CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

April 24, 2007

Donal O'Callaghan
Director of Light and Power
City of Vernon
4305 Santa Fe Avenue
Vernon, CA 90058

Dear Mr. O'Callaghan,

VERNON POWER PLANT (06-AFC-4) DATA REQUESTS

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff requests the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the 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 potential mitigation measures.

This set of data requests (#60-74) is being made in the areas of waste management and transmission systems engineering. Written responses to the enclosed data requests are due to the Energy Commission staff on or before May 24, 2007, or at such later date as may be mutually agreed.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, you must send a written notice to both Chairman Jackalyne Pfannenstiel, Presiding Committee Member for the Vernon Power Plant project, and to me, within 20 days of receipt of this letter. 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 (f)).

If you have any questions, please call me at (916) 653-1245, or E-mail me at jreede@energy.state.ca.us.

Sincerely,

James W. Reede, Jr., Ed.D.
Energy Facility Siting Project Manager

Enclosure
cc: POS

PROOF OF SERVICE (REVISED 3/12/07) FILED WITH
ORIGINAL MAILED FROM SACRAMENTO ON 4/24/07

VERNON POWER PLANT
(06-AFC-4)
DATA REQUESTS

Technical Area: Waste Management
Author: Ellie Townsend-Hough

BACKGROUND

Staff and the Department of Toxic Substances Control (DTSC) have reviewed the following four documents that make up the Vernon Power Plant (VPP) Phase II Environmental Site Assessment (ESA).

1. Phase II Environmental Site Assessment, Volumes 1 & 2.
2. Stoddard Solvent Impacted Soils Investigation.
3. Polychlorinated Biphenyls (PCB) Notification Plan.
4. Supplemental Phase II Environmental Site Assessment.

The proposed project site has had a manufacturing presence since the 1940s. There will be a large amount of ground disturbance during project construction, and there is a potential for public health impacts during operations and maintenance, when workers will be present at the site. To protect the workers and reduce/eliminate damage to the environment, the project owner needs to verify that no harmful concentrations of any contaminant will occur at the proposed project site.

DTSC had not been contacted in this process by the applicant. Information presented by DTSC Permitting and Corrective Action Branch on April 18, 2007, confirmed that the City of Vernon's Environmental and Public Health Department does not possess the required Certified Unified Participating Agency (CUPA) certification to be eligible to review their own corrective action projects or approve Remedial Action Plans for soil or groundwater contamination as required by DTSC or the Regional Water Quality Control Board (RWQCB). The applicant will need to provide a schedule and workplan for contaminated soil and groundwater remediation activities with oversight by DTSC and the RWQCB.

According to the VPP Phase I and II ESAs there is evidence of:

- three monitoring wells (AOW-6, AOW-8 and AOW-9) on site for which staff cannot find well abandonment documentation: These wells are in an area which appears to have a groundwater contaminant plume;
- polychlorinated biphenyls (PCBs) in soil which could effect workers dermally and may leach to groundwater. It is not clear if concrete and/or soils contaminated with PCBs were appropriately handled and disposed of during the Alcoa Building demolition activities at the site;
- there appear to be areas where additional sampling for PCBs is necessary;
- Stoddard solvent contamination that can leach to groundwater and potentially be inhaled; and
- other Volatile Organic Compounds detected in the soil, soil vapor and groundwater which may be a risk to human health.

DATA REQUEST

60. Please provide a schedule, workplan, and contacts to comply with DTSC and RWQCB requirements for soil and groundwater remediation.

61. **Monitoring Wells:** Please document the fate of these wells indicating that proper well abandonment activities and/or adequate protection were provided during demolition activities at the site in compliance with California Department of Water Resources (DWR) Bulletins 74-81 and 74-90. Further, the required RWQCB oversight with regard to the existing groundwater contaminant plume shall be discussed in detail.

62. **Polychlorinated Biphenyls (PCBs):** Please report on the status of the PCB investigations for the transformer pads, cathouse area, building 104 and building 106.

    a. If the local agency has determined that certain concentrations of PCBs can remain in the subsurface with a land use covenant, please discuss in detail, and provide documentation of the decisions and site maps showing where those areas are located.

    b. For areas where PCBs have been detected at depth (vertical pits building 104), please evaluate and report on contaminant migration to groundwater.

63. **Stoddard Solvent Contamination**: The Phase II ESA identifies that contamination from Stoddard solvent exists in the subsurface. It is also stated that Areas B and D are not vertically defined. The ESA states that it has been adequately demonstrated that biodegradation (i.e., breakdown of contaminants) is occurring. However, other sections of the report state that 'with few exceptions, the concentration distribution data from the recent characterization is consistent with previous surveys.' Please provide documentation that clearly demonstrates that the contamination has been reduced by biodegradation / natural attenuation.

64. It also appears that a proposal for continued monitored natural attenuation (MNA) of the contaminant plume in the vadose zone is likely to be submitted by the applicant at some future date. While this may be an option, it has not been demonstrated that it can be successfully applied to this site. Please provide the proposal for continued MNA of the contaminant plume.

The following DTSC guidance, which incorporates US Environmental Protection Agency (USEPA) requirements, is provided with regard to the MNA approach and deliverables necessary to respond to the data requests.

    a. USEPA's directive provides that all viable remedial options shall be evaluated and compared during a study phase leading to a selection of a remedy. In this case, MNA is apparently the sole remedy proposed for the site.

    b. Under the DTSC Office of Solid Waste and Emergency Response (OSWER) programs, MNA must still be protective of human health and the environment. One of the key principles of the OSWER program is that contaminated soil shall be remediated to achieve an acceptable level of risk to human and environmental

receptors and to prevent any transfer of contamination to other media (i.e., soil and groundwater). Further, groundwater shall be considered to have 'beneficial use' whenever possible. In this case, transfer of contaminants from soil matrix to vapor and groundwater has not been fully evaluated.

c. A conceptual site model (CSM) shall be presented. CSMs reflect both the level of site understanding and the amount of information and complexity of analysis required to support the decisions that need to be made.

d. The 'mass' of contaminants shall be quantified. The nature and extent of the contamination shall be clearly defined. Figures shall be presented which depict the outline of the plume, including its vertical and lateral limits.

e. It may be necessary to conduct contaminant fate and transport models to further support the theory that the 'mass' of contaminated soils is decreasing through biodegradation processes, and that any remaining contamination does not pose a risk to human health or the environment.

f. Geologic cross sections and boring logs signed by a professional geologist shall be submitted which support the contention that a 'high quality clay layer' exists in the subsurface; and that this clay layer successfully limits vertical migration of contaminants to the aquifer.

g. Groundwater affected by the Stoddard solvent plume shall be addressed. Monitoring wells shall be installed with a plan for reporting on the results of groundwater sampling from the wells. Provide a model of the migration of Stoddard solvent contaminants to the groundwater aquifer.

65. **Volatile Organic Compounds (VOCs):** Elevated concentrations of VOCs exist in the subsurface at the site of the former Alcoa/Alcan facility. For example, vapor phase TCE was detected at 1,900 micrograms per liter (ug/l) at 15 feet below ground surface (bgs). This concentration presents a significant risk to human health and the environment according to DTSC. Please provide a complete delineation of the vapor plume and an indoor air risk assessment, following DTSC and USEPA Guidance and using the J & E model for this property prior to redevelopment. Further, the risk to groundwater from migration of VOCs shall also be addressed in the response.

BACKGROUND

In the Phase II ESA, PCB Notification Plan, Attachment WM-44C, page 3, the following statement is made: "The selection of the cleanup level will be based on whether the City of Vernon's Health & Environmental Control Department approves of the reuse of PCB-impacted concrete (e.g. porous surfaced waste) as crushed fill material where the Site has been designated as low occupancy use."...

The following data requests are presented to address concerns with risk to future occupants at the site, as well as threats to groundwater quality.

DATA REQUEST

66. Please provide what land use needs shall be considered when making decisions about what contaminants remain on site and what portions of the site will be remediated prior to construction/operation of VPP.

BACKGROUND

Risk Assessment: If a 'Risk Based Closure' is proposed for this property, along with a 'Land Use Covenant' (as mentioned in the Phase II ESA reports), then it will be necessary to conduct a risk assessment for the site. Current conditions at the site must be assessed in order to adequately predict the risk to human health and the environment. The intrusion of subsurface vapors into buildings is one of many exposure pathways that must be considered in assessing the risk posed by releases of hazardous chemicals into the environment. DTSC recommends an approach for evaluating vapor intrusion into buildings and its subsequent impact on indoor air quality. If VOCs are present in the subsurface at a site, the vapor intrusion pathway shall be evaluated along with the exposure pathways identified in other guidance (Preliminary Endangerment Assessment (PEA) Guidance Manual, DTSC, reprinted 1999; Risk Assessment Guidance for Superfund (RAGS), Volume 1 Human Health Evaluation Manual, Part A, United States Environmental Protection Agency (USEPA 1989). The Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA) are applicable to the proposed site and subsequent facilities and will need to be addressed in the Risk Assessment.

As discussed by the USEPA in their risk assessment guidance (USEPA RAGS, 1989), the risks from each chemical and from all applicable exposure pathways shall be summed to obtain the overall screening level risk posed by chemicals detected at the facility/site. The guidance (found on the link provided below), along with USEPA's vapor intrusion guidance, provides technically defensible and consistent approaches for evaluating vapor intrusion to indoor air, based upon the current understanding of this exposure pathway.

http://www.dtsc.ca.gov/AssessingRisk/upload/HERD_POL_Eval_Subsurface_Vapor_Intrusion_interim_final.pdf

67. Please provide a complete risk assessment for the site that addresses all contaminants of concern detected at the facility, including VOCs, metals (including hexavalent chromium), naphthalene, and other Semivolative Organic Compounds (SVOCs), total petroleum hydrocarbons, and PCBs. Further, because vapors can migrate, it may not be appropriate to separate the site into 'high' occupancy and 'low' occupancy areas, as suggested in the Phase II report, unless appropriate engineering controls are developed and implemented. Any such controls would need to be monitored under a DTSC operation and maintenance agreement as part of the land use covenant.

68. It is not clear from the ESA reports if the areas listed below were adequately characterized:

    a. Sump (sediments within), in the boring 107 area
    b. Saw area (PCBs)
    c. Outfall #6 (metals)
    d. Former etch station (metals)
    e. Rail line

Please provide characterizations of the listed areas.

VERNON POWER PLANT
(06-AFC-4)
DATA REQUESTS

Technical Area: Transmission System Engineering
Author: Ajoy Guha, PE, Mark Hesters

INTRODUCTION

Staff needs to determine the system reliability impacts of the project interconnection and to identify the corresponding facilities needed to support the proposed VPP. The interconnection must comply with the Utility Reliability and Planning Criteria, North American Electric Reliability Council (NERC) Planning Standards, NERC/Western Electricity Coordinating Council (WECC) Planning Standards, and California Independent System Operator (CAISO) Planning Standards. In addition the California Environmental Quality Act (CEQA) requires the identification and description of the "direct and indirect significant effects of the project on the environment."

For determining compliance with planning and reliability standards and the identification of direct or indirect downstream transmission impacts, staff relies on the System Impact and Facilities Studies of the proposed project. Staff also relies on the review of these studies by the agencies responsible for insuring the interconnecting grid meets reliability standards. The studies analyze the effect of the proposed project on the ability of the transmission network to maintain reliability of the interconnected systems, given the standards noted above. These standards apply not only to interconnected system operation but also to individual service areas. When the studies determine that the project will cause a violation of system reliability criteria, the potential mitigation or upgrades required to bring the transmission system into compliance are identified. The mitigation measures often include the construction or modification of downstream transmission facilities.

BACKGROUND

After reviewing the March 5, 2007, Data Responses Set 2A, with regard to Transmission System Engineering (TSE) Data Request No. 52, staff is concerned with the potential impacts noted in the short circuit study by Southern California Edison (SCE). SCE's study determined that thirteen circuit breakers (CB) at its Lighthipe substation and two CBs at its Laguna Bell substation will exceed fault duties due to addition of the VPP. For operation of the VPP, the CBs at these SCE substations would need replacing or upgrading.

DATA REQUEST

69. Please provide a statement that indicates your agreement with an SCE-approved mitigation plan for the replacement/upgrade of the circuit breakers at the identified substations to prevent short circuit duty overloads caused by the operation of the VPP. The mitigation plan should include the expected completion date for each circuit breaker replacement/upgrade.

VERNON POWER PLANT
(06-AFC-4)
DATA REQUESTS

BACKGROUND

A review of the March 5, 2007, Data Responses-Set 2A, with regard to TSE Data Request Nos. 55 to 58, reveals that the System Impact Study (SIS) performed by SCE was limited to identifying system impacts within the SCE system only, not for any other adjacent interconnected systems beyond SCE. The 914 MW VPP is proposed to be interconnected to SCE's system but in close proximity to the neighboring Los Angeles Department of Water & Power (LADWP) system.

The current SIS does not comply fully with the reliability requirements of the NERC or NERC/WECC planning standards for addressing potential impacts on neighboring transmission systems. The normally open SCE Laguna Bell-Velasco 230 kV tie line to the LADWP system could be closed during emergencies. Therefore, staff believes that an SIS which identifies any impacts to the LADWP system under normal and worst case system conditions (i.e., with and without the tie line closed) would be the most informative.

In this context, please note that during the 2002 AFC process for the City's 134 MW Malburg Generating Station (MGS) interconnection, the SIS performed by Navigant Consulting (Navigant) on behalf of the City included system impacts on the City's 66 kV, SCE and LADWP systems.

DATA REQUEST

70. a. Submit a Power Flow analysis for the LADWP area under normal and probable N-1 & N-2 contingencies and a Short Circuit Duty study for the same area with consultation and approval of the LADWP. The analysis is required to identify the potential system impacts in the LADWP area under 2009 summer peak and light spring system conditions due to interconnection of the 914 MW VPP at the existing Laguna Bell substation.

    b. For any identified reliability criteria violations in the LADWP area, provide respective mitigation measures with a report or approval letter from the LADWP and their expected on-line date.

    c. Provide Power Flow one-line diagrams for the LADWP area for base cases and detected overloads under N-1 & N-2 contingencies.

<u>Alternatively</u>,

70. Please provide a LADWP comment letter on the current SCE SIS, or provide a SIS from LADWP discussing the impacts, if any, of the project on its transmission system. If impacts are identified, the letter or study must provide approved mitigation for the impacts.

BACKGROUND

After reviewing the March 5, 2007 Data responses-Set 2A with regard to TSE Data Request No. 59, staff observes that the City's 66 kV system is connected to the Laguna Bell 66 kV bus. Therefore, the VPP could contribute additional fault currents in the 66 kV network. Moreover, load flows in the 66 kV system may be affected for different generation schedules from the City-owned plants including the MGS or any other generating units being turned on or off. Please note that according to the 2002 SIS performed by Navigant, the interconnection of the MGS caused an increase in fault level in the City's system. It warranted a mitigation plan by the City for replacement or upgrade of forty 66 kV circuit breakers in their 66 kV system.

The mitigation of identified VPP-related overloads on the City's 66 kV system could require the construction or upgrade of downstream facilities. A study of the City's 66 kV system is required to determine whether or not downstream mitigation is required and to identify the whole of the proposed project.

DATA REQUEST

71. a. Provide a Power flow analysis for the City's 66 kV system under 2009 summer peak and spring system conditions for normal base cases and probable N-1 & N-2 contingencies in the 66 kV and SCE systems.

    b. Provide Power Flow diagrams for the City's 66 kV system for base cases and for identified overloads under N-1 & N-2 contingencies.

    c. Provide a Short Circuit Duty study report for the City's 66 kV system. For any identified reliability criteria violations in the City's 66 kV system, identify and describe mitigation measures with their expected on-line date.

BACKGROUND

The interconnection of the VPP requires CAISO review and concurrence or approval of the SIS and Facility Study. The CAISO review letter is required to provide study validation and final approval of the proposed interconnection and any necessary mitigation measures.

DATA REQUEST

73. Provide the CAISO preliminary and/or final interconnection approval letter(s).
74. Please provide an environmental assessment of any new transmission facilities and / or reconductoring selected as mitigation measures that require construction outside of existing substations.

Below is a list of the information that VPP needs to address for Staff's analysis of the potential impacts of any future transmission facilities and / or reconductoring associated with the VPP project:

A) The location, rating and age of the line.

B) A basic, layperson's discussion of the reconductoring process for the line, identifying the techniques used, equipment required, vehicles (land and air), personnel required, parking and staging areas needed, and time needed to complete the reconductoring. This shall include:

- Candidate locations (if available) and average acreage needed for tension and pulling stations, or, alternatively, the approximate number of pulling and tension sites and the average acreage per site.
- Stringing method (slack or tension)
- Need for reel or other storage near the lines.
- Method and access (cherry picker, climbing tower, etc) to unclip the old conductor, install sheaves, and clip in the new conductor and "tension" lines.
- General methodology for any needed tree trimming and brush clearing.

C) How access to the line and towers would be accomplished, including identifying any existing or needed access road to pull sites and staging areas.

D) If known, the location of any tower that would need to be modified or replaced, a basic description of the work that would be done to the tower, and a description of the potential impacts of that work.

E) Identity of any substations that will be added or expanded as a result of the reconductoring.

F) Recent aerial photographs (less than 5 years old) and topographic maps of the applicable line segments (i.e., the segments that would be replaced) with the transmission towers plotted on the photographs.

G) Identification of any sensitive habitats along the route by examining aerial photographs, conducting site visits, searching available databases (such as the Natural Diversity Database) and literature searches, etc.

H) Legible map(s) depicting biological resources (habitat, nesting areas, etc.) within 500 feet of the outside edges of the right of way for the transmission line corridor.

I) Identification of known cultural resource sites within ½ mile of the route based on a California Historic Resource Information System literature search and contact with the Native American Heritage Commission. This information should be provided as a legible map depicting the cultural sites, and must be submitted under confidential cover.

J) If any portion of the line is more than 45 years old, describe modifications/upgrades, if any, that have been made previously and provide any information indicative of the historic significance of the existing transmission line segment to be reconductored.

K) If an existing substation needs to be modified as a result of the proposed project, and it is more than 45 years old, describe modifications/upgrades, if any, that have

been made previously, and provide any information indicative of the historic significance of the existing substation.

L) Legible map(s) showing existing land uses within 500 feet of the outside edges of the right of way, including identification of any school, hospital, daycare center, other sensitive receptors, and residential and commercial areas.

M) Identification of any potentially significant impact to the environment that may occur as the result of the reconductoring, construction technologies that are available to mitigate an impact, and mitigation measures that would reduce the impact to a less than significant level, including the standard environmental mitigation measures developed generically by the transmission owner and/or the CPUC for reconductoring projects.

N) Identity of any agency or other interested party with jurisdiction or permit approval authority over any part of the reconductoring project.

O) In general, provide facts to support conclusions about the potential for impacts and feasible mitigation, including impact avoidance measures.

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

APPLICATION FOR CERTIFICATION
FOR THE VERNON POWER PLANT PROJECT
BY THE CITY OF VERNON

DOCKET NO. 06-AFC-4
PROOF OF SERVICE LIST
(REVISED 3/12/07)

INSTRUCTIONS: All parties shall (1) file a printed, original signed document plus 12 copies OR file one original signed document and e-mail the document to the Docket address below, AND (2) all parties shall also send a printed OR electronic copy of the document, plus a proof of service declaration, to each of the entities and individuals on the proof of service list:

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DECLARATION OF SERVICE

I, Dora Gomez, declare that on April 24, 2007, I deposited the required copies of the attached Data Requests #60-74 for Vernon Power Plant in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above. I declare under penalty of perjury that the foregoing is true and correct.

OR

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

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

Dora Gomez