

CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET
SACRAMENTO, CA 95814-5512



August 29, 2007

Mr. George L. Piantka, PE
NRG Energy Inc./El Segundo Power II LLC
1819 Aston Avenue, Suite 105
Carlsbad, CA 92008

**Subject: El Segundo Power Redevelopment Project (00-AFC-14C)
Data Requests for Dry Cooling Petition – Set Two**

Dear Mr. Piantka:

Pursuant to Title 20, California Code of Regulations, section 1716, California Energy Commission staff requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the proposed modifications to the approved project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess any potential mitigation measures.

This second set of data requests is being made in the areas of public health, hazardous materials, soil and water resources, visual resources, visual resources – plume, and traffic and transportation. Written responses to the enclosed data requests are due to the Energy Commission staff on or before September 28, 2007, or at such later date as may be mutually agreed upon.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send a written notice to me within 30 days of receipt of this notice. The notification must contain the reasons for not providing the information, the need for additional time and the grounds for any objections (see Title 20, California Code of Regulations section 1716 (e)).

If you have any questions or comments, please contact me either by telephone at (916) 653-1639, or by e-mail at smunro@energy.state.ca.us.

Sincerely,

/signed/

STEPHEN D. MUNRO
Compliance Project Manager
Energy Facilities Siting Division

Enclosure

cc: Chris Doyle, NRG Energy Inc.
John A. McKinsey, Stoel Rives LLP
Marc Kodis, NRG Energy Inc.

**EL SEGUNDO POWER REDEVELOPMENT PROJECT (00-AFC-14C) PETITION TO AMEND
DATA REQUESTS (SET TWO)**

Technical Area: Public Health

Author: Dr. Alvin Greenberg

BACKGROUND

The Request for Amendment claims on page 3-79 that a net decrease in noncriteria emissions will occur as a result of the proposed use of different combustion turbines, the elimination of a cooling tower, and the elimination of the diesel emergency fire water pump. While staff agrees that these proposed project amendments will result in a decrease in risk to public health due to lower emissions of Toxic Air Contaminants, staff nevertheless needs a stand-alone human health risk assessment for the project that is proposed to be built in order to completely assess all potential impacts.

DATA REQUESTS

Please provide a human health risk assessment for the revised project using the Hot Spots Analysis and Reporting Program (HARP) model.

**EL SEGUNDO POWER REDEVELOPMENT PROJECT (00-AFC-14C) PETITION TO AMEND
DATA REQUESTS (SET TWO)**

Technical Area: Hazardous Materials Management
Author: Dr. Alvin Greenberg

BACKGROUND

The Request for Amendment describes the use of hazardous materials on pages 2-11 and 3-56. Information on these pages is incomplete and appears to be contradictory in that one page mentions the need for an oxygen scavenger while the other page describes the elimination of the need for an oxygen scavenger and the use of a “peroxide”. Staff needs a more complete discussion of the hazardous materials to be used on this site and the amounts and location of storage tanks.

DATA REQUESTS

1. Please provide the identity of the “peroxide” proposed for use at the power plant, its CAS number, the amount to be stored, and a Material Safety Data Sheet (MSDS).
2. Please provide a revised list of all hazardous materials that will be used and/or stored on the site, the CAS number, the strength, the amount, the proposed use, and the proposed locations of storage tanks..

**EL SEGUNDO POWER REDEVELOPMENT PROJECT (00-AFC-14C) PETITION TO AMEND
DATA REQUESTS (SET TWO)**

Technical Area: Soil and Water Resources

Author: Richard Latteri

BACKGROUND

I have reviewed the ESRP amendment and have determined that additional information is required for a complete analysis of potential impacts to water and soil resources from the construction and operation of the ESRP project. The following information is requested so that a complete analysis can be made of the project's ability to comply with applicable LORS.

DATA REQUESTS

The ESRP proposes to use recycled water for all non-potable operation uses and proposes to use potable water as a backup source. Additional information on the estimated amount of potable water consumption and the availability of other nonpotable sources is required for staff to conduct a complete analysis of potential impacts to water resources and the project's compliance with applicable LORS.

1. Please provide an itemized estimate in tabular format of daily and annual average potable water consumption for plant construction, equipment wash water, hydrostatic testing of all pipelines, and any other uses for the construction of the ESRP.
2. Please provide the daily potable water consumption estimates requested in Item 1 above as an average in gallons per minute and the annual water consumption in acre-feet per year.
3. Please provide a reliability assessment of the recycled water supply and distribution infrastructure from the recycled water supplier to the ESRP. As part of the assessment, please provide the expected frequency and duration of any potential disruption of the recycled water supply or distribution system.
4. Please provide a reasonable estimate in days or hours, based on the reliability assessment requested in Item 3, that potable water would be required as a backup source for ESRP operation.
5. Please provide a "Will Serve" letter from the City of El Segundo, which commits the City to the long-term (30 – 35 years) delivery of potable water to the ESRP; a discussion of the supply reliability including the area of origin of the raw water source; and the potential impacts of ESRP potable water use on other municipal and industrial users over the 30 – 35 year delivery period.

**EL SEGUNDO POWER REDEVELOPMENT PROJECT (00-AFC-14C) PETITION TO AMEND
DATA REQUESTS (SET TWO)**

BACKGROUND

State of California Water Recycling Criteria (adopted in December 2000) requires the submission of an engineering report to the Los Angeles Regional Water Quality Control Board (LARWQCB) and the Department of Health Services (DHS) before recycled water projects are implemented.

DATA REQUESTS

6. Please define the level of Title 22 Treatment (disinfected tertiary, disinfected secondary-2.2, or disinfected secondary-23) of all recycled water sources proposed for use for any purpose of ESRP construction, landscape irrigation, and industrial purposes.
7. Please provide a discussion of the permits and oversight requirements of the LARWQCB and DHS for the supply and use of recycled water at the ESRP, and whether a board hearing will be required per the provisions of Water Code Section 13523 et seq.
8. Please provide the names and telephone numbers of the LARWQCB and DHS personnel who are responsible for recycled water permitting and use.
9. Please provide a "Will Serve" letter from West Basin Water District, which commits the District to the long-term (30 – 35 years) delivery of recycled water, by type if more than one disinfection type will be delivered, to the ESRP and the potential impacts of ESRP recycled water use on future customers over the 30 – 35 year delivery period.

BACKGROUND

The project owner proposes to discharge ESRP sanitary wastewater to the City of Manhattan Beach Municipal Sanitary Sewer in accordance with the City Public Works Department discharge requirements.

DATA REQUEST

10. Please provide the quantity and quality standards for sanitary wastewater discharge to the Manhattan Beach Municipal Sanitary Sewer system. Please provide a discussion of the City's Municipal Codes for hookup and discharge to its sanitary sewer system.

BACKGROUND

To determine the additional impacts to water and soil resources from the construction of the ESRP project and the proposed beach delivery of oversized equipment, a Drainage Erosion and Sediment Control Plan (DESCP) will be required that includes all soil and sand disturbing activities of the ESRP. Although the project owner proposes to submit a Notice of Intent to comply with the terms of the General Permit to discharge stormwater associated with

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DATA REQUESTS (SET TWO)**

construction activities and is currently permitted, a draft DESC needs to be submitted and is to be a separate document from the Construction Storm Water Pollution Prevention Plan (SWPPP).

DATA REQUEST

11. Please provide a draft DESC containing elements A through I below outlining site management activities and erosion/sediment control best management practices (BMPs) to be implemented during site mobilization, excavation/demolition, construction, and post-construction activities. Within the draft DESC, please provide a discussion of the requirements of any additional municipal permits issued by the LARWQCB for separate storm sewer systems. The level of detail in the draft DESC shall be commensurate with the current level of planning for site demolition and corresponding site grading and drainage. Please provide all conceptual erosion control information for those phases of construction and post-construction that have been developed or provide a statement of when such information will be available. The DESC is to be a separate document from the construction SWPPP and will be updated and revised as the project moves from the preliminary to final design phases.
 - A. **Vicinity Map** – A map(s) at a minimum scale 1"=100' will be provided indicating the location of all project elements with depictions of all significant geographic features including swales, storm drains, and sensitive areas.
 - B. **Site Delineation** – All areas subject to soil/sand disturbance for the ESRP (project site, lay down/demolition areas, beach delivery site, all linear facilities, landscaping areas, and any other project elements) shall be delineated showing 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** – The DESC shall show the location of all nearby watercourses including swales, storm drains, and drainage ditches. Indicate the proximity of those features to the ESRP construction, lay down/demolition, beach delivery site, and landscape areas, and all transmission and pipeline construction corridors.
 - D. **Drainage Map** – The DESC shall 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 shall be extended off-site for a minimum distance of 100 feet in flat terrain.
 - E. **Drainage of Project Site Narrative** – The DESC shall include a narrative of the drainage 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 shall state the watershed size(s) in acres that was used in the calculation of drainage measures. The

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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 ESRP construction and laydown/demolition areas.

- F. Clearing and Grading Plans** – The DESCPC shall provide a delineation of all areas to be cleared of vegetation and areas to be preserved. The plan shall provide elevations, slopes, locations, and extent of all proposed grading as shown by contours, cross sections, or other means. The locations of any disposal areas, fills, or other special features will also be shown. Illustrate existing and proposed topography tying in proposed contours with existing topography.
- G. Clearing and Grading Narrative** – The DESCPC shall include a table with the quantities of material excavated or filled for the site and all project elements of the ESRP (project site, lay down/demolition areas, beach delivery site, and pipeline corridors) to include those materials removed from the site due to demolition, whether such excavations or fill is temporary or permanent, and the amount of such material to be imported or exported. The table shall distinguish whether such excavations or fill is temporary or permanent and the amount of material to be imported or exported.
- H. Best Management Practices Plan** – The DESCPC shall identify on the topographic site map(s) the location of the site specific BMPs to be employed during each phase of construction (initial grading/demolition, project element excavation and construction, beach delivery site, and final grading/stabilization). BMPs shall include measures designed to prevent wind and water erosion in areas with existing soil/sand contamination. Treatment control BMPs used during construction should enable testing of groundwater and/or stormwater runoff prior to discharge to Santa Monica Bay.
- I. Best Management Practices Narrative** – The DESCPC shall show the location (as identified in H above), timing, and maintenance schedule of all erosion and sediment control BMPs to be used prior to initial grading/demolition, during project element excavation and construction, beach delivery site preparation and use, final grading/stabilization, and post-construction. Separate BMP implementation schedules shall 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 provided when such information will be available.

**EL SEGUNDO POWER DEVELOPMENT PROJECT (00-AFC-14C) – PETITION TO AMEND
DATA REQUESTS – SET TWO**

Technical Area: Visual Resources
Author: David Flores

BACKGROUND

The petition to amend discusses modifying VIS-1 and VIS-4 which addressed the facility visual enhancement plan. As discussed in the Commission Decision, the California Coastal Commission's responsibility is to insure that permitted developments are sited and designed to protect views to and along the ocean and scenic coastal areas. The Coastal Commission recommended that specific provisions be included in the conditions of certification to meet requirements of the California Coastal Act.

DATA REQUEST

1. Please provide a discussion of the Coastal Commission's response as well as the cities of El Segundo and Manhattan Beach to the proposed change to the project's design and conditions of certification VIS-1 and VIS-4.

Technical Area: Visual Resources - Plume
Author: William Walters

Gas Turbine/HRSG Operating Data

BACKGROUND

Due to the significant changes in the gas turbine/HRSG design, staff needs to assess the amended design's plume potential. While the project owner has stated that they believe that the plume formation should be no worse than that found for the original design due to the higher exhaust temperatures, the owner has not provided all of the exhaust condition data for staff review. Staff requires additional gas turbine/HRSG exhaust data for the revised design to complete this analysis.

DATA REQUEST

1. Please summarize for the gas turbine/HRSG the full operating load conditions that affect vapor plume formation including the exhaust temperature, exhaust mass flow rate, and exhaust water content. Please provide values to complete and correct the table. Additional combinations of temperature and relative humidity, if provided by the project owner, will be used to more accurately represent the gas turbine/HRSG exhaust conditions.

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Parameter	Gas Turbine/HRSG Tower Exhausts					
Stack Height						
Stack Diameter						
Ambient Temperature*	40°F		62°F		83°F	
Ambient Relative Humidity*	90%		70%		47%	
Steam Injection (Yes/No)	Yes	No	Yes	No	Yes	No
Exhaust Temperature (°F)						
Exhaust Flow Rate (1,000 lb/hr)						
Exhaust Water Vapor Flow Rate (lb/hr)						

*The 62°F and 83°F Ambient conditions based on ambient conditions provided in the footnotes of Table 3.15-2 of the Petition to Amend. These ambient conditions can be changed if necessary; however, at least one ambient condition should be provided at or below 50°F.

2. The gas turbine/HRSG stack height and diameter used in the air dispersion modeling analysis are 210 feet and 20 feet, respectively. The gas turbine/HRSG stack height and diameter provided in Table 3.12-1 (p. 3-97) of the Petition to Amend and discussed elsewhere in Section 3.12 are noted as 140 feet and 13 feet, respectively. Please clarify the correct gas turbine/HRSG stack dimensions for the new facility design.

3. Please describe at what ambient conditions steam injection power augmentation would not be used in the gas turbine/HRSG.

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Technical Area: Traffic and Transportation

Author: James Adams

BACKGROUND

The El Segundo project site is located at 301 Vista Del Mar in the City of El Segundo, just north of the City of Manhattan Beach. The traffic and transportation section of the amendment notes that a new laydown and parking area would be located at 777 W. 190th Street, adjacent to the I-110/405 interchange and about ten miles from the project site. Though not stated explicitly, staff assumes that construction workers would be bussed from the parking area to the project site. Access to the project site would be via W. 190th Street, Hawthorne Boulevard, Imperial Highway, and Vista Del Mar. Peak hour levels of service (LOS) are provided for some of the applicable road intersections, but staff needs additional road segment information to determine the construction traffic impact on the local roads.

DATA REQUEST

2. Please provide a table that displays the following information for road segments on the W. 190th Street, Hawthorne Boulevard, Imperial Highway and Vista Del Mar construction traffic route: existing daily average and peak traffic counts and LOS, estimated changes to daily average and peak traffic counts, and changes in LOS due to project related construction traffic.