

Responses to Data Request Set 1 (#1–59)

Application for Certification (07-AFC-02) for **SAN GABRIEL GENERATING STATION** Rancho Cucamonga, California

August 2007

Prepared for:

**SAN GABRIEL
POWER GENERATION, LLC**

Prepared by:

URS

**RESPONSES TO DATA REQUEST SET 1 (# 1-59)
TABLE OF CONTENTS**

Responses to Data Request

Air Quality
Responses to Data Requests 1 through 9 1

Alternatives
Response to Data Request 10..... 5

Biological Resources
Responses to Data Requests 11 through 14..... 6

Cultural Resources
Responses to Data Requests 15 through 22..... 9

Land Use
Responses to Data Requests 23 through 26..... 14

Socioeconomics
Response to Data Request 27..... 18

Soil and Water Resources
Responses to Data Requests 28 through 43..... 19

Traffic and Transportation
Responses to Data Requests 44 through 49..... 34

Transmission System Engineering
Responses to Data Requests 50 through 53..... 38

Visual Resources
Responses to Data Requests 54 and 55 40

Waste Management
Responses to Data Requests 56 through 59..... 44

APPENDICES

Air Quality

- Appendix A1 Sulfur Content in Natural Gas
- Appendix A2 Rule 30
- Appendix A3 List of Sources Provided by SCAQMD

Biological Resources

- Appendix B1 Correspondence with Agencies
- Appendix B2 Biological Assessment
- Appendix B3 USACE letters dated May 15, 2007 and June 20, 2007

Groundwater

Appendix C1	1978 Chino Basin Judgment
Appendix C2	Chino Basin Water Master's Twenty-Eighth Annual Report
Appendix C3	Relocation of West Well

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Appendix D	System Impact Study
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TABLE

Table 35-1	SGGS Septic System Conceptual Design
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FIGURES

Figure 10-1	Vacant Properties
Figure 18-1	Pre-Project Topography
Figure 18-2	Post-Project Topography
Figure 18-3	Proposed Cut and Fill
Figure 23-1	Proposed Easements and Setbacks
Figure 34-1	Proposed SGGS Septic System
Figure 45-1	Current FAA Approved Airport Layout Plan
Figure 45-2	Approach and Clear Zones, Ontario International Airport
Figure 58-1	Existing EGS Wastewater System

Technical Area: Air Quality

Author: Joe Loyer

BACKGROUND: EMISSION REDUCTION CREDITS

The applicant proposes reliance on the South Coast Air Quality Management District's (District) nitrogen oxides (NO_x) RECLAIM program for acquiring trading credits for offsetting the project's NO_x emission impacts. The applicant also proposes purchasing volatile organic compounds (VOC) and sulfur dioxide (SO₂) emission reduction credits (ERC) from the District's ERC banks. Finally the applicant proposes purchasing particulate matter (PM₁₀) ERCs as part of the due diligence requirements in District Rule 1309.1 (Priority Reserve). However, the applicant has not provided any specific information on how they intend to secure the ERCs.

DATA REQUESTS

1. Please provide a list of NO_x RECLAIM trading credits (RTCs) that the applicant owns or has under option contract.

RESPONSE

This information has been filed under separate confidential cover.

2. Please update staff as to the status of securing the NO_x RTCs, VOC, PM₁₀ and SO₂ ERCs as part of the monthly status reports that are filed with the CEC.

RESPONSE

This information has been filed under separate confidential cover.

BACKGROUND: NATURAL GAS SULFUR CONTENT

The Application for Certification (AFC) indicates that the facility will use natural gas with a maximum sulfur content of 0.2 grains per 100 standard cubic feet (gr/100scf). Staff has seen in previous siting cases that the delivered natural gas can contain as much as 1gr sulfur/100scf. If higher sulfur content natural gas fuel is used at the facility, sulfur oxide (SO_x) and PM emissions may be underestimated, and the project impacts may be underestimated and insufficient offsets may be provided. Thus staff needs additional information to assure that the sulfur content of the fuel does not exceed the levels stated in the AFC.

DATA REQUESTS

3. Please provide specific documentation from Southern California Gas Company that the sulfur content of supplied natural gas will not be above 0.2 gr/100scf.

RESPONSE

The SGGs project will use pipeline-quality natural gas supplied by the Southern California Gas Company (SoCalGas). The quality of natural gas is defined in SoCalGas Rule No. 30—Transportation of Customer-Owned Gas¹. Rule No. 30, Section I-Gas Quality limits total fuel sulfur to no more than 0.75 gr/100 scf. Based on historical fuel composition data, fuel sulfur content of natural gas delivered to the project area is below 0.20 gr/100 scf. Data derived from SoCalGas for January through December 2006 at all entry points indicate that the gas fuel sulfur content averages 0.090 gr/100 scf or 1.52 parts per million by volume (ppmv) (see Appendix A1). These averages indicate that, in all likelihood, the maximum gas sulfur content will be well below 0.20 gr/100 scf, and that the annual average of the delivered gas will also be below 0.20 gr/100 scf. Also note that maximum is 0.167 gr/100 scf.

4. Please provide documentation from Southern California Gas Company of the upstream injection points for the natural gas that is proposed to be delivered to the project site.

RESPONSE

See Appendix A1 for 2006 data provided by SoCalGas. According to Doug Spahr, Senior Account Manager at SoCalGas, the project location is at the crossroads of several supply sources; therefore, the system average numbers shown in Appendix A1 would be representative of the natural gas characteristics to be delivered to the project site.

5. Please provide the steps the applicant would take to ensure that the natural gas that has higher than 0.2 gr/100scf of sulfur will not be used at the facility.

RESPONSE

SGGS is committed to using clean-burning natural gas, which has been shown to be extremely low in total sulfur content. As the natural gas is provided by a utility regulated by the Public Utilities Commission (SoCalGas), SGGs will rely upon SoCalGas to ensure that the natural gas supplied to the project is the highest quality, resulting in the lowest possible fuel sulfur content. SGGs will evaluate the need for a program of periodic onsite gas fuel sampling and analysis to determine compliance with the stated gaseous fuel sulfur value of 0.20 gr/100 scf. Pursuant to the New Source Performance Standard (NSPS) Subpart KKKK Section 60.4365 (new turbines greater than or equal to 1 MW and constructed after February 18, 2005), the SGGs turbines would not need to monitor (sample and analyze) fuel for sulfur content because the project is supplied with natural gas under a valid transportation tariff (SoCalGas Rule 30) that is below the sulfur dioxide limit of 0.06 lb SO₂ per million British thermal units (MMBtu).

6. Please provide the method for ensuring continuous compliance with the sulfur content limits specified for the supplied natural gas fuel.

RESPONSE

SGGS cannot guarantee fuel quality when it has no control over the fuel supply (origin) or distribution and mixing network, etc. SGGS is committed to using clean-burning natural gas which, based, on historical data and future expectations, will continue to be extremely low in total sulfur content, resulting in low emissions of SO₂. In addition, the data noted above and presented in Appendix A1 indicates that the overall average gas sulfur content is well below the 0.20 gr/100 scf value quoted in the AFC, which means that the actual SO₂ emissions will most likely be less than those stated in the AFC on an annual basis. SGGS will rely upon SoCalGas to ensure that the gas supplied to the plant (as well as to all of the remaining gas customers) is the highest quality, i.e., having the lowest possible fuel sulfur content. In addition, the facility will evaluate the need for a program of periodic onsite gas fuel sampling and analysis to determine compliance with the stated gaseous fuel sulfur value or 0.20 gr/100 scf. Pursuant to NSPS Subpart KKKK Section 60.4365 (new turbines greater than or equal to 1 MW and constructed after February 18, 2005), the SGGS turbines would not need to monitor (sample and analyze) fuel for sulfur content since the current tariff and transportation sheet for the proposed natural gas (see Rule 30 included in Appendix A2) insures that the gas sulfur content will be well below the 300 ppmw NSPS Subpart KKKK limit.

BACKGROUND: CUMULATIVE ASSESSMENT

The applicant indicates on page 7.1-51 in the AFC that the required cumulative impact assessment will be completed and submitted after further information from the District is received and evaluated.

DATA REQUESTS

7. Please provide the documentation of new sources within six miles of the proposed San Gabriel Generating Station project site.

RESPONSE

Data received from the South Coast Air Quality Management District (SCAQMD) have been reviewed and several sources have been identified as sources to be included in cumulative modeling for the SGGS project. The data list provided by SCAQMD is provided in Appendix A3.

This list was provided to CEC on August 1, 2007. If CEC concurs with our findings, we will contact the SCAQMD for stack parameters and emission rates needed to perform the cumulative modeling analysis for the SGGS.

8. Please provide an estimated date of filing of the completed cumulative impact assessment.

RESPONSE

Upon receipt of information for the selected sources from the SCAQMD, we will review the data for completeness, and if no further interaction with agency personnel is

required, begin the cumulative modeling analysis for SGGs. Our initial estimate for completion of this modeling analysis and submittal to the CEC is September 2007, assuming prompt response by CEC in reviewing the proposed list of cumulative sources and by SCAQMD in providing stack parameters for the selected facilities.

BACKGROUND: EMERGENCY ENGINE EMISSIONS

The AFC makes no mention of an emergency generator, which is a typical component of most power projects and which emits criteria air pollutants.

DATA REQUEST

9. Please provide the following:

- a) Please confirm that the proposed San Gabriel Generating Station will not include a diesel power emergency generator and the rationale for excluding this typical power plant component.

RESPONSE

The SGGs project design does not include the use of a diesel power emergency generator nor a black plant start generator. Reliant does not use emergency generators or black plant start generators in the design of its Combined Cycle plants. SGGs will have a 4 KV feed from the existing EGS units that is fed from the 230 KV switchyard and not the 525 KV system. This is being done to provide power to the SGGs auxiliary system during maintenance of the single line connection to the 525 KV switchyard.

- b) If a diesel emergency generator is part of the project, please discuss the expected emissions and plans for mitigation.

RESPONSE

As stated in the response to Data Request 9a, the SGGs will not have a diesel emergency generator as part of the project.

Technical Area: Alternatives
Author: Stanley Yeh

BACKGROUND

The description of alternative sites to the proposed San Gabriel Generating Station site was provided. Staff requests a scaled map depicting the alternative site locations in reference to the proposed San Gabriel Generating Station location. This will provide a visual frame of reference for the reader.

DATA REQUEST

10. Please provide a scaled map depicting the alternative site locations, including the proposed San Gabriel Generating Station site.

RESPONSE

Attached is Figure 10-1 which shows the four offsite locations described in Section 8.4.3. The four locations are:

1. A large piece of vacant land lies on the north side of Jurupa Avenue between Beach and Poplar, approximately 4.5 miles southeast (not southwest as stated on p. 8-3) of the proposed project site.
2. A site located north of Valley Boulevard between Commerce Drive and Calabash, less than 2 miles from the proposed project site.
3. A site across from the existing EGS on the east side of Etiwanda Avenue along the north side of Napa Street, approximately 0.6 mile east of the proposed project site.
4. A site located on Arrow Route east of I-15 and south of the Foothills Boulevard ramps. This site is located approximately 0.5 mile north of the proposed project site.

Distances provided above are approximate and represent "as-the-crow-flies" distances from the SGGS site.

Technical Area: Biological Resources

Author: Brian McCollough

BACKGROUND

The Application for Certification (AFC) for the San Gabriel Generating Station (SGGS) contains unclear information regarding the jurisdictional status and nature of the potential wetlands on the project site and off-site construction laydown areas. Section 7.2.1.4 (p. 7.2-6) states that wetland determinations were not conducted, but Section 7.2.2.1 (p. 7.2-15) states, "The dry wash/drainage through the proposed off-site construction laydown area is a potentially jurisdictional waters of the United States," and "the construction of the access bridge across Chadwick Channel would result in fill of waters of the United States." Additionally, Figure 7.2-3 shows the off-site construction laydown area, and displays "potential Jurisdictional Wetland and/or Waters of the U.S." on the map.

Although AFC Section 7.2.7 (p. 7.2-26) indicates that the applicant is aware that the proposed project activities in Chadwick Channel and the off-site construction laydown area drainage would require a Streambed Alteration Agreement from the California Department of Fish and Game (CDFG), there is no indication that CDFG has been notified regarding this project. The Energy Commission staff needs more information regarding these issues to complete its analysis.

DATA REQUESTS

11. Please provide the following:

- a) An approved United States Army Corps of Engineers (USACE) wetlands delineation and map for the project site and off-site laydown area (suggested scale of 1:6000), and a calculation of wetland acreage to be impacted.
- b) Please identify the mitigation measures that will be required for these wetland impacts.

RESPONSE

The jurisdictional delineation report will be submitted within the next two weeks and Individual Permit applications for impacts to wetlands and other potential waters of the United States will be submitted to the U.S. Army Corps of Engineers shortly after a jurisdictional determination has been made. Impacts to wetlands will be determined during the jurisdictional determination process. Once the federal and state jurisdictional limits are determined, the level of impact will be quantified. A copy of the Jurisdictional Determination and the Individual Permit will be submitted to the CEC upon completion.

Mapping of the proposed jurisdictional limits has been conducted (in a July 26, 2007 site visit) and will be verified by the USACE during the Jurisdictional Determination process. SGGS expects to receive a jurisdictional determination by October 2007.

Mitigation measures will be developed and included in the USACE Individual Permit and the Streambed Alteration Agreement applications.

12. Please provide the contact information and reports of conversation for your contacts with the USACE.

RESPONSE

Appendix B1 includes letters from the USACE dated May 15, 2007 and June 20, 2007 regarding potential permitting requirements for the proposed project pursuant to Section 404 of the Clean Water Act and identifying the point of contact, who is Ms. Shannon Pankratz, P.O. Box 532711, Los Angeles, California 90053-2325; (213) 452-3412.

13. Please provide the following:

- a) Please contact CDFG and complete a Notification of Lake or Streambed Alteration.

RESPONSE

A Streambed Alteration Agreement is in preparation. A copy of the Agreement will be submitted to the CEC upon completion, estimated to be October 2007.

- b) Please provide the contact information and reports of conversation for your contacts with CDFG.

RESPONSE

CDFG Contact Person: Mr. Jeff Brandt, 3602 Inland Empire Boulevard, Suite C220, Ontario, California 91764; (909) 987-7161.

BACKGROUND

The AFC indicates that the off-site construction laydown area will impact sandy soils that may potentially be suitable habitat for the federally-listed endangered Delhi Sands flower-loving fly (DSF fly). Sections 7.2.2.2 (p. 7.2-16) and 7.2.4.2 (p. 7.2-19) regarding the DSF fly state that Dr. Dale Powell, a DSF fly expert, will assess the habitat suitability and map the sandy soils in April, 2007. Additionally, Section 7.2.6 indicates extensive correspondence with Eric Porter of the United States Fish and Wildlife Service (USFWS) regarding this protected species.

DATA REQUEST

14. Please provide the following:

- a) The results of Dr. Powell's DSF fly habitat assessment and soil mapping surveys.

RESPONSE

A copy of the Biological Assessment, including Dr. Powell's report is provided in Appendix B2.

- b) Copies of the correspondence and reports of conversations with the USFWS regarding the DSF fly.

RESPONSE

Copies of correspondence and reports of conversations and email with Eric Porter of USFWS are provided in Appendix B3.

URS submitted the draft BA directly to U.S. Fish and Wildlife Service (USFWS) and U.S. Environmental Protection Agency (USEPA). As directed by USEPA, the report was sent to Gerardo Rios at USEPA with a copy transmitted to Karen Goebel, Assistant Field Supervisor, at USFWS (Carlsbad office). URS will continue to work with these agencies to provide requested information prior to the initiation of consultation.

Technical Area: Cultural Resources
Author: Beverly Bastian

BACKGROUND

The information regarding the number and location of the laydown areas proposed for the San Gabriel Generating Station (SGGS) differs between the AFC's project description (Vol. I, pp. 2-32 to 2-35, Figure 2.7-3) and the introduction to the Cultural Resources Technical Report (Vol. II, Appendix M, pp. 1). The latter indicates there would be 11 laydown areas, 9 on the SGGS site and 2 off-site, while the AFC's Figure 2.7-3 shows 8 proposed laydown areas on-site and 2 off-site.

DATA REQUESTS

15. Please clarify which project description/depiction is correct.

RESPONSE

The description of the construction laydown areas provided in Chapter 2 is correct.

16. Please provide the following:

- a) A map depicting the locations of the correct number of laydown areas, labeled with numbers.

RESPONSE

The nine onsite laydown areas (with numbers) are shown on Figure 2.7-4A in the AFC. The offsite laydown area is shown on Figure 2.7-4B.

- b) A description, like that provided on AFC pp. 32-35, addressing the correct number of laydown areas.

RESPONSE

There are ten laydown areas, nine onsite and one offsite. The following description of the laydown areas in Section 1 of Appendix M correctly corresponds to the areas shown on Figure 2.7-4A and described in AFC Section 2.7.2.2.

- **Laydown Areas** – the vertical extent of the Offsite Construction Laydown Area and Onsite Construction Laydown Area 1 has not yet been determined, though based upon prior experience, excavation and grading activities can extend up to 3 feet below the ground surface. Laydown Areas 2 through 9 would not require grading or excavation. It should be noted that these components are going to be placed in a heavily disturbed area and will connect with existing utilities.
- **Offsite Construction Laydown Area.** This 12-acre area is located along the southern side of the Burlington Northern Santa Fe Railroad tracks, east of Day Creek and west of the proposed SGGS site. Heavy vegetation removal is required at this location. All 12 acres will be

- graded, though 6 acres will be cut and the remaining 6 will be filled with the cut material.
- **Construction Onsite Laydown Area 1.** This 4.5-acre area is located on land owned by Inland Empire Utilities Agency (IEUA) and to the south of the proposed SGGGS site.
 - **Construction Onsite Laydown Area 2.** This 0.5-acre area is located on site and within the EGS property, east of the proposed SGGGS site.
 - **Construction Onsite Laydown Area 3.** This 2.2-acre area is located on site and within the EGS property, east of the proposed SGGGS site.
 - **Construction Onsite Laydown Area 4.** This 0.3-acre area is located on site and within the EGS property, east of the proposed SGGGS site.
 - **Construction Onsite Laydown Area 5.** This 0.35-acre area is located on site and within the EGS property, east of the proposed SGGGS site.
 - **Construction Onsite Laydown Area 6.** This 0.3-acre area is located on site and within the EGS property, east of the proposed SGGGS site.
 - **Construction Onsite Laydown Area 7.** This 0.7-acre area is located on site and within the EGS property, east of the proposed SGGGS site.
 - **Construction Onsite Laydown Area 8.** This 1.4-acre area is located on site and within the EGS property, southeast of the proposed SGGGS site.
 - **Construction Onsite Laydown Area 9.** This 1.4-acre area is located on site and within the EGS property, southeast of the proposed SGGGS site.

BACKGROUND

On AFC p. 2-29, the discussion of the earthwork which would be needed to construct the proposed SGGGS states that topsoil, vegetation, and debris would be removed and disposed of and that a balance of cutting and filling would produce the final “plant grade.” To identify all of the project’s potential impacts, staff needs more information on the potential of the project to impact cultural resources at the project’s soil and debris disposal site, and, additionally, staff needs to know the difference in elevation between existing grade and final “plant grade.”

DATA REQUESTS

17. If the project’s chosen soil and debris disposal site is not a commercial operation and consequently has not been surveyed for cultural resources, please conduct such surveys and provide to staff a brief report including survey personnel qualifications, methods, and findings.

RESPONSE

As stated in the AFC, the project will be graded such that cut and fill will be balanced. Only material that is not suitable for reuse at the site will need to be disposed. The project plans to use a commercial disposal site for these materials.

18. Please provide a discussion of the grading plan which will be used to achieve the final "plant grade," including the overall difference in elevation between existing grade and "plant grade."

RESPONSE

Existing Grade

The existing topography of the project site generally slopes from north to south from approximately Elevation 1,130 feet to approximately Elevation 1,111 feet (see Figure 18-1). The proposed project will be constructed in the area previously occupied by the Units 1 and 2 cooling towers. The existing Units 1 and 2 cooling towers will be demolished before the proposed project construction begins as part of the EGS' safety and maintenance activities.

South of the proposed SGGs power block area, the two IEUA tanks are surrounded by a berm. This existing berm is part of a former spill containment area, when the tanks were owned by SCE and were used to store oil. The tanks now belong to IEUA and are used to store reclaimed water; therefore, the spill containment berm is no longer needed. The top of the berm is at approximately Elevation 1,120 feet. The ground elevation within the bermed containment area is flat at Elevation 1,110 feet.

Plant Grade

The project site would be graded as shown on AFC Fig 2.6-2 and on Figure 18-2. Approximate cuts and fills are shown on Figure 18-3. Mass grading is intended to be balanced, with the same amount of cut and fill (i.e., approximately 30,000 cubic yards (cy) of cut and 30,000 cy of fill). The proposed final site grade within the powerblock area (i.e., the northern portion of the site) would be at about Elevation 1,120 feet and would be covered in crushed rock. Therefore, there would be a maximum cut of about 9 to 10 feet in the northwestern corner of the site. A retaining wall, approximately 865 feet long in an east-west direction, would be required to support the cuts along the northern portion of the site. The maximum height of the wall would be approximately 9 to 10 feet and then taper as needed to meet grade. Wing walls, about 50 feet long, would extend from the northwest and northeast ends of the retaining wall tapering to grade at their southern ends. There would be no extension of the retaining wall or wing walls above the existing ground surface (but there would be an aboveground perimeter security fence). The cut and wall to support the cut would be on the SGGs property, approximately 65 feet away from the railroad tracks, and would be designed to comply with BNSF requirements.

The maximum fill of about 3 feet will be located in the southeastern corner of the site near the ammonia tanks (i.e., existing grade at this location is at approximately

Elevation 1,117 feet and the final grade would be at approximately Elevation 1,120 feet).

The “plant grade” for the power block and water treatment building/control building area will be Elevation 1,120 feet. The “plant grade” for the area between the power block area and the former berm north of the existing IEUA storage tanks will vary from Elevation 1,120 feet to Elevation 1,111 feet in a uniform slope, and the area surfaced with 4 inches to 6 inches of crushed rock.

Catch basins will be installed to capture storm water runoff, which will then be conveyed via the storm drain system into the storm water detention pond, in the southeastern portion of the site. The bottom of the basin will be at approximately Elevation 1,102 feet, for a maximum depth of approximately 13 feet. The detention basin will have vertical concrete walls. In the power block area, the maximum depth of excavation will be about 16 feet for electric manholes and ductbanks and about 17 feet for the sump. The maximum depth of excavation for sewers will be about 8 feet, providing for 5 feet of cover over a 36-inch-diameter pipeline. Earthwork required for the offsite laydown area will be balanced, about 2 feet of cut and 2 feet of fill representing approximately 40,000 cy.

The area south of the power block area, currently occupied by the two tanks, may be used as a construction laydown area. The tank spill containment area has gunite-surfaced berms. The area inside the berms is not surfaced. The berms would be demolished, and the gunite surfacing on the berms removed and disposed of off site at a permitted disposal facility. The soil used to construct the berms would be pushed into the center of the spill containment area and compacted. The soil will be placed to within 20 feet of each tank, which will leave the tanks in a shallow hole. Twelve-inch-high berms will be built around the top of the hole to prevent stormwater from entering the area around the tanks. The area will be surfaced with 4 inches of crushed rock and potentially would be used during construction to park construction trailers, as a space to store construction materials, and as a space for fabrication shops (such as rebar fabrication and pipe fabrication). After construction of the SGGs is complete, the tank area will be cleaned up, but the crushed rock surfacing and the run-on diversion dikes around the tanks will remain in place.

BACKGROUND

In the confidential volume (Vol. II, Appendix B to Appendix M), providing copies of the cultural resources data the applicant received from the California Historical Resources Information System (CHRIS), staff observed that some information was missing. Two of the included reports had missing pages, and three reports that should have been included were not present. Figure 7.3-4, showing the coverage of previous cultural resources surveys of areas immediately adjacent to the proposed project site, indicated that copies of three survey reports that the CHRIS should have provided to the applicant were not in the confidential materials provided to staff. Additionally, one identified resource, P1084-23 H, was plotted on Figure 7.3-5, but did not have a Department of Parks and Recreation (DPR) form, and the only information provided about it was a

single page from an unidentified report. Staff needs to have the complete set of pertinent cultural resources data to complete its analysis.

DATA REQUESTS

19. Please provide copies of missing pp. 24 and 26 of the CHRIS report # 1063023 (Owen 1995a) on the cultural resources survey of the El Cajon Oil Pipeline.

RESPONSE

The missing pages have been filed under separate, confidential cover.

20. Please provide copies of missing pp. 2-5, 8, 10, 12, 14, 16, 18, 20-31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, and 59 and of Figures 4-6 and 10, of the CHRIS report # 1063591 (Owen 1995b) on the cultural resources survey of the San Sevaine Redevelopment Project.

RESPONSE

The missing pages have been filed under separate, confidential cover.

21. Please provide copies of the following missing reports:

- a) # 1061894, Stephen J. Bouscaren and Mark T. Swanson, "Cultural Resources Survey of the 27-Acre Proposed Chino Basin Municipal Water District Regional Plant No. 4 in the City of Cucamonga, California," 1989;
- b) # 1062090, Mark T. Swanson, "Addendum to Cultural Resources Survey of the 27-Acre Proposed Chino Basin Municipal Water District Regional Plant No. 4 in the City of Cucamonga, California," 1990; and
- c) # 1063592, Deborah McLean and Jani Monk, "Cultural Resource Assessment of the Kaiser West End Project, City of Fontana, San Bernardino County, CA," 1997.

RESPONSE

The requested reports have been filed under separate, confidential cover.

22. For resource P1084-23 H, please provide a copy of any DPR forms and a copy of the survey report that discusses the resource.

RESPONSE

Information provided by the Information Center has been filed under separate, confidential cover.

Technical Area: Land Use
Author: Amanda Stennick

BACKGROUND

As stated in the applicant's May 2007 Data Adequacy filing, the proposed project would be primarily located within the existing Reliant Energy (Reliant) Etiwanda Generating Station (EGS) property in Rancho Cucamonga, San Bernardino County, California. A portion of the proposed project transmission line and an internal road would occupy property currently owned by Inland Empire Utilities Agency (IEUA). No permanent buildings or equipment other than transmission structures would be placed on the IEUA property. The applicant is currently negotiating with the IEUA to acquire an easement for these facilities across this additional area, either by long-term lease or purchase. Therefore, a parcel split and lot line merger would not be, if required for this additional land area needed for the project to form a legal parcel of sufficient size to allow development of the project.

DATA REQUEST

23. Because staff will have to ensure the project's compliance with the city of Rancho Cucamonga's development standards (including setback requirements) for the Industrial (I) Zone, please show on a map the proposed easement in conjunction with the parcel for the proposed project.

RESPONSE

The proposed easement in relation to parcel boundaries, along with minimum setbacks, is shown on Figure 23-1. A 40-foot-wide easement on IEUA property will run east-west. As shown on the figure, only transmission structures, overhead conductors and a portion of an access road would be placed on the IEUA property within this easement. Based on discussions between Reliant and IEUA regarding the easement, IEUA understands that the transmission towers, overhead conductors and access road will be within the easement. These conditions will be addressed in the easement agreement between Reliant and IEUA. The City engineer will need to approve the easement as indicated by the following Rancho Cucamonga Municipal Codes.

16.08.110 Improvement.

A. "Improvement" refers to such street work, storm drainage, utilities and landscaping to be installed, or agreed to be installed, by the subdivider on the land to be used for public or private streets, highways, and easements, as are necessary for the general use of the lot owners in the subdivision and local neighborhood traffic and drainage needs as a condition precedent to the approval and acceptance of the final map thereof; or to such other specific improvements or types of improvements, the installation of which, either by the subdivider, by public agencies, by private utilities, by any other entity approved by the local agency or by a combination thereof, is necessary or convenient to insure conformity to or implementation of the general plan or any adopted specific plan.

B. Improvements shall be constructed in accordance with the city standard specifications and details and/or when applicable with standards as adopted by local utility companies and approved by the city engineer. (Ord. 28-B § 1.201 (part), 1981)

In addition, setback requirements for Industrial Sites in accordance with the Rancho Cucamonga Municipal Code is a minimum of 0 foot to 5 feet for interior lot lines as indicated below:

Section 17.30.040 Site Development Criteria, D. Setback Requirements

b. Interior Rear: None, except when rear lot area abuts a side street, the setback shall be 5 feet minimum.

d. Interior Side: 5-foot minimum. Minimum side yard setback may be waived or modified by the Planning Commission subject to Master Plan application and approval.

Additionally, the required minimum horizontal setback to a transmission tower conductor will be governed by the National Electric Safety Code and is 17.4 feet.

As can be seen from Figure 23-1, there are two easements required from IEUA. The first is an east-west easement that is required for a part of the transmission towers and road at the southwestern edge of the project site. The transmission towers are nominally 66 feet high, with the transmission lines running parallel to the southern plant boundary. The legs of the transmission towers closest to the easement boundary (outside legs) are approximately 15 feet from the boundary. This exceeds the 5-foot minimum setback required by the Rancho Cucamonga Municipal Code as cited above. In addition, the southernmost transmission line conductor is 17.5 feet north of the outside transmission tower leg centerline, resulting in approximately a 22.5-foot setback from the southern plant boundary as noted on Figure 23-1. This also exceeds the minimum setback of 17.4 feet required by the National Electric Safety Code as noted above.

The far west transmission tower will be set back a minimum of 5 feet from the existing north-south property line between the SGGs plant site and the SCE property, thus complying with the Rancho Cucamonga Municipal Code setback requirement of 5 feet. The conductors to the tower are attached using insulators that will be a minimum of 15 feet long. Therefore, the setback for the conductors will be a minimum of 20 feet, exceeding the setback requirements of the National Electric Safety Code.

The second easement required from IEUA is a north-south easement for the transmission line running from the plant site to the SCE switchyard. There are no permanent structures (including transmission line towers) or roads within this easement other than the overhead transmission lines. The transmission lines are supported by a nominal 110-foot-high transmission tower located on the SGGs plant site and a nominal 120-foot-high tower located in the SCE switchyard. The easement is 100 feet wide. The transmission line closest to the western boundary of the easement is approximately 27 feet from the western edge of the easement as indicated on Figure 23-1. The

transmission line closest to the eastern boundary of the easement is approximately 18 feet from the eastern edge of the easement as shown on the same figure. Both conductors exceed the minimum 17.4-foot setback required by the National Electric Safety Code noted above.

The required horizontal setback to the transmission tower conductors from any adjacent structure (e.g., the existing water tanks) is 17.4 feet (National Electrical Safety Code). Per State of California General Order 95 for overhead electric line construction, the required horizontal clearance is 15 feet. The proposed conductors will be approximately 50 feet from the IEUA tank, which is greater than the required setback. In addition, the distance to the new SCE peaker plant would exceed this setback requirement.

BACKGROUND

Page 7.4-2 of the Application for Certification (AFC) states that the Industrial Area Specific Plan is divided into three zones (A, B, and C) and 17 subareas and the project is located within Zone A. However, Figure 7.4-4 in the AFC illustrates each zone within the Industrial Area Specific Plan and shows the proposed project located in Zone C.

DATA REQUESTS

24. Please clarify whether the proposed project is located in Zone A or Zone C of the city of Rancho Cucamonga Industrial Specific Plan.

RESPONSE

The proposed project is located in Zone C of the city of Rancho Cucamonga Industrial Specific Plan as shown on Figure 7.4-4 in the AFC (the text on page 7.4-2 incorrectly stated that the project was located in Zone A).

25. Please state which subarea(s) are applicable to the proposed project.

RESPONSE

Subarea 15 is applicable to the proposed project.

BACKGROUND

As stated in the applicant's May 2007 Data Adequacy filing, the applicant has initiated discussions with the city of Rancho Cucamonga regarding a height variance due to the project's stacks that would exceed the 75-foot limit. To help staff determine whether the proposed facility complies with all applicable state, regional, and local laws, ordinances, regulations, and standards, staff is preparing a letter to the city to gain their input on these issues, including their process and timeline for issuing the variance.

DATA REQUEST

26. Please provide staff with the status of the discussions with the city of Rancho Cucamonga on the height variance.

RESPONSE

SGGS representatives are currently scheduling a meeting with City of Rancho Cucamonga staff, which is expected to take place within the next few weeks, to discuss the height variance and the items identified in the CEC's recent land use letter. SGGS will update this response with supplemental relevant information after the meeting.

Technical Area: Socioeconomics
Authors: Joseph Diamond

BACKGROUND

The year for the IMPLAN model economic impacts (secondary impacts) caused by the construction and operation of the project was provided. However, the time value of money should be reflected for all economic estimates. Staff needs to know the year that corresponds to all dollar estimates.

DATA REQUEST

27. Please indicate the year for all economic estimates (e.g., construction costs, construction and operation payroll, property taxes, school impact fees etc.)

RESPONSE

The construction cost of \$521 million (including all components of construction cost, i.e., payroll, equipment, materials, supplies, engineering, fees, insurance, taxes, administrative costs, and other direct costs) is expressed in 2007 dollars.

The annual operations cost of \$14.3 million (including all components, i.e., payroll, equipment, materials, supplies, taxes, administrative costs, and other direct costs) is expressed in 2007 dollars.

The estimated school impact fee of \$13,700 is expressed in 2007 dollars. The estimate is based on 2007 fees per square foot of new commercial covered building space.

The construction cost of \$521 million (2007 dollars) was used as an estimate of the increase in assessed value of the project property. This estimated increase in assessed value was applied to the 2007 property tax rate to estimate the increase in annual property tax revenue of \$5.4 million. Therefore, the estimate of \$5.4 million in increased annual property tax revenues is expressed in 2007 dollars.

The one-time influx of sales tax revenue of approximately \$40.4 million would be generated due to the construction contract of \$521 million. The construction cost is expressed in 2007 dollars and sales tax rates are for 2007. Therefore, the estimate of \$40.4 million in sales tax revenue is also expressed in 2007 dollars.

The approximately \$325,500 in sales tax revenues that would be generated throughout the four-county area each year of operation is based on the annual operations cost (which is expressed in 2007 dollars), and sales tax rates for 2007. Therefore, the estimate of additional annual sales tax revenue is expressed in 2007 dollars.

Technical Area: Soil and Water Resources
Authors: Cheryl Closson

EROSION AND FLOOD CONTROL

BACKGROUND

The proposed San Gabriel Generating Station project includes construction of a new bridge across Chadwick Channel. Page 7.2-5 of the AFC states that “pylon support structures will be driven into the bank of the channel with riprap erosion protection placed along the channel slopes near the support pillars.” While the Biology section of the AFC does acknowledge the need for a Clean Water Act (CWA) Section 401 Water Quality Certification and a CWA Section 404 (dredge and fill) permit for the bridge construction activity, the section does not clearly identify the permitting agencies and agency contacts. In addition, the Water Resources section of the AFC does not address the need for the permits at all and instead states on page 7.14-21 that “the new bridge across Chadwick Channel would be constructed as a clear span bridge; therefore, there would be no encroachment into the channel and no impediment to flood flows or flood elevations.” In order to complete its analysis, Energy Commission staff needs more clear and complete information on how the project will comply with all applicable water-related laws, ordinances, regulations and standards (LORS) governing the construction of the proposed bridge.

DATA REQUESTS

28. Please provide a description of the current design and construction methods to be used for the proposed bridge crossing Chadwick Channel.

RESPONSE

Currently there is no bridge crossing at Chadwick Channel where the proposed bridge is shown. At this location, the channel is currently crossed by driving down into and out of the channel. This method cannot be used to transport heavy equipment to and from the plant during construction and when maintenance of the equipment is required. There is an existing bridge crossing the channel on the EGS property north of the proposed bridge location. However, this bridge is narrow, does not have the capacity to carry a low-boy truck loaded with a transformer or heavy equipment, and does not have a proper turning radius on the eastern side to maneuver a multi-axle carrier. The primary purpose of the proposed bridge is to provide access during operations and maintenance. The main access to the site during construction will be via 6th Street and the temporary access road. Figure 2.7-5 in the AFC shows the proposed bridge across Chadwick Channel. The bridge is 30 feet wide and would be constructed using concrete beams, a concrete deck, and concrete end walls. The clear span length of the beams is 80 feet. The top of deck elevation of the bridge will be Elevation 1,115 feet. The top elevation of adjacent roads is Elevation 1,112 feet. On either side of the bridge, the road approaching the bridge will be sloped at approximately 5 percent to raise the grade of the road from Elevation 1,112 feet to Elevation 1,115 feet. The side slopes on either side of the channel will be riprapped. The riprap will be sized for the forces

produced by the 100-year flow in the channel. The riprap will be placed on the end-wall side slopes and then vertically beneath the channel so that the riprap will not be removed by erosion when the 100-year flow occurs.

The extent of construction activities for the erection of the bridge will be limited to the minimum extent along the banks of the channel as possible. Earthwork associated with the bridge construction is expected to be minimal and will be limited to that needed to construct the end walls and maintain the existing flow area of the channel. As discussed above, sediment control measures will be employed during the construction of the bridge. Construction within the channel would be performed when the channel is dry.

29. Please provide summaries of consultation and contact information for the agencies responsible for issuing erosion control and water quality-related permits or authorization for the bridge construction, including the California Department of Fish and Game's (CDFG) Streambed Alteration Permit, the Santa Ana Regional Water Quality Control Board's (SARWQCB) CWA Section 401 Water Quality Certification, and the United States Army Corp of Engineer's (USACE) CWA Section 404 permits. In addition, please identify any requirements of certification or authorization that may be imposed on the bridge construction activity.

RESPONSE

Contacts are as follows:

- USACE Contact Person: Ms. Shannon Pankratz, P.O. Box 532711, Los Angeles, California 90053-2325; (213) 452-3412.
- CDFG Contact Person: Mr. Jeff Brandt, 3602 Inland Empire Boulevard, Suite C220, Ontario, California 91764; (909) 987-7161.
- SARWQCB Contact Person: will be determined upon submittal of notification package.

USACE has been preliminarily contacted to discuss jurisdictional determinations for these watercourses. The CDFG contact is currently on vacation and will be contacted upon his return to alert him to the pending Streambed Alteration Agreement.

Any requirements or mitigation measures imposed on the bridge construction will be developed during the Individual Permit and Streambed Alteration Agreement application process. Completed applications and subsequent permit conditions will be submitted to the CEC upon completion.

30. As applicable, please provide an updated schedule for application and issuance of the Streambed Alteration Permit, the CWA Section 401 certification, and the CWA Section 404 permit. Please clearly identify any impediments to, or constraints on, issuance of any of the permits, and how the project will address any constraints (such as wet season construction restrictions or other requirements).

RESPONSE

Schedules are as follows:

USACE Jurisdictional Determination

Milestone Date When Required: September 28, 2007

Expected Application Filing Date: August 24, 2007

Expected Approval Time: 1 month

CDFG Streambed Alteration Permit

Milestone Date When Required: August 2008

Expected Application Filing Date: October 2007

Expected Approval Time: 6 months

CWA Section 404 Permit

Milestone Date When Required: August 2008

Expected Application Filing Date: October 2007

Expected Approval Time: 6 months

CWA Section 401 Permit

Milestone Date When Required: August 2008

Expected Application Filing Date: February 2008

Expected Approval Time: 6 months

Impediments/constraints: delay in a Jurisdictional Determination from USACE; delay in Individual Permit authorization from USACE; delayed response from CDFG regarding the Streambed Alteration Agreement; once the permits are issued, permit conditions may not allow work to occur within the watercourse channels while there is surface water flow, project initiation coincides with the onset of the rainy season, site preparation work may be delayed due to storm events.

31. Please provide the following:

- a) Please identify any other federal, state, or local LORS that may apply to construction of the proposed bridge and any special erosion or water quality-related conditions that may be required by those LORS.

RESPONSE

Design of the bridge will conform to the State of California Street and Highway Code regulations. The California Department of Transportation (Caltrans) design requirements will be followed as provided in the April 2000 (or later edition) of the Bridge Design Specifications. Loading requirements will be for H-20 criterion that is applicable for the largest fire trucks (20 tons) used on municipal streets. This loading criterion will be reviewed if it is anticipated the larger loads or vehicles will need to access the site.

Since the proposed project is within the City of Rancho Cucamonga. A formal review is not anticipated because the bridge is on private property. However, because public

safety vehicles may need to access the site, it is proposed that the City's Engineering and Public Works Department review the bridge design.

The bridge over Chadwick Channel will be constructed on private property and is not on a public road or highway. No approvals are needed from Caltrans or the California Highway Patrol.

The bridge will not be constructed within any Federal Emergency Management Agency (FEMA) designated floodplains or floodways.

Construction of the SGGS project, including construction of the bridge, will comply with the California State Water Resources Control Board (SWRCB) Water Quality Order 99-08-DWQ: "National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction Activity (General Permit)." This is a general permit for stormwater discharges associated with construction activities that disturb more than one acre. Construction activities subject to the permit include cleaning, grubbing, grading, stockpiling, and excavation activities. The General Permit requires submittal of a Notice of Intent to comply with the permit and the development of a SWPPP for construction activities. The SWPPP will describe BMPs to prevent stormwater pollution during construction activities. BMPs include erosion controls, sediment controls, and other controls to prevent stormwater from contacting pollutants. The SWPPP will also include a stormwater monitoring program.

A grading permit will be obtained from the City of Rancho Cucamonga Building and Safety Department before construction of the SGGS begins. The following items need to be submitted to the City for Plan Check and Grading Permit issuance:

1. Grading plan (3 sets).
2. Drainage report (2 copies) except for single-family residences, which may be required later, if determined necessary during plan review.
3. Soil report (2 copies).
4. Water Quality Management Plan (WQMP) (2 copies) to be reviewed by the Engineering Division.
5. Public Improvement Plans related to the site if necessary for plan review.
6. A percolation test report wet sealed by a licensed soil engineer is required for proposed percolation mitigation measures.
7. Other items may be required if found necessary during the plan review process.

Contained in the Grading Plan (#1 above), are specific erosion control requirements:

Erosion Control Sheet Content:

- Provide sandbags at perimeter where drainage could flow off site.
- Provide sandbag stacking detail.
- Provide details of access control with tire shaker.
- Protect drainage inlets.

The Water Quality Management Plan (WQMP) (referenced as #4 above) is the same plan that is submitted as per the NPDES permit requirements.

- b) Please discuss any additional erosion control best management practices, water-quality testing, and/or monitoring that may be required related to the bridge construction.

RESPONSE

Erosion control BMPs, water-quality testing, and/or monitoring are described in the draft Construction SWPPP included in Appendix H of the AFC and the draft DESCOP being prepared in response to Data Request 33. Measures relevant to bridge construction include the use of sandbags to provide temporary erosion protection during construction of the bridge walls. This temporary protection will be removed once construction of the end walls and riprap is complete.

Chadwick Channel is an unlined earthen channel with no erosion protection in the vicinity of the proposed bridge. The channel drains into an existing retention basin about 1,000 feet south of the bridge crossing. The soils are silty sand. As part of the proposed bridge construction, riprap is being provided in front of and upstream and downstream of each end wall to prevent erosion of the backfill compacted around the base of the bridge walls.

BACKGROUND

To determine the potential impacts to soil and water resources from the construction and operation of the San Gabriel Generating Station project, the Energy Commission requires a draft and final Drainage, Erosion and Sediment Control Plan (DESCOP). The DESCOP must also be updated and revised as necessary as the project moves from the preliminary to final design phases, on through to construction and operation of the facility. The DESCOP would be a separate document from any Construction and/or Industrial Storm Water Pollution Prevention Plans (SWPPP), unless the applicant intends to combine the DESCOP and SWPPP into one document.

While the applicant has submitted a draft Construction SWPPP as part of the project AFC, the plan is rough and skeletal, and provides outdated information from the EGS facility instead of addressing conditions and plans for activities specific to the proposed project.

DATA REQUESTS

32. Please identify whether or not the project will prepare a combined Construction SWPPP, Industrial SWPPP and DESCP document, or if the plans will be prepared and maintained separately.

RESPONSE

The Applicant plans to prepare and maintain separate documents.

33. Please provide a draft DESCP (or combined DESCP/SWPPP) that contains elements "A through I" below outlining the site management activities and erosion/sediment control Best Management Practices (BMPs) to be implemented during site mobilization, grading, construction, and operation of the proposed project. The level of detail in the draft DESCP should be commensurate with the current level of planning for site grading and drainage. Please provide all conceptual erosion control information for those phases of construction and operation that have been developed or provide a statement identifying when such information will be available.
- a) Vicinity Map – Provide a map(s) at a minimum scale 1"=100' indicating the location of all project elements, including depictions of all significant geographic features including swales, storm drains, and sensitive areas.
 - b) Site Delineation – Identify all areas subject to soil disturbance (i.e., project site, lay down areas, all linear facilities, landscaping areas, and any other project elements) and show boundary lines of all construction/demolition areas and the location of all existing and proposed structures, pipelines, roads, and drainage facilities.
 - c) Watercourses and Critical Areas – Show the location of all nearby watercourses including swales, storm drains, and drainage ditches. Indicate the proximity of those features to the project construction, lay down, and landscape areas, and all transmission and pipeline construction corridors.
 - d) Drainage Map – Provide a topographic site map(s) at a minimum scale 1"=100' showing all existing, interim and proposed drainage systems and drainage area boundaries. On the map, spot elevations are required where relatively flat conditions exist. The spot elevations and contours should be extended off-site for a minimum distance of 100 feet in flat terrain.
 - e) Narrative Discussion of Project Site Drainage – Include a narrative discussion of the drainage management measures to be taken to protect the site and downstream facilities. The narrative should include the summary pages from the hydraulic analysis prepared by a professional engineer/erosion control specialist. The narrative should state the watershed size(s) in acres that was used in the calculation of drainage measures. The hydraulic analysis should be used to support the selection of BMPs and structural controls to divert off-site and on-site drainage

around or through the project construction and laydown area, as well as post-construction and operation areas.

- f) Clearing and Grading Plans – Identify all areas to be cleared of vegetation and areas to be preserved. Provide elevations, slopes, locations, and extent of all proposed grading using contours, cross sections or other means and include locations of any disposal areas, fills, or other special features. Illustrate existing and proposed topography tying in proposed contours with existing topography.
- g) Clearing and Grading Narrative – Include a table that identifies all of the following: all project elements where material will be excavated or fill added; the type and quantities of material to be excavated or filled for each element; whether the excavation or fill is temporary or permanent; and the amount of material to be imported or exported.
- h) Construction Best Management Practices Plan – Identify on the topographic site map(s) the location of the site-specific BMPs to be employed during each phase of construction (initial grading, project element excavation and construction, and final grading/stabilization). The BMPs identified should include measures designed to prevent wind and water erosion in areas with existing soil contamination. Any treatment BMPs used during construction should also allow for testing of stormwater runoff prior to discharge to a receiving water.
- i) Best Management Practices Narrative – Provide a narrative discussion of the location, timing, and maintenance schedule for all erosion and sediment control BMPs (as identified in H above) to be used prior to initial grading, during project element excavation and construction, at final grading/stabilization, and for post-construction. Separate BMP implementation schedules should be provided for each project element for each phase of construction. The maintenance schedule should include post-construction maintenance of structural control BMPs, or a statement when such information will be available.

RESPONSE

The DESCOP is being prepared and will be forwarded to CEC when it is completed. This is anticipated to be at the end of August 2007.

WASTEWATER MANAGEMENT

BACKGROUND

Page 2-28 of the AFC provides a narrative description of the proposed project's sanitary wastewater system, which will include a septic tank and associated leachfield. However, the location of the septic tank and leachfield is not identified on any of the project maps. In addition, the AFC is unclear about the actual size and design of the septic system to be used. Page 2-28 of the AFC does give information on the size of

the septic tank to be used and states, in part, that the tank will be approximately 4.75 feet deep, 10.5 feet long and 5.25 feet wide, with the tank inlet having a 2.5 foot depth of cover. Page 2-28 also states that the leachfield will be approximately 30 feet wide by 40 feet long. However, page 7.14-17 of the AFC (Water Resources section) says that “percolation tests would be conducted in accordance with San Bernardino County’s requirements to design and size the septic system” and meet minimum distances for siting individual waste disposal systems. Energy Commission staff needs clear and specific information on the location and design of the septic system in order to properly assess project impacts and compliance with LORS.

DATA REQUESTS

34. Please provide a map of the project site at an appropriate scale that clearly shows the location of the proposed septic tank and associated leachfield in relation to other project structures, piping, sumps, retention basins, and erosion control features.

RESPONSE

Figure 34-1 provides a map of the project site and shows the location of the proposed septic tank and associated leachfield in relation to other project structures, piping, and detention basin, as well as Chadwick Channel and other existing EGS features.

35. Please provide the following:

- a) Please provide specific information detailing San Bernardino County’s design requirements compared to the conceptual design for the project septic system.

RESPONSE

Table 35-1 compares the design requirements to the conceptual design for the septic system. The City’s requirements are very similar to those of the County; and since the SGGs is within the City’s limits, the City’s requirements would apply.

Table 35-1 SGGS Septic System Conceptual Design		
City of Rancho Cucamonga Design Requirements		SGGS Conceptual Design for Septic System (see Figure 34-1)
Distance from property line adjoining private property	A minimum of 5 feet from septic tank and/or disposal field; clear of building sewer	The proposed septic system (tank and leach field) will be located within the interior portion of the project site and the closest property boundary (to the north) is more than 600 feet away.

Table 35-1 SGGS Septic System Conceptual Design		
City of Rancho Cucamonga Design Requirements		SGGS Conceptual Design for Septic System (see Figure 34-1)
Distance from water well	A minimum of 50 feet from building sewer and septic tank; 100 feet from disposal fields.	The closest well to the septic system will be the recently relocated well, which is located more than 200 feet southeast of the proposed septic system.
Distance from streams	A minimum of 50 feet from septic tank and/or disposal field	The septic system will be approximately 100 feet from Chadwick Channel.
Distance from on site domestic water line	A minimum of 1 foot from the building sewer; 5 feet from septic tank and/or disposal field	The potable water line, as well as the makeup water line, would be more than 20 feet away from the proposed leachfield and more than 70 feet away from the septic tank.
Distance from buildings or structures	A minimum of 2 feet from the building sewer; 5 feet from septic tank; 8 feet from disposal field	The nearest building/structure would be the new control building warehouse, which would be approximately 70 feet from the septic system.
Distance from trees	A minimum of 10 feet from septic tank	The closest trees (along the EGS entrance road) are more than 900 feet away from the proposed septic tank
Distance from seepage pits/cesspools	A minimum of 5 feet from septic tank or disposal field	No seepage pits are within 5 feet of the proposed septic system
Distance from disposal field	A minimum of 5 feet from septic tanks; 4 feet from disposal fields	The existing EGS septic system is located south of Units 3 and 4 and would be more than 600 feet away from the proposed septic tank and leachfield. The proposed septic tank would be located so that it will be minimum of 5 feet from the proposed septic tank.

Table 35-1 SGGS Septic System Conceptual Design		
City of Rancho Cucamonga Design Requirements		SGGS Conceptual Design for Septic System (see Figure 34-1)
Distance from distribution box	A minimum of 5 feet from the disposal field	The septic system will be designed and constructed so that the distribution box will be a minimum of 5 feet away from the disposal field.
Distance from pressure public water main	A minimum of 10 feet from the building sewer, septic tank and disposal field.	There are no pressure public mains on the EGS/SGGS property.

Source: <http://www.ci.rancho-cucamonga.ca.us/pdf/PrivateSewageDisposalSystem.pdf>

- b) Please discuss the city of Rancho Cucamonga role, if any, in reviewing the septic system design.

RESPONSE

For the proposed septic system, the Applicant will:

- Submit a percolation report and plot plans to San Bernardino County, Division of Environmental Health Services (DEHS) for review and approval.
- Obtain permit to construct from the City of Rancho Cucamonga.

The City of Rancho Cucamonga Building and Safety Division issues permits for septic systems within the City limits. The City does rely, however, on San Bernardino County Environmental Health Services approval of percolation tests. Therefore the percolation test results must be submitted to the County for approval and a copy of the County’s approval along with site plans are then submitted to the City for review and approval.

WATER SUPPLY AND USE

BACKGROUND

The AFC states that water will be supplied to the proposed San Gabriel Generating Station project by the existing Etiwanda Generating Station (EGS) water supply system, which draws water from an existing 4-acre reservoir located on the northeast corner of the EGS property. The EGS reservoir receives water from four sources: reclaimed water, groundwater, Metropolitan Water District (MWD) aqueduct water, and cooling water return. The AFC states that the primary source of water is reclaimed water and that groundwater is “added to the reservoir during periods of high ambient temperatures

to reduce the temperature of the makeup water supply.” MWD aqueduct water is added only on an emergency basis, but has not been used since the EGS plant began using reclaimed water in 2003. In the last two years, the water in the reservoir has been a mix of roughly 65% reclaimed water and 35% groundwater. Although the proposed San Gabriel Generating Station plant is designed with an air cooled condenser for turbine cooling and 100% reclaimed water use for most other plant needs, by using the existing EGS reservoir water it will in effect be using approximately 35% groundwater for the plant steam cycle and CTG evaporative coolers. (Table 2.5-7 identifies plant water uses as steam cycle make-up water, water to CTG evaporative coolers, and miscellaneous plant uses).

Pages 8-4 and 8-5 of the project AFC provide a discussion asserting that no alternative water supply analysis is needed because the plant would use dry cooling technology (i.e., an air cooled condenser) and reclaimed water. However, the plant will use water for evaporative (wet) cooling associated with gas turbine inlet cooling. As noted above, Table 2.5-7 identifies the project’s annual water consumption to be approximately 220 acre-feet of water per year, with 48 acre-feet of that total specifically identified for steam cycle make-up, 90 acre-feet identified for evaporative cooling uses, and the rest going toward “miscellaneous uses”.

The Energy Commission’s 2003 Integrated Energy Policy Report (IEPR) Policy states that when considering the siting of power plants, “consistent with the Board policy and the Warren-Alquist Act, the Energy Commission will approve the use of fresh water for cooling purposes by power plants which it licenses only where alternative water supply sources and alternative cooling technologies are shown to be environmentally undesirable or economically unsound.”

DATA REQUEST

36. Please provide an economic and environmental assessment of alternative water supply sources and cooling technologies for gas turbine inlet cooling, in accordance with the Energy Commission 2003 IEPR Policy. Please be sure to provide factual support for all conclusions and assertions made as part of the assessments. The assessments should include consideration of the following potential alternatives:

- a) Modifying the EGS water supply system to use 100% reclaimed water;
- b) Not using EGS reservoir water and instead using 100% reclaimed water from Inland Empire Utilities Agency (IEUA); and
- c) Using other cooling processes or methods for gas turbine inlet cooling.

RESPONSE

SGGS respectfully disagrees that a complete alternative analysis is required by the Staff in order to fulfill its obligations under the 2003 IEPR policies. First, the SGGS is employing an Air Cooled Condenser (ACC). In the recently approved amendment for the Gateway Generating Station, the Siting Committee and the full Commission approved the use of up to 120 acre-feet of potable water for a baseload combined cycle

power plant that switched from use of river water in a conventional cooling tower to an ACC. The use of the ACC in and of itself complies with the 2003 IEPR Policy. If the CEC Staff believes that such an alternative analysis is required, it can prepare its own, but requiring the SGGs to perform such an analysis, when SGGs believes it has already demonstrated compliance with the policy is unwarranted and is not relevant or necessary for Staff to complete its analysis. Notwithstanding this potential disagreement with Staff, SGGs provides the following information to clarify that the SGGs will not increase any use of potable water for cooling purposes beyond that which is already being used by the EGS. In fact, the SGGs will most likely decrease the use of potable water being used by the existing EGS as described below.

The existing design for the SGGs project is that all process makeup water will be 100 percent reclaimed except for potable water usage of 1 acre-foot per year of well water. There will be no planned increase in the use of fresh or well water for process water. While the reservoir does periodically include well water, the addition of well water is made by the EGS only at times when the temperature of the reclaimed water is too high. Well water makeup to the reservoir is controlled manually by the operator, and therefore it will not increase automatically as the SGGs draws water from the reservoir. In fact with the additional reclaimed water flowing through the system as a result of the additional demand by the SGGs, the net result will be a lowering of the overall temperature of the water in the reservoir. This is likely to result in a decrease in the amount of fresh water the EGS operator will add to the reservoir to control the temperature. As stated in the AFC, all makeup water for the SGGs will come from reclaimed water. The only time that fresh water could conceivably be used for makeup would be when there is a loss of the reclaimed water source, which would not be expected to occur more than once during the life of the plant, or the use of about 2 to 3 acre-feet of well water based on a 3-day outage.

Not using the reservoir as makeup for the very small amount of process water for the air-cooled SGGs plant requires additional infrastructure and would not have the potential benefit of reducing the existing EGS's use of fresh water in the reservoir and therefore was rejected.

The only other known process for cooling the inlet of a gas turbine is by using a refrigeration process. This process requires a cooling tower to reject the heat from the process which using more water than the evaporative coolers now proposed. The cost of the refrigeration equipment (about \$12,000,000) is approximately 20 times the current design. Therefore, the evaporative cooler was chosen as the most cost effective and as designed does not use any fresh water, only reclaim. Additionally, the evaporative cooler has been approved on recent air-cooled projects.

GROUNDWATER

BACKGROUND

The AFC states that water for the proposed San Gabriel Generating Station project will be supplied by the existing EGS water supply system. In addition to receiving reclaimed water from the IEUA, the EGS system draws groundwater from three offsite water wells.

The AFC states that EGS has adjudicated rights to draw 954 acre-feet of groundwater per year from the Chino Groundwater Basin. However, the AFC does not include documentation verifying the adjudicated right, nor does the AFC provide information on any groundwater pumping or monitoring conditions, restrictions, or reporting requirements that may have been imposed as part of the adjudication or required by the Chino Basin Watermaster.

DATA REQUESTS

37. Please provide the following:

- a) Please provide a copy of the document establishing the groundwater right currently owned by EGS.

RESPONSE

The SGGs will not require groundwater rights as it will connect to the EGS' existing makeup water supply and potable water supply systems. While this request is irrelevant to SGGs, we are providing copies of the 1978 Chino Basin Judgment (see Appendix C1) in which adjudicated water rights were established and a copy of the Chino Basin Water Master's 28th Annual Report (see Appendix C2), which lists EGS as having adjudicated rights to withdraw 954-acre-feet per year. The 1978 Chino Basin Judgment lists SCE as the owner of the Etiwanda plant. Reliant purchased the EGS on April 7, 1998.

- b) Please identify any conditions associated with pumping groundwater from the Chino Basin.

RESPONSE

The 1978 Chino Basin Judgment gives the EGS the right to withdraw 954 acre-feet per year from the Chino Basin as a part of the Appropriative Pool. As long as the plant does not exceed this allowance, there are no conditions placed on water removal. This is the plant's share of the Safe Yield for the basin.

38. Please provide the following:

- a) Since the groundwater wells identified in the AFC are not located on the EGS site, please describe who controls the wells and how the wells are controlled and maintained.

RESPONSE

The wells belong to Reliant Energy as part of the EGS, and are listed as such with the State and Local Water Master. The wells are controlled from EGS Units 3 and 4 control room. Two of the wells are on SCE property and one (i.e., the recently relocated well) is on EGS property. The wells are locked and SCE and Reliant have the keys. Inspections occur every week, with maintenance as required.

- b) Please identify if any other parties receive water from the wells or have a contractual agreement to receive water from the wells.

RESPONSE

The water from the wells is not used for any other purpose besides support of EGS' power generation. EGS supplies the power to the wells and piping from the wells goes to the plant only. No other parties receive water from the wells.

39. Please discuss whether groundwater users in the Chino Basin are required to purchase replacement water for groundwater recharge and describe what recharge requirements, if any, may be imposed.

RESPONSE

The 1978 China Basin Judgment gives the EGS the right to withdraw 954 acre-feet per year from the Chino Basin as a part of the Appropriative Pool. As long as the plant does not exceed this allowance there are no requirements for recharge placed on the plant. This is the Plant's share of the Safe Yield for the basin. The Operating Safe Yield is defined as "the annual amount of ground water which Watermaster shall determine...can be produced from China Basin by the Appropriative Pool parties free of replenishment obligation under the Physical Solution herein."

BACKGROUND

As noted above, the EGS water supply system draws groundwater from three offsite water wells located south of the project site. The locations of the wells are shown on the EGS Site Drainage map, Figure 7.14-4. However, Page 6-4 of the Phase I Environmental Site Assessment (Phase I) prepared by URS states that "at the time of the site reconnaissance, another water well was being installed onsite (to replace one of the offsite wells) just to the south of Units 3 and 4." In addition, page 6-7 of the Phase I document states that "the new water production well is located near the center of [onsite laydown] Area 6."

If a new well is being drilled or exists on the project site, the Energy Commission staff will need detailed information on the disposition and impacts of the well in order to complete the analysis of the proposed project.

DATA REQUESTS

40. Please clarify the number and location of water wells to be utilized by the project as part of the EGS water system, including information on well construction (i.e., size, depth, screening, etc.) and production capability.

RESPONSE

The SGGS does not connect directly to any of the three EGS wells. The SGGS will connect to the EGS' makeup water supply and potable water supply. The EGS uses all three wells. The wells are owned by Reliant and were acquired as part of the asset

purchase in 1998. Two wells (East Well and Central Well) are on SCE property as shown on Figure 7.14-4. The West Well shown on Figure 7.14-4 was recently relocated by SCE. The relocated well is located on EGS property east of Chadwick Channel and south of the EGS access road (see Figure 34-1).

41. If a new water well has been drilled onsite, or is planned to be drilled, please provide detailed information on the location, well construction, and production capability.

RESPONSE

SCE drilled a new well on the EGS site to replace the West Well, since the original well would be in the way of SCE's Rancho Vista Substation construction. The well relocation was done by SCE at their cost. EGS owns the well. The location of the new well is shown on Figure 34-1. SCE has not provided Reliant with a copy of the well construction log. A copy of the well relocation report prepared by SCE's consultant is provided in Appendix C3.

42. Please provide the following:

- a) Please provide a detailed discussion on the location and impacts of water production from the new well with respect to other wells, septic systems, or groundwater contaminants in the area.
- b) Please address any impacts that construction and production of the new well might have on contaminants in soil and/or groundwater underlying the site, especially in those areas subject to Department of Toxic Substances Control (DTSC) corrective action orders.

RESPONSE

Please see the well relocation report prepared by SCE's consultant (Appendix C3).

43. Please provide the following:

- a) Please clarify which, if any, of the existing offsite water wells will be retired if a new well is (or has been) drilled and put into production.
- b) Please provide documentation and confirmation of plugging and abandonment of any wells that are to be taken out of service, including providing evidence of having obtained a Well Destruction Permit from the appropriate authority, if applicable.
- c) If a well will be converted to a monitoring well, please provide documentation and confirmation of conversion and use of the well.

RESPONSE

As described above, the West Well was relocated from SCE property onto EGS property. The original West Well was abandoned. The abandonment and relocation of

the wells was completed by SCE. Reliant does not have copies of the Well Destruction Permit or any other documentation of the well abandonment. No wells were converted to monitoring wells.

Technical Area: Traffic and Transportation
Author: David Flores

BACKGROUND

The project would not have any structures tall enough to trigger the filing of Form 7460 (Notice of Proposed Construction or Alteration) with the Federal Aviation Administration (FAA). However, the restricted airspace for airports with runways longer than 3,200 feet extends 20,000 feet out from any point on the runways. The project site is located within the restricted airspace of Ontario International Airport, which is located approximately 18,000 feet to the southwest and has runways greater than 3,200 feet in length. Please provide the following information to enable staff's evaluation of compliance with FAA's safe air navigational requirements.

DATA REQUEST

44. Provide a description of the amount of light to be generated into the airspace by the proposed project.

RESPONSE

Light generated from the SGGS facility will come from the area and equipment lighting and the required FAA stack lighting. The stacks for the SGGS facility will be 150.5 feet high. FAA Form 7460 will be filed in order to determine the appropriate stack lighting. While the SGGS stacks will be located within 20,000 feet of Ontario International Airport, they do not penetrate the 100:1 imaginary surface noted in Title 14 of the Code of Federal Regulations (CFR) Part 77.13. The proposed stacks will be 150.5 feet tall, which is less than the 180-foot clearance height at a distance of 18,000 feet from the runway.

Outdoor lighting will be designed to minimize transmission of light beyond the plant boundary through the use of directed lighting, guarded luminaires, etc. Fixtures and poles shall be sited such that light is focused toward the interior of the plant as much as practicable. The illumination shall meet the Illuminating Engineering Societies recommended foot-candle levels as shown in the middle range.

The outdoor lighting will be arranged into individual zones or areas. Each zone or area will be provided with a three position hand/off/auto switch for control of the lighting. In the auto position, a photoelectric cell will control the illumination. The hand position will enable the operator to bypass the photoelectric cell. The off position will prevent the lighting from being energized. It is anticipated that the operators will turn off specific zones at night if no activity is planned in that area.

45. Provide a copy of the current FAA approved "Approach and Clear Zone Plan" for the Ontario International Airport, with the exact location of the proposed power generation facility clearly marked.

RESPONSE

Figure 45-1 includes a copy of the FAA-approved Airport Layout Plan (ALP) dated September 12, 2003. The ALP was obtained from the City of Ontario website (<http://www.ci.ontario.ca.us/index.cfm/22/42223>) last accessed on July 24, 2007.

Figure 45-2 shows the current FAA approved Approach and Clear Zones in relation to the proposed project.

BACKGROUND

Section 7.10.1 (Existing Transportation Facilities) page 7.10-6 indicates a railroad spur serves the existing Etiwanda power plant. The Application for Certification (AFC) does not indicate whether heavy equipment for the SGGs project will be delivered by rail.

DATA REQUEST

46. If the rail line spur is to be used to transport heavy equipment and materials for the proposed project, please provide the location where the loading and transfer of the cargo to trucks would occur and the number of railroad deliveries that would occur.

RESPONSE

The proposed project intends to use an established offsite off-loading area, one of which is located east of EGS on Napa. The proposed project does not plan to use the existing rail line spur. It is anticipated that there would be no more than approximately 20 deliveries by rail and these would be for the major pieces of equipment such as the turbines.

BACKGROUND

Section 7.10.2.2 (Construction Impacts) page 7.10-19 discussed three-grade crossings which are proposed to be placed across the southerly Burlington Northern Santa Fe (BNSF) spur track for access to the offsite laydown and parking sites. The AFC also indicated that discussions with BNSF representatives are on-going as to what measures may be incorporated to support a safe railroad crossing. Staff will need copies of BNSF and related California Public Utilities Commission (CPUC) approved documents for completion of its traffic analysis.

DATA REQUEST

47. Please provide a status report on the applicant's discussion with BNSF on approvals of the rail crossings from the laydown and parking areas to the project site.

RESPONSE

Various discussions have been held concerning the temporary rail crossing between the laydown and parking area and the temporary access road to the project site. Conversations were held with a local engineer and local Road Master for the BNSF who

will be providing recommendations for installation of the crossing. They are familiar with the spur to be crossed. The engineer indicated that their preliminary recommendation is to install a 48-foot-wide crossing with warning lights and a gate. The improvement would be a concrete crossing. These recommendations are subject to further refinement based on a meeting at the site to discuss the crossing requirements.

Based on information obtained from a BNSF Senior Contract Specialist in Fort Worth, Texas, the following formal process for a Temporary Occupancy Permit is to be followed:

- The application form has been obtained from BNSF in Fort Worth to begin the process of approving and installing the rail crossing.
- The application, along with a \$350 processing fee, is to be submitted to The Staubach Global Service, BNSF's Real Estate Management Service, which is then entered into the BNSF tracking system.
- The application will be accompanied by drawings (already prepared by Reliant).
- The application materials will be used by a third-party engineering firm working for BNSF that prepares an Exhibit A drawing on the railroad right-of-way maps. (This process can take up to two weeks.)
- After the Exhibit A drawing is completed, the application and Exhibit A drawing are sent to BNSF's field safety director, who distributes them to his management team throughout the country.
- The local field safety manager will contact and meet with Reliant at the site to discuss any issues.
- The local field safety manager then determines what type of materials will be needed for the crossing and makes a recommendation to the Director to approve or deny the crossing.
- If approved, BNSF then estimates the cost of installing the crossing. Once the estimate is completed, fees for installation as well as for the permit costs, insurance, etc., are requested from Reliant.
- Once fees are received, BNSF will install the crossing.
- The local Road Master will be involved with the installation.

The whole application process may take anywhere from 3 to 6 months. BNSF could not estimate the exact time that it would take to have the crossing installed.

Prior to initiating the formal request through BNSF, Reliant will meet with the local Engineering Manager, the Roadmaster for this spur, and the local Stubach representative. The purpose of this meeting will be to give the locals advance notice on

the pending application, and it will allow for a local connection to deal with BNSF/Staubach internal processes. It is anticipated that this meeting will occur within the next 30 days. Reliant will provide CEC with the outcome of the meeting.

48. Please provide a schedule that BNSF agrees with for securing its approval for rail crossings and a similar schedule showing timelines necessary for California Public Utilities Commission (CPUC) rail crossing approvals.

RESPONSE

As discussed above, it is estimated that the BNSF application approval process will take approximately 3 to 6 months.

According to Reliant's legal counsel:

- CPUC does not have jurisdiction over crossings that are not used for public use, and
- The CPUC can become involved in any crossings if the sponsor and the RR company cannot come to agreement

The temporary railroad crossing will be for private use and since the project will be working closely with BNSF, CPUC involvement is not anticipated.

49. Please provide a copy of BNSF's and CPUC's final approval (with conditions) when the agreement becomes available.

RESPONSE

The Applicant will provide a copy of the final agreement(s) from BNSF to the CEC when available.

Technical Area: Transmission System Engineering
Authors: Laiping Ng

BACKGROUND

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

Staff needs additional information regarding the proposed project in order to prepare the Staff Assessment for the San Gabriel Generating Station (SGGS) project.

DATA REQUESTS

50. Please provide a one-line diagram for the Rancho Vista Substation before the interconnection of the SGGS.

RESPONSE

Reliant is continuing to work on this. It is anticipated that this information will not be available until the detailed facility study has been completed (see response to Data Request 53).

51. Provide a one-line diagram for the Rancho Vista Substation after the addition of the SGGS. Show all equipment ratings including breakers, disconnect switches, buses and any other features required for the addition of the SGGS.

RESPONSE

Reliant is continuing to work on this. It is anticipated that this information will not be available until the detailed facility study has been completed (see response to Data Request 53).

52. Please provide the System Impact Study. The study should analyze the system impact with and without the project during peak and off-peak system conditions,

which will demonstrate conformance or non-conformance with the utility reliability and planning criteria. Please include the following items:

- a) Identify major assumptions in the base cases including imports to the system, major generation and load changes in the system and queue generation;
- b) Analyze system for N-0, N-1 and N-2 contingency conditions and provide a list of criteria violations in a table showing the loadings before and after adding the new generation;
- c) Analyze the post-project system for Short Circuit studies;
- d) Analyze system for transient stability and post-transient voltage conditions under N-1 and N-2 contingencies, and provide related plots, switching data and a list for voltage violations in the studies.
- e) Provide a list of contingencies evaluated for each study.
- f) List mitigation measures considered and those selected for all criteria violations.
- g) Provide electronic copies of *.sav and *.drw PSLF files.
- h) Provide power flow diagrams (MW, % loading & P. U. voltage) for base cases with and without the project. Power flow diagrams must also be provided for all N-0, N-1 and N-2 studies where overloads or voltage violations appear.

RESPONSE

The System Impact Study performed by CA ISO and dated June 4, 2007 is attached as Appendix D.

53. Provide a CA ISO Preliminary Approval Letter for interconnection of the proposed SGGS to the CA ISO control grid or the schedule for when the preliminary approval would be granted.

RESPONSE

The following are the actual and anticipated milestones related to the CA ISO System Interconnection for SGGS:

- 1) Reliant executed Facilities Study Agreement on July 13, 2007. CAISO has 120 days to complete the study.
- 2) CA ISO provides Reliant with draft Facilities Study (anticipated to include the Preliminary Approval Letter) by November 12, 2007.
- 3) CA ISO expected to issue final Facilities Study by January 15, 2008.

Technical Area: Visual Resources
Author: David Flores

BACKGROUND

The AFC discusses the need for SGGs project night lighting and the controls that would be utilized to minimize the visibility of night lighting (AFC pg. 7.11-25.). However, the discussion of lighting does not describe the extent to which night lighting in combination with the adjacent existing EGS facility would be visible from nearby viewing locations.

DATA REQUEST

54. Please describe the visibility of project components (including exhaust stacks and vapor plumes) due to illumination from: a) existing ambient lighting and b) the combination of existing ambient lighting and proposed project lighting.

RESPONSE

The following design/mitigation measures will help to reduce overall visibility of the proposed SGGs during nighttime hours:

- Exterior lighting will be limited to areas where it is required by regulations, concerning operations and safety. Low-intensity lights will be used where allowed by regulations (e.g., site perimeter and parking areas). High-intensity lighting will be limited to areas where such lighting is necessary for operations and safety concerns (e.g., stairways and checking plant equipment).
- Lighting will be directed and/or shielded to reduce glare towards sensitive viewers. Exterior lighting will be designed to minimize transmission of light beyond the plant boundary. Through the use of directed lighting, guarded luminaires, and selective positioning, light will be focused toward the interior of the plant as much as practicable. Illumination of the proposed SGGs will meet the Illuminating Engineering Societies recommended foot-candle levels.
- Exterior lighting will be arranged into individual zones or areas. Each zone or area will be provided with a three-position, hand/off/auto switch for control of the lighting. In the auto position, a photoelectric cell will control the illumination. The hand position will enable the operator to bypass the photoelectric cell. The off position will prevent the lighting from being energized. It is anticipated that the operators will turn off specific zones at night if no activity is planned in that area.

a) Visibility of proposed project from Existing Ambient Lighting

The area in the vicinity of the existing EGS is highly developed, including numerous industrial and commercial complexes and associated lighting to support their operations. Existing visible night lighting ranges from soft amber colors to more intense white light. The majority of these lights are consistently operational during nighttime hours. Other sources of night lighting in the existing area include street and vehicle lights. Vehicle headlights and tail lights along Etiwanda Avenue to the east,

Interstate 15 to the west, and Foothills Boulevard to the north are a source of light in the project area.

When operating during nighttime hours, the existing EGS lights are “on” and the plant is fully illuminated, which increases the amount of ambient light in the project area when compared to times when the plant is not operating at night. Assuming the proposed SGGS is built and is not operating during nighttime hours, minimal lighting would be required for safety and security. However, the proposed SGGS would not likely provide a substantial amount of additional light over existing ambient conditions in the project area.

To discuss the visibility of the proposed project due to illumination from existing ambient light, two conditions were identified, which do not factor in illumination from the proposed project itself. These two possible conditions are baseline conditions, which would occur infrequently after construction, as nighttime lighting of the proposed SGGS will be a typical condition. The two conditions are defined below:

Condition 1 would occur when the existing EGS is not operational during nighttime hours and lighting is minimal. Lighting of the EGS is reduced to the minimum requirements for safety, maintenance, and security. During this condition, the lights on the plant grounds and perimeter are similar in intensity and appearance as the surrounding area and generally less noticeable, contributing minimally to ambient light in the project area.

Condition 2 would occur when the existing EGS lights are “on” to support operation during nighttime hours. During Condition 2, lights at the existing EGS are most visible and there is a noticeable increase in ambient light in the project area, especially within the immediate vicinity of the SGGS site.

In Condition 1, the proposed SGGS and associated components would be slightly visible due to illumination by surrounding ambient light sources. Perimeter and area lighting from the existing EGS and other ambient light from other adjacent sources (e.g., commercial or industrial facilities) would slightly illuminate the proposed SGGS and associated facilities (e.g., exhaust stacks). The proposed SGGS components would appear as silhouettes in the skyline and would likely not be noticeable to the casual observer.

In Condition 2, the increase in ambient light from the existing EGS during nighttime hours would increase the visibility of the proposed SGGS. The proposed SGGS would likely be more visible as a result of the additional ambient light being shed from the existing EGS. During Condition 2, the visibility of the proposed SGGS and associated facilities would likely be noticeable to viewers within close proximity (i.e., foreground views within one-half mile) of the project site.

b) Visibility of proposed project from the combination of existing ambient lighting and proposed project lighting

Assuming the proposed SGGS was built and was operating during nighttime viewing conditions, all the required lights for support of operations would be lit and visible. However, the proposed SGGS would not likely provide the same level of intensity of light or add substantially to the ambient conditions due to the proposed mitigation measures mentioned above and the design of the SGGS facility (i.e., lower profile design and more self-contained/enclosed).

To factor in the increase in lighting and potential for increased visibility, as a result of illumination of the proposed project and associated components in context with the existing lighting, two additional conditions are described as follows:

Condition 3 would be observed when the existing EGS is not operating; therefore, illumination of the proposed SGGS due to ambient lighting adjacent to the project site would be minimal. However, the SGGS would be operating and all required lights for safety and operation would be lit and visible.

Condition 4 would be observed when the existing EGS and proposed SGGS are operating, and all lights required for safety and operation would be lit and visible.

In Condition 3, during nighttime hours, visibility of the proposed SGGS and associated facilities would be not noticeable to slightly noticeable from viewers in the foreground (within one-half mile). The light given off by the proposed SGGS during nighttime hours would be minimal due to the proposed lighting control devices. This condition would result in a slight increase in visibility potential as compared with Condition 1.

In Condition 4, during nighttime hours, the amount of light generated would slightly increase over Condition 2 by incrementally adding to the ambient light (including existing lighting of the EGS). The additional light would increase the visibility of the proposed SGGS and associated facilities. This condition would likely result in the highest potential for visibility and would be noticeable from foreground viewers (within one-half mile).

For all viewers present in the project vicinity, structural and vegetation screening, along with the distance between the viewer and the proposed SGGS, would affect the ability of viewers to distinguish or see details associated with the proposed project facilities during nighttime hours. Additionally, localized lighting conditions for a given viewer may also influence how the proposed SGGS is seen. For example, viewers in areas that have more intense ambient light may not notice additional light at the project site.

55. Please provide a more specific discussion of night lighting to be used during project construction. Discussion shall include the following:

- a) the location of construction areas to be lit at night;
- b) description of type of lighting to be used and methods to limit offsite visibility; and
- c) a discussion on the intensity of project night lighting to the surrounding area.

RESPONSE

The majority of construction activities for the proposed SGGS will take place between 6 a.m. and 6 p.m., therefore, they will not require extensive lighting during nighttime hours. The anticipated work schedule (as describe in AFC Section 2.7.1) will generally be 10 hours per day for a 50-hour week.

However, longer workdays or work weeks may be required on occasion. Additionally, crews may work 24 hours per day, 7 days per week during the startup and testing phase, where night lighting may be required; this phase is expected to occur for approximately 3 to 4 months.

a) the location of construction areas to be lit at night;

During construction of the proposed SGGS, the areas to be lit at night include the project site proper and offsite construction parking/laydown area west of the project site. Some construction laydown areas may be lit using lights from the existing EGS. The purpose of nighttime lighting during construction is to provide adequate light for construction tasks (when necessary) and for safety and security. Lights for specific tasks will only be on when work is being performed in the immediate work area.

b) description of type of lighting to be used and methods to limit offsite visibility

Light generated to illuminate construction activities at night will occur only if night shifts are required. At this time, construction night shifts are not planned and therefore are expected to occur on a limited basis during the construction period. A light plant, or sometimes called a Light Tower, would most likely be used to light construction areas at night. Such a tower consists of four metal halide type lights, 1,000 watts each. Such a tower can be raised 30 feet high and can illuminate 7.5 acres. The light would be directed downward and inward in order to reduce transmission of light off site.

Additionally, night lighting could range from smaller spot or flood lights used to conduct localized tasks to more broad area flood lights used to conduct larger tasks. All lighting used during construction will be temporary and may not remain for the duration of nighttime construction. Lights will be positioned within the interior of the working area and directed downwards, and will be shielded to the extent feasible.

c) a discussion on the intensity of project night lighting to the surrounding area.

Typically, construction lighting requires the use of more intense white light given the nature of construction tasks and for safety. Since the light would be more intensive and contribute more noticeably to the ambient conditions, visibility is expected to be greater from foreground viewers (within one-half mile).

Technical Area: Waste Management
Author: Cheryl Closson

BACKGROUND

The Phase I Environmental Site Assessment (Phase I) prepared by URS Corporation for the proposed San Gabriel Generating Station project (Attachment S, Volume II of the project Application for Certification (AFC)) cites and summarizes certain findings and recommendations contained in other environmental assessments, studies, and reports previously conducted to evaluate conditions at the project site. The information provided in these assessments was used in part to support the conclusions and recommendations provided in the URS Phase I. Review of these reports will assist California Energy Commission (CEC) staff assessment of existing site conditions and impacts of the proposed project.

DATA REQUEST

56. Please provide copies of the following reports and publications identified in the Phase I report prepared by URS and in the project AFC.

- Phase I Environmental Site Assessment, Etiwanda Generating Station, prepared by CH2M HILL, May 1997.
- Etiwanda Generating Station, Phase II Environmental Site Assessment, Volumes 1 and 2, prepared by Geraghty & Miller, Inc., June 6, 1997.
- Leak Detection Investigation, Etiwanda Generating Station, prepared by Pat Hamilton, June 11, 1997.
- Data Report, Shallow Soil Investigation, Etiwanda Steam Station, Units 1 and 2 Cooling Towers, prepared by URS, August 11, 2005.
- Annual Groundwater Monitoring Report, Etiwanda Generating Station, prepared for Southern California Edison by Pat Hamilton, February 14, 2004.
- Annual Groundwater Monitoring Report, Groundwater Detection Monitoring Program with Fourth Quarter 2006 Sampling Data, Etiwanda Generating Station, prepared by Pat Hamilton, February 4, 2007.

RESPONSE

One set of the requested documents is being provided to the CEC along with these responses to data requests.

BACKGROUND

The AFC identifies the area around the existing EGS Unit 1 and 2 cooling towers as an area to be developed as part of the proposed project. However, based on the results of

the Phase 1 report, the area is also identified in the AFC as a Recognized Environmental Condition¹ (REC) due to the presence of treated wood that contains arsenic and elevated arsenic concentrations present in the soil. Page 7.13-1 of the AFC states that “when the cooling towers are demolished, the arsenic treated wood will need to be handled and disposed of according to applicable local, state, and federal regulations.” In addition, the AFC states that “an investigation beneath the cooling tower basins will be required as part of the Resource Conservation and Recovery Act (RCRA) closure requirements for the facility...”

While the AFC states that demolition of the Unit 1 and 2 cooling towers is not part of the proposed project, the area underneath and around the towers will be used for proposed project structures and activities. Therefore, since the area is already identified as an REC, the environmental investigation of the site after demolition, and completion of any necessary remedial action, should be done well in advance of any project construction to ensure that any possible contamination is identified and mitigated to a less than significant level. Investigation and remediation of hazardous waste during the construction phase of a project should only be done as a contingency measure, when previously unknown contamination is encountered during the normal construction activities.

DATA REQUEST

57. Please provide the following:

- a) Please provide an estimated date for the demolition of the Unit 1 and 2 cooling towers.

RESPONSE

As discussed at the Site Visit and Informational Hearing and in Section 2.4.1 of the AFC, the demolition of the Units 1 and 2 cooling towers is not part of the SGGGS Project. Southern California Edison (SCE) has the responsibility under its Stipulated Judgment with DTSC and pursuant to its contract obligations when it sold the EGS to Reliant Energy to investigate and remediate, if necessary, any contamination discovered under the cooling tower. Reliant has been working closely with DTSC to coordinate access and encourage the timely investigation around and eventually underneath the cooling tower structures. SCE has met with DTSC on site and has proceeded to obtain samples of the soil around the cooling tower structure and within the feedwater flume. Based on the results of that investigation, SCE will be developing a workplan to investigate further. This workplan may involve investigating underneath the cooling tower pursuant to DTSC’s guidance.

At this time, SCE has not yet prepared that workplan. Depending on the nature and extent of what is required pursuant to that workplan, Reliant will then coordinate any demolition activities with the SCE investigation. Reliant will be able to further describe its demolition plans and timing upon receipt of a DTSC-approved workplan. For

¹ A Recognized Environmental Condition is a term used in Phase 1 Environmental Site Assessments and by the United States Environmental Protection Agency, denoting areas where there has been a release of a regulated toxic substance or pesticide.

purposes of the processing of the AFC, SGGS is willing to accept a Condition of Certification that no construction can occur in areas requiring remediation without approval of DTSC. In this way, the CEC can ensure that no permanent project components would be constructed in a manner that would prevent subsequent remediation. SGGS believes that with such a condition, the CEC Staff can conclude the project will comply with applicable LORS as administered by DTSC. SGGS further believes that waiting for the investigation and remediation to be performed prior to licensing could cause unnecessary delay.

- b) Coordinated with 59(a) above, please provide a schedule and workplan for investigation and possible remediation of soils in the vicinity of the cooling towers. The schedule and workplan should also be reviewed and approved by the Department of Toxic Substances Control (DTSC) prior to submittal to the Energy Commission, unless other arrangements are made with Commission staff to address or accommodate DTSC review.

RESPONSE

As described in the response to Data Request 57a above, SCE and not Reliant is performing the investigation or possible remediation beneath the cooling towers. Therefore Reliant cannot control the schedule or scope of such work. Reliant is working closely with both DTSC and SCE and will continue to update the Commission Staff when it receives information concerning the workplan and schedule. Please see the response to Data Request 57a.

BACKGROUND

The AFC states that the plant wastewater will be discharged to the County sewer/wastewater treatment plant through the Inland Empire Utility Agency's (IEUA) nonreclaimable industrial waste lines via the existing Etiwanda Generating Station's (EGS) wastewater discharge system. In describing the system, Page 7.14-14 of the AFC states that "EGS manages discharge using two active retention ponds, one 600,000 gallon aboveground tank, and, if needed, an inactive retention pond, all of which are at the EGS facility."

However, the Phase I prepared by URS and the Waste Management section of the AFC indicate that four retention basins (including two general use basins, referred to as the north and south basins) are currently under a court order to conduct closure and corrective action under DTSC oversight. Yet, page 7.14-4 of the AFC states that Southern California Edison closed three retention basins in 1996, including two basins known as the North and South basins.

The status, actual location, and elements (such as pipeline location and points of discharge to the sewer) of the existing EGS wastewater system are unclear in the AFC due to vague or incomplete information, conflicting statements in various portions of the AFC, and the lack of clear identification of the EGS wastewater system elements on site maps. Staff needs consistent information on the existing EGS wastewater system including the retention basins for completing its waste analysis.

DATA REQUESTS

58. Please provide the following:

- a) Please provide clarification on the location, elements, and status of any investigations or corrective action relating to the existing EGS wastewater treatment system.

RESPONSE

There have only been three basins at the EGS site which were part of the wastewater discharge system. Two of the original three basins are still in use as part of the wastewater system for Units 3 and 4. In some reports, these two basins are referred to as the North and South Retention Basins. The third basin, which is referred to as the Boiler Chemical Cleaning Basin (or boiler wash basin), is inactive. These three basins are subject to the Stipulated Agreement between DTSC and SCE.

The Boiler Chemical Cleaning Basin is within one of the proposed onsite laydown areas. Per discussions with SCE, they plan to have DTSC approval of the basin investigation and complete closure before construction of SGGs and use of this area starts.

The reverse osmosis (RO) basin mentioned in Section 7.13 Waste Management and the Phase I ESA, is part of the EGS reverse osmosis process system; wastewater from the RO basin is re-circulated in the plant and ultimately discharged to the EGS wastewater system.

The SGGs wastewater system will not use any of these basins for any management of wastewater, as it will connect directly to the wastewater discharge line.

- b) Please provide a site map (1"= 250' scale) clearly showing the size and location of any system piping, points of plant process wastewater discharge to the system, retention basins, and points of discharge to the IEUA industrial waste pipelines.

RESPONSE

Figure 58-1 shows the existing EGS wastewater discharge system.

59. If the existing EGS wastewater system includes retention basins or other elements that are currently subject to DTSC corrective action or further investigation, please provide information on the schedule, workplan, and studies or assessments that may be required to complete site characterization and/or corrective action. If closure and/or corrective action have already been completed for any of the wastewater system elements, please provide documentation that the required work has been done and no further action is necessary.

RESPONSE

Please see the response to Data Request 58a.