction & Operation	N/A						Mixture
Propane	Operation	Low toxicity	1,000 ppm	Flammable	1	4	0	74-98-6
RO Membrane Cleaners (neat)	Operation	N/A						
Sodium Bisulfite (38%)	Operation	Harmful if swallowed. Contact with acids liberates toxic gas. Irritating to eyes, respiratory system and skin. Possible sensitizer.	15 mg/m^3	Corrosive	2	0	1	7631-90-5

Hazardous Materials	Project Phase	Toxicity	OSHA	Caltrans Class	NFPA[1]			CAS Number
					Health	Flammability	Instability	
Sodium Hypochlorite (12%)	Operation	Toxic and corrosive.	1.5 mg/m^3 as Cl_2	Corrosive	3	0	0	7681-52-9
Sodium Hydroxide (25%)	Operation	Irritant and corrosive.	2 mg/m^3	Corrosive	3	0	1	1310-73-2
Sulfuric Acid (93%)	Operation	Irritant to eyes, poisonous via inhalation, and extremely irritant, corrosive and toxic to tissue.	1 mg/m^3	Corrosive	3	0	2	7664-93-9
Sulfur Hexafluoride	Operation	Asphyxiant. Effects are due to lack of oxygen. No other health effects are currently known.	1,000 ppm	Non-flammable Gas	1	0	0	2551-62-4
Transmission fluid	Construction	N/A						
Unleaded gasoline	Construction	Irritant	5 mg/m^3	Flammable Liquid	1	3	0	Mixture
Various detergents	Construction & Operation	N/A						
Waste fluids (i.e., motor oil, transmission fluid, hydraulic fluid, and antifreeze)	Construction & Operation	N/A						
Waste paint, thinners and solvents	Construction & Operation	N/A						
Waste welding materials	Construction & Operation	N/A						

[1] NFPA hazardous rating:

- Health: 4-deadly; 3-extreme danger; 2-hazardous; 1-slightly hazardous; 0-normal material
- Fire (Flash Point Temp.): 4-below 73F; 3-73 to 100F; 2- 101 to 200F; 1-over 200F; 0-will not burn
- Reactivity: 4-may detonate; 3-shock or heat may detonate; 2- violent chemical reactivity; 1-unstable if heated; 0-stable

Abbreviations: Caltrans = California Department of Transportation g/m^3 = grams per cubic meter mg/m^3 = milligrams per cubic meter N/A = not applicable NFPA = National Fire Protection Association OSHA = Occupational Safety and Health Administration ppm = parts per million

APPENDIX B. STORMWATER RUNOFF CALCULATIONS

Canyon Power Plant Project
WQV/WQF Calculations

Prepared By: M. Grodzki Date: 10/9/2007
Checked By: K. Chang Date: 10/10/2007
Revised By: _____ Date: _____

Purpose: To calculate Water Quality Volumes (WQV) for this project

Assumptions/ Methods:
-Basin Sizer version 1.4 was used for these calculations.
-WQV is Calculated as:
WQV = (Water Quality Event Depth x Runoff Coefficient) x Tributary Area
(Water Quality Event Depth x Runoff Coefficient) is taken from the Basin Sizer output data
-Runofff Coefficient for this project is C=0.90

References: -Caltrans Storm Water Quality Handbooks - Project Planning and Design Guide May 2007

Output Data from Basin Sizer:

Project: Anaheim

Latitude 33.858
Longitude -117.8396

Caltrans Stations

Name	Distance	Elevation	Years of Data
ANAHEIM	1.07	102	17

Water Quality Volumes

Maximized Volume Method (in)
Drawdown Time (Hours) 48
Runoff Coefficient 0.95
Unit Basin Storage Volume (in) 0.91

Predetermined Numbers
A water quality event depth of 0.75 inches has been set by the Los Angles RWQCB for the Los Angeles Area

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Water Quality Flows

Caltrans Water Quality Flows
Region 8, all counties: 0.2 in/hour.

CSUS, Office of Water Programs

Canyon Power Plant Project
WQV/WQF Calculations

Prepared By: M. Grodzki Date: 10/9/2007
Checked By: K. Chang Date: 10/10/2007
Revised By: _____ Date: _____

Entire Property

WQV Calculation

		Line
area =	9.02 Ac.	1
area conversion (Ac to ft^2) =	392,911 ft^2	2
runoff coefficient =	0.9	3
Water Quality Event Depth =	0.75 in	4
WQE depth conversion (in to ft) =	0.0625 ft	5

WQV = Line 2 x Line 3 x Line 5
WQV = 22,101 ft^3

Entire Site within Soundwall

WQV Calculation

		Line
area =	8.56 Ac.	1
area conversion (Ac to ft^2) =	372,874 ft^2	2
runoff coefficient =	0.9	3
Water Quality Event Depth =	0.75 in	4
WQE depth conversion (in to ft) =	0.0625 ft	5

WQV = Line 2 x Line 3 x Line 5
WQV = 20,974 ft^3

Disturbed Area (approximate area of development - eastern and southern portion of site)

WQV Calculation

		Line
area =	4.25 Ac.	1
area conversion (Ac to ft^2) =	185,130 ft^2	2
runoff coefficient =	0.9	3
Water Quality Event Depth =	0.75 in	4
WQE depth conversion (in to ft) =	0.0625 ft	5

WQV = Line 2 x Line 3 x Line 5
WQV = 10,414 ft^3

Canyon Power Plant Project
Water Quality BMP Size Calculations

Prepared By: M. GRODZKI
Checked By: K. CHANG
Revised By:

Purpose: To estimate the size of the proposed multi-chamber treatment train BMP unit for the referenced site.

Assumptions: WQV treated is presumed to be that generated by the *approximate area of construction disturbance only,* 4.25 Ac. (185,130 ft^2)

Entire Site Area
Total Area of Construction Disturbance = 185,130 ft^2
WQV= 10,414 ft^3

Multi-Chamber Treatment Train:
- Total head 5 ft

First Chamber
- Sized to hold 25% WQV
- Depth Below Weir 1 ft

Second Chamber
- Depth below ground surface 9 ft

Third Chamber
- Equation 1:

$A_f = (C * VOL * d) / (k * T * (h + d))$

A_f =	Surface area of third chamber (m^2)	
C =	Conversion Factor for units of permeability 12 for inches to ft	12
VOL =	100% Water Quality Volume	
d =	Depth of filter bed	2 ft
k =	Coefficient of permeability	4 in/hr
T =	Drain design time	48 hr
h =	Average water height above media surface	0.5*max head of second ft chamber

- Equation 2:

$L_{3rd\ chamber} = A_f / W$

$L_{3rd\ chamber}$ =	Third chamber length (ft)
A_f =	Surface area of third chamber (ft^2)
W =	Filter bed width (ft)

References: -Caltrans Storm Water Quality Handbooks - Project Planning and Design Guide May 2007

-Equations:
Equation 1: Caltrans Storm Water Quality Handbooks, B-68
Equation 2: Caltrans Storm Water Quality Handbooks, B-68

Multi-Chamber Treatment Train (MCTT)

BMP Unit	Area Treated (ft^2)	Percent WQV Treated (%)	WQV (ft^3)	First Chamber Size 25% WQV (ft^3)	First Chamber Surface Area (ft^2)	First Chamber Width (ft)	First Chamber Length (ft)	Second Chamber Size 75% WQV (ft^3)	Second Chamber Surface Area (ft^2)	Second Chamber Length (ft)	Third Chamber Size 100% WQV (ft^3)	Third Chamber A_f (ft^2)	Third Chamber Length (ft)	Total Length (ft)	Total Width (ft)	Total Depth (ft)
Anaheim	185,130	100%	10,414	2,603.5	433.9	25.0	17.4	7,810.50	976.31	39.05	10,414.00	289.28	11.57	67.98	25.00	9.00

PB Americas, Inc.

Designed: M. Grodzki — Date: 10/10/07

Checked: K. Chang — Date: 10/10/07

Checked:

Checked:

STORM SEWER COMPUTATIONS

Project: COA Canyon Power Plant

Project No: 13642A

Desc: CPP pipe capacity calcs

Page 1 of 1

Rainfall Data: Anaheim, CA

Units: English

Manning's "n" values:	
RC	0.013
DI	0.010
CM	0.024
HDPE	0.011

Intensity, $i = at^b$			
Fr	a	b	
2	5.702	-0.574	
5	7.870	-0.562	
10	10.209	-0.573	
25	11.995	-0.566	
50	13.521	-0.566	
100	15.560	-0.573	

LOCATION		SUBAREA DATA									PIPE DATA														DESIGN FLOW				
FROM	TO	Area Ac	"C"	CxA	CxA Sum	Tc* min	T_c Sum	Fr Yr	"I" in/hr	Q_A cfs	Mat	# of Pipes	Type C,E,B	Span in	Hgt in	L ft	Slope %	n	Q_{cap} cfs	Inverts Upper	Inverts Lower	Upper Grate	Cover Upper	Cover Lower	% of Cap	Q_A cfs	d ft	V_A fps	t min
1-1	1-2	0.244	0.90	0.22	0.22	10.0	10.0	25	3.26	0.7	RC	1	C	15	15	48	0.20	0.013	2.9	215.50	215.40	218.50	3.00	3.20	25	0.7	0.44	1.85	0.5
1-2	1-3	0.223	0.90	0.20	0.42	10.0	10.5	25	3.17	1.3	RC	1	C	15	15	76	0.20	0.013	2.9	215.40	215.25	218.60	3.20	3.42	46	1.3	0.62	2.19	0.6
1-3	1-4	0.387	0.90	0.35	0.77	10.0	11.1	25	3.07	2.4	RC	1	C	15	15	76	0.20	0.013	2.9	215.25	215.10	218.67	3.42	3.60	82	2.4	0.92	2.47	0.5
1-4	1-5	0.327	0.90	0.29	1.06	10.0	11.6	25	3.00	3.2	RC	1	C	15	15	68	0.30	0.013	3.5	215.10	214.90	218.70	3.60	4.05	91	3.2	1.00	3.04	0.4
2-1	2-2	0.149	0.90	0.13	0.13	10.0	10.0	25	3.26	0.4	RC	1	C	15	15	77	0.20	0.013	2.9	215.50	215.35	218.50	3.00	3.15	15	0.4	0.34	1.64	0.5
2-2	2-3	0.128	0.90	0.12	0.25	10.0	10.5	25	3.17	0.8	RC	1	C	15	15	55	0.20	0.013	2.9	215.35	215.24	218.50	3.15	3.31	28	0.8	0.47	1.89	0.5
2-3	1-5	0.137	0.90	0.12	0.37	10.0	11.0	25	3.09	1.2	RC	1	C	15	15	64	0.53	0.013	4.7	215.24	214.90	218.55	3.31	4.05	25	1.2	0.44	2.98	0.4
2-4	1-5	0.483	0.90	0.43	0.43	15.0	15.0	25	2.59	1.1	RC	1	C	15	15	44	1.14	0.013	6.9	215.40	214.90	218.55	3.15	4.05	16	1.1	0.36	3.89	0.5
1-5	1-6	0.330	0.90	0.30	2.17	12.0	15.5	25	2.54	5.6	RC	1	C	18	18	101	0.30	0.013	5.8	214.65	214.35	218.70	4.05	4.15	97	5.6	1.29	3.43	0.5
3-1	3-2	0.149	0.90	0.13	0.13	10.0	10.0	25	3.26	0.4	RC	1	C	15	15	77	0.20	0.013	2.9	215.50	215.35	218.50	3.00	3.15	15	0.4	0.34	1.64	0.5
3-2	3-3	0.135	0.90	0.12	0.26	10.0	10.5	25	3.17	0.8	RC	1	C	15	15	70	0.20	0.013	2.9	215.35	215.21	218.50	3.15	3.34	28	0.8	0.47	1.94	0.6
3-3	1-6	0.137	0.90	0.12	0.38	10.0	11.1	25	3.07	1.2	RC	1	C	15	15	73	0.83	0.013	5.9	215.21	214.60	218.55	3.34	4.15	20	1.2	0.39	3.60	0.3
3-4	1-6	0.168	0.90	0.15	0.15	12.0	12.0	25	2.94	0.4	RC	1	C	15	15	51	2.16	0.013	9.5	215.70	214.60	218.70	3.00	4.15	5	0.4	0.19	3.81	0.2
1-6	1-7	0.319	0.90	0.29	2.98	10.0	16.0	25	2.50	7.5	RC	1	C	18	18	90	0.60	0.013	8.1	214.35	213.81	218.50	4.15	4.69	92	7.5	1.22	4.90	0.3
4-1	4-2	0.149	0.90	0.13	0.13	10.0	10.0	25	3.26	0.4	RC	1	C	15	15	77	0.20	0.013	2.9	215.50	215.35	218.50	3.00	3.15	15	0.4	0.34	1.64	0.5
4-2	4-3	0.135	0.90	0.12	0.26	10.0	10.5	25	3.17	0.8	RC	1	C	15	15	70	0.20	0.013	2.9	215.35	215.21	218.50	3.15	3.34	28	0.8	0.47	1.94	0.6
4-3	1-7	0.137	0.90	0.12	0.38	10.0	11.1	25	3.07	1.2	RC	1	C	15	15	73	0.20	0.013	2.9	215.21	215.06	218.55	3.34	4.69	41	1.2	0.58	2.10	0.6
1-7	1-8	0.366	0.90	0.33	3.69	10.0	16.3	25	2.47	9.2	RC	1	C	18	18	65	0.80	0.013	9.4	213.81	213.29	218.50	4.69	5.21	98	9.2	1.31	5.62	0.2
1-8	1-9	0.153	0.90	0.14	3.83	10.0	16.5	25	2.46	9.5	RC	1	C	18	18	54	0.85	0.013	9.7	213.29	212.83	218.50	5.21	6.10	98	9.5	1.31	5.79	0.2
5-1	5-2	0.454	0.90	0.41	0.41	12.0	12.0	25	2.94	1.2	RC	1	C	15	15	114	0.20	0.013	2.9	215.20	214.97	218.20	3.00	3.35	42	1.2	0.59	2.13	0.5
5-2	1-9	0.302	0.90	0.27	0.68	10.0	12.5	25	2.87	2.0	RC	1	C	15	15	111	0.20	0.013	2.9	214.97	214.75	218.32	3.35	6.10	68	2.0	0.79	2.40	0.8
1-9	1-10	0.178	0.90	0.16	4.67	10.0	16.6	25	2.44	11.5	RC	1	C	24	24	172	0.30	0.013	12.4	212.33	211.81	218.43	6.10	5.42	93	11.5	1.64	4.17	0.7
1-10	1-11	0.691	0.90	0.62	5.29	15.0	17.3	25	2.39	12.7	RC	1	C	24	24	61	0.35	0.013	13.4	211.81	211.60	217.23	5.42	5.15	95	12.7	1.68	4.53	0.2
1-11	MCTT																												
MCTT	Infiltration Basin																												
Infiltration Overflow	Exist. SD Manhole	2.670	0.90	2.40	7.70	30.0	30.0	25	1.75	13.6	RC	1	C	24	24	76	1.00	0.013	22.6	211.60	210.84	216.75	5.15	0.00	60	13.6	1.17	7.08	0.2

APPENDIX C. EDUCATIONAL MATERIALS

For purposes of this Preliminary WQMP, the educational materials have not been included. All of the educational materials listed in Section VII can be viewed and downloaded from the following websites:

http://www.ocwatersheds.com/StormWater/documents_bmp_existing_development.asp#ind

and

http://www.ocwatersheds.com/PublicEducation/pe_brochures.asp

BACKGROUND

By letter dated February 7, 2008 from Orange County Sanitation District (OCSD) to Mr. Che McFarlin, Energy Commission Project Manager, OCSD requests that any and all domestic/sanitary wastewater generated within the CPP be separated and discharged directly to the sewer and bypass the oil-water separator. The OCSD also requests that a fail safe procedure and/or hardware be developed and installed for the CPP to ensure that solvent-containing washwater is not inadvertently discharged to the sewer before storage in collection tanks.

Technical Area: Soil and Water Resources

Data Request 49-SOILS: Please provide a discussion of how the SCPPA proposes to comply with OCSD's requests for changes to the proposed deposition of wastewater generated by the CPP as stated in their February 7, 2008 letter.

Response: The CPP Team has reviewed its wastewater disposal plan in light of the OCSD letter and provides the following clarification which addresses OCSD concerns:

> *The wastewater discharge from the CPP will consist primarily of process wastewater as well as a minor amount of domestic sewage. The process wastewater is comprised of RO wastewater and cooling tower blowdown from the chilled water system cooling towers. The plant process wastewater will not need to be treated, because the water quality is acceptable to be sent to the OCSD sanitary sewer system. The process wastewater is basically concentrated GWRS water that has been cycled up as part of the RO reject and cooling tower evaporation processes.*
>
> *The CPP's process wastewater will be discharged directly into the OCSD sewer system.*

The CPP will comply with the requirement to discharge directly to the sewer and bypass the oil-water separator. Piping for the domestic sewage will be handled separately from the

process wastewater. Final construction plans will include this design.

> *Plant equipment that contains oil by design such as power transformers, lube oil storage tanks, and fuel gas filter separators will be located within concrete spill-containment berms. The berms are used to contain an oil spill and also function to prevent the spread of a fire. These types of outdoor containments will collect a small amount of stormwater and plant wash-down water. Drains from this type of equipment will gravity flow to a plant process wastewater oil-water separator. This oil-water separator will be a highly efficient corrugated plant interceptor (CPI) separator designed to remove oil residues down to 10 parts per million (ppm). After passing through the oil-water separator, the wastewater will then flow to the plant wastewater lift station for eventual transfer to the sanitary sewer system.*
>
> *CTG water wash waste can contain solvents or biodegradable detergents. This wastewater stream can be considered hazardous when it contains solvent-based cleaning solutions and will not be sent to the sanitary sewer system. Underground 2,000-gallon-capacity water wash tanks will be provided to collect and store CTG solvent-based wastewater. The 2,000-gallon-capacity tanks can accommodate up to approximately 10 water wash operations on each CTG. The underground tanks will be of fiberglass construction for long-term corrosion protection and will be provided with secondary containment with leakage alarms. When the cleaning solution is a biodegradable detergent the CTG water wash waste will be sent directly to the sanitary sewer.*

Therefore, the plant wastewater system and the fail safe method to ensure that solvent-containing washwater is not inadvertently discharged to the sewer.

The CPP is compliant with the two recommendations contained in the February 7, 2008 letter from OCSD.

BACKGROUND

The SCPPA proposes to develop and implement a Water Quality Management Plan per the requirements of the City of Anaheim's Municipal Code, Title 10 Public Service and Utilities, Chapter 10.09.

Technical Area: Soil and Water Resources

Data Request 50-SOILS: Please provide a draft Water Quality Management Plan for the CPP project site and associated liner facilities.

BACKGROUND

For any site proposed for the construction of a power plant in California, the applicant must provide sufficient documentation about the nature of any contamination on the site. Staff requires that at the least, a Phase I Environmental Site Assessment (ESA) be prepared and submitted to the Energy Commission for staff's review and evaluation. A Phase I ESA provides a history of use of the site, often as far back as the mid-1800s, and a list of any hazardous waste release within a certain distance of the site. If there is a reasonable potential that the site contains hazardous waste, soil or groundwater would be sampled and analyzed as part of a Phase II ESA.

The Waste Management section of the Application for Certification (AFC) provides a summary of recommendations made in Phase I, Phase II, and Supplemental Phase II ESAs for the project site. The summary indicates there is contaminated soil on the 10- acre site and recommends remediation. It also recommends removal and disposal of septic tanks, underground storage tanks, clarifiers, and hydraulic hoists observed on the site.

There will be a large amount of ground disturbance during project construction. To protect the workers and reduce/eliminate damage to the environment the project owner will be required to verify that no harmful concentrations of any contaminant will be encountered at the proposed project site. The owner of the property, the City of Anaheim, plans to conduct soil remediation activities to limit its environmental liability for future uses of the site.

Staff received one copy of the Phase I ESA and no copies of either the Phase II or Supplemental Phase II. These documents contain site specific information that is necessary for staff to complete it's analysis of site conditions.

Technical Area: Waste Management

Data Request 51-WM: Please provide four additional copies of the Phase I ESA. Also, provide five copies of the Phase II and Supplemental Phase II ESAs to staff for further evaluation.

Response: Four additional copies of the Phase I ESA have been provided to the CEC as requested. An additional five copies of the Phase II and Supplemental Phase ESAs have also been provided to CEC staff for review.

Technical Area: Waste Management

Data Request 52-WM: Please provide staff with a list of state regulating agencies (e.g., Department of Toxic Substances Control) that will be responsible for verifying that the 10-acre proposed project site requires no further investigation, that there is no harmful concentrations of any contaminant that will be encountered by workers or the public, and that the site is ready for redevelopment.

Response: The Orange County Health Care Agency (OCHCA) will be the responsible agency for verifying investigations needs for the project site. The Canyon Power Plant (CPP) project has submitted the appropriate documentation, per the California Health and Safety Code, Division 1010, Chapter 4, Article 5, Section 101480(b), to have OCHCA provide remedial action supervision at the site. By accepting the responsibility as a supervising agency, the OCHCA has agreed to verify that the project site requires no further investigation and that there are no harmful concentrations of any contaminant that will be encountered by workers or the public. The OCHCA will provide their final approval that the site is ready for redevelopment.

The CPP is not currently listed under the Department of Toxic Substances Control's (DTSC) Calsite list, and is therefore not being held subject to initiation of remedial actions by the DTSC. Additionally, the site has also not been identified by the Regional Water Quality Control Board's (RWQCB) Leaking Underground Storage Tank Information Systems (LUSTIS) or the Spills, Leaks, Investigation and Cleanup (SLIC) list, and is therefore not subject to RWQCB enforcement for cleanup or abatement actions. The only agency that will provide supervision over condition will be the OCHCA. The OCHCA agency has been aware of all activities and findings regarding the site, and has accepted the supervisory role for the site.

OCHCA is the most appropriate agency to provide oversight for this project because of the nature, size, and media of the

potential contamination. The impact to soil is minor and localized and the potential cleanup requires a low level of effort.

Technical Area: Waste Management

Data Request 53-WM: Please provide names, offices, telephone numbers and any additional contact information of the responsible/oversight agency.

Response: The contact information of the responsible/oversight agency is as follows:

Luis Lodrigueza
Hazardous Waste Specialist
Orange County Health Care Agency
Environmental Health Division
Tel: 714-433-6253
Fax: 714-754-1768

BACKGROUND

Staff reviews the applicant's proposed solid and hazardous waste management methods and determines if the methods meet the state standards for waste reduction and recycling. Staff then reviews the available off-site treatment and disposal sites available and determines whether or not the proposed power plant's waste would have a significant impact on the disposal sites' allotted daily, yearly, or lifetime volume of waste it is allowed to receive.

Staff requires additional information on the amount of waste generated during demolition, construction and operation. Staff has evaluated Tables 3.4-7, 3.4-8, in Section 3.4, and Tables 6.14-2, 6.14-3 in Section 6.0 of the AFC. The two sections do not list the same quantities of construction and operation waste. The construction tables do not provide or indicate which waste is generated by construction versus demolition.

The AFC also does not provide an estimate of the amount of asbestos or lead that will be deposited into various landfills.

Technical Area: Waste Management

Data Request 54-WM: Please provide tables that separate the demolition, construction, and operation waste and reconcile the numbers found in Sections 3.4 and 6.0.

Response: The waste quantities found in Tables 3.4-7, 3.4-8, 3.4-9, 6.14-2, 6.14-3, and 6.14-4 of Sections 3.4 and 6.0 were reconciled as requested. Information from the tables was used to develop the following tables identifying the types and quantities of waste that will be generated from the project site during demolition, construction, and operation periods. The tables depicting waste generated during demolition, construction, and operations have been included below.

TABLE 3.4-7
SOLID WASTE GENERATED DURING DEMOLITION

Material	Hazardous Classification	Estimated[1] Amount	Treatment
Paper, wood, glass and plastics from packing material, waste lumber, insulation, and empty non-hazardous chemical containers	Non-hazardous	50 tons	On-site dumpsters; waste disposal facility (Class III landfill)
Existing concrete structures, asphalt pavement, demolition of existing structures	Non-hazardous	3,000 tons	Recycling dumpsters. If not recyclable, then disposal as a Class III Landfill

1 Refer to AFC.

TABLE 3.4-8
SOLID WASTE GENERATED DURING CONSTRUCTION

Material	Hazardous Classification	Estimated[1] Amount	Treatment
Metals, including steel from welding/cutting operations, packing materials, empty nonhazardous chemical containers, aluminum waste from packing materials, and electrical wiring	Non-hazardous	13 tons	Weekly collection for disposal at a Class III Landfill
Excess concrete	Non-hazardous	34 tons	Recycle or Waste disposal facility (Class III landfill)
Empty hazardous material containers-drums	Hazardous Recyclable	2 cubic yards/week	Recondition, recycle, or waste disposal at Class I landfill
Oily rags	Hazardous	Less than one cubic yard per week	Hazardous waste disposal facility or recycle

1 Refer to AFC.

TABLE 3.4-9
SOLID WASTE GENERATED DURING OPERATION

Material	Hazardous Classification	Estimated[1] Amount	Treatment
SCR Catalyst Unit	Hazardous	500 lbs every 3 to 5 years	Recycled by SCR manufacturer or disposed of in Class I landfill
CO Catalyst Unit	Hazardous	500 lbs every 3 to 5 years	Recycled manufacturer
Oily rags	Hazardous	200 lbs/year	Recycled or disposed of by certified oil recycler

1 Refer to AFC.

TABLE 6.14-2
SUMMARY OF DEMOLITION WASTE STREAMS AND MANAGEMENT METHODS

Material	Hazardous Classification	Estimated[1] Amount	Disposal Method
Paper, wood, glass and plastics	Non-hazardous	50 tons	Weekly collection for recycling and/or disposal at a Class III Landfill
Existing concrete structures, asphalt pavement, demolition of existing structures	Non-hazardous	3,000 tons	Recycling dumpsters. If not recyclable, then disposal as a Class III Landfill

1 Refer to AFC.

TABLE 6.14-3
SUMMARY OF CONSTRUCTION WASTE STREAMS AND MANAGEMENT METHODS

Material	Hazardous Classification	Estimated[1] Amount	Disposal Method
Metals, including steel from welding/cutting operations, packing materials, empty nonhazardous chemical containers, aluminum waste from packing materials, and electrical wiring	Non-hazardous	13 tons	Weekly collection for disposal at a Class III Landfill
Excess concrete	Non-hazardous	34 tons	Recycle or Waste disposal facility (Class III landfill)
Empty hazardous containers	Hazardous Recyclable	2 cubic yards/week	Recondition, recycle, or waste disposal at Class I landfill
Waste paint, thinners and solvents	Hazardous	2 gal/week	Hazardous waste disposal facility or recycle
Oily rags	Hazardous	Less than one cubic yard per week	Hazardous waste disposal facility or recycle
Oil absorbents	Hazardous	Less than one cubic yard per week	Hazardous waste disposal facility or recycle
Waste welding materials	Hazardous	Less than one cubic yard per week	Hazardous waste disposal facility or recycle
Waste oil	Hazardous	20 gal/week	Hazardous waste disposal facility or recycle
Spent batteries; lead acid	Hazardous Recyclable	2 batteries/year	Recycle

TABLE 6.14.3 (CONTINUED)
SUMMARY OF CONSTRUCTION WASTE STREAMS AND MANAGEMENT METHODS

Material	Hazardous Classification	Estimated[1] Amount	Disposal Method
Spent batteries; alkaline	Hazardous Recyclable	60 batteries/month	Recycle

[1] Refer to AFC.

TABLE 6.14-4
HAZARDOUS WASTE GENERATED AT THE FACILITY DURING OPERATIONS

Waste	Origin	Composition	Estimated Quantity	Classification	Disposal
Lubricating oil	Gas turbine lubricating oil system	Hydrocarbons	Small amounts from leaks and spills	Hazardous	Cleaned up using sorbent and rags – disposed of by certified oil recycler
Lubricating oil filters	Gas turbine lubricating oil system	Paper, metal, and hydro-carbons	Approximately 12 per year	Hazardous	Recycled by certified oil recycler
Laboratory analysis waste	Water treatment	Miscellaneous analysis reagent chemicals	Approximately 50 gallons per year	Hazardous	Recycled by certified recycler
Spent SCR catalyst units	SCR system	Metal and heavy metals, including vanadium	500 lbs every 3 to 5 years	Hazardous	Recycled by SCR manufacturer or disposed of in Class I landfill
Spent CO catalyst units	CO system	Metal and heavy metals, including vanadium	500 lbs every 3 to 5 years	Hazardous	Recycled by CO manufacturer
Oily rags	Maintenance, wipe down of equipment, etc.	Hydrocarbons, cloth	200 lbs per year	Hazardous	Recycled or disposed by certified oil recycler
Oil sorbents	Cleanup of small spills	Hydrocarbons	Approximately 200 pounds per year	Hazardous	Recycled or disposed of by certified oil recycler
Cooling tower sludge	Deposited in cooling tower basin by cooling water	Dirt from air, arsenic from water	200 lb/yr	Potentially hazardous, but usually not	Class II landfill if nonhazardous; Class I if hazardous
Chemical feed area drainage	Spillage, tank overflow, area washdown water	Water with water treatment chemicals	Minimal	May be hazardous if corrosive	On-site neutralization, if required, then discharged to cooling tower basin

Technical Area: Waste Management

Data Request 55-WM: Please provide an estimate of the amount asbestos that will be generated from demolition. Please indicate the method and location of asbestos disposal.

Response: The CPP project will collect approximately 12,330-square feet of asbestos from demolition activities conducted on-site. This estimate of the total quantity of asbestos that will be retrieved from demolition activities was determined through the Hazardous Materials Survey conducted by TRC, Inc. in September of 2007. Asbestos containing materials are found in some of the structures that are currently on-site.

Asbestos-containing material will be removed without disturbance applying the California Occupational Safety and Health Administration Title 8, Section 1529 Class I or Class II removal procedures. Asbestos containing material will be collected and put into plastic bags or containers, in order to prevent any dispersion of the collected material. The collected material container will be properly sealed and labeled.

Friable asbestos (Class I) collected during demolition activities will be disposed as hazardous waste. Asbestos collected during demolition activities will be disposed of at the Class I Landfill Solid Waste Landfill located in the City of Azusa, California. Quantities of asbestos waste generated will be manifested upon collection for disposal. All personnel involved in the removal, collection, transport, and disposal of the asbestos will possess the required certifications establishing their competency in safely handling asbestos waste.