CALIFORNIA ENERGY COMMISSION
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December 15, 2006

DOCKET
06-AFC-6
DATE DEC 15 2006
RECD. DEC 15 2006

Mr. Greg Trewitt
Vice President
Tierra Energy, Inc.
710 S. Pearl Street, Suite A
Denver, Colorado 80209

Dear Mr. Trewitt:

RE: EASTSHORE ENERGY CENTER DATA REQUESTS (1- 49)

Pursuant to Title 20, California Code of Regulations, Section 1716, the California Energy Commission staff seeks 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 (#1-49) is being made in the areas of Air Quality, Biological Resources, Cultural Resources, Geology, Paleontology, Public Health, Soil and Water Resources, Transmission System Engineering, Visual Resources and Worker Safety and Fire Protection. Written responses to the enclosed data requests are due to the Energy Commission staff on or before January 15, 2007, or at such later date as may be mutually agreeable.

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 both Commissioner Jeffrey Byron, Presiding Committee Member for the Eastshore Energy Center and to me within 10 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) 654-4640 or email me at lprescot@energy.state.ca.us.

Sincerely,

Lorne C. Prescott
Project Manager

Enclosure
cc: Docket (06-AFC-6)
Proof of Service List

Proof of Service List (Revised on _____) filed with Original Document. Mailed from Sacramento on 12/15/06).
GWZ

Technical Area: Air Quality
Author: Brewster Birdsall

BACKGROUND

Reduce Potential PM10 and PM2.5 Impacts

The U.S. EPA recently revised the national ambient air quality standards (NAAQS) for particulate matter less than 2.5 micrometers (PM2.5) downward to 35 micrograms per cubic meter (µg/m3) 24-hour average concentration (see Federal Register Vol. 71, No. 200, p. 61144, October 17, 2006; effective December 18, 2006). The previous standard was 65 µg/m3.

Table 8.1-34 of the AFC shows that the project would cause a maximum impact of roughly 50 µg/m3 PM2.5 over a 24-hour averaging period from direct emissions of PM2.5. Because this project impact would exceed the new NAAQS, the project appears to cause a direct violation of the standard. This would be a significant impact that may be difficult to fully mitigate. Project-related emissions of other pollutants that are precursors to PM2.5 would exacerbate the direct impact by reacting in the atmosphere to form additional, indirect PM2.5 that would add to the project's potentially significant impact.

Emissions of PM10 and PM2.5 should be limited to the lowest achievable rate. The proposed maximum hourly PM10/2.5 emission rate of 2.43 lb/hr (AFC Table 8.1-4) would be roughly equivalent to 0.095 grams-per-brake horsepower-hour (g/bhp-hr). Although the applicant proposes to achieve the level of the Best Available Control Technology (BACT) by using strictly pipeline-quality natural gas, the AFC does not propose a BACT emission level for PM10 (AFC Section 8.1.4.5). The AFC shows that the "Level 2" standards (i.e., achieved in practice) are based on the September 2001 version of California Air Resources Board's (CARB) "Guidance for the Permitting of Electrical Generation Technologies." However, the PM10 level of 0.02 g/bhp-hr from Table I-1 of the July 2002 version of the CARB guidance is not mentioned (AFC Appendix 8.1F). The current 0.02 g/bhp-hr recommendation is for natural gas-fueled reciprocating engine units under 50 megawatts (MW), such as those proposed for Eastshore, and it is considered "achieved in practice" by the San Joaquin Valley Air Pollution Control District (see also AFC Table 8.1F-1).

Good Engineering Practice (GEP) stack height for the facility is shown to be about 120 feet (AFC Section 8.1.7.1.4). Direct impacts of PM10 and PM2.5 might be reduced by increasing the design of the stacks from the proposed 70 feet to some level closer, but not in excess of 120 feet.

DATA REQUEST

1. Please describe why the air emissions are not being mitigated to achieve the more-stringent PM10 and PM2.5 emission limit of 0.02 g/bhp-hr consistent with the current BACT recommendation in CARB guidelines.

2. Please describe the effectiveness and feasibility of other modifications to the facility design or operation that could reduce 24-hour PM10 and PM2.5 impacts (e.g., discuss feasibility of increasing the height of the stacks).
3. Please revise the PM10/2.5 modeling assessment to show how the project would not cause a violation of new PM2.5 NAAQS.
4. Please describe the effect that multiple start-cycles per day could have on PM2.5 24-hour average concentrations, and discuss whether it is feasible to limit the number of start-cycles per day to minimize PM2.5 impacts.

BACKGROUND

Reduce Proposed Level of Ammonia Slip

Ammonia is a State-designated toxic air contaminant and a precursor to PM2.5 formed in the atmosphere downwind. The applicant's proposal is to limit project emissions to 20 ppmvd, a level that would result in nearly 55 tons-per-year NH3 (AFC Appendix 8.1A). Aside from health risk considerations, the project PM2.5 impacts (described above) warrant fully controlling ammonia emissions to avoid contributing to violations of the PM2.5 standards.

In the California Air Resources Board's "Guidance for the Permitting of Electrical Generation Technologies" (pg. 31 of July 2002 guidance), CARB recommends that lean-burn internal combustion engine units with individual capacities of less than 50 MW be controlled to an ammonia slip of 10 ppmvd or less. According to the guidelines, this level is achievable based for engines with Selective Catalytic Reduction (SCR) and an oxidation catalyst, as proposed by Eastshore.

DATA REQUEST

5. Please describe whether the SCR system design could be modified to achieve a level of 10 ppmvd ammonia slip at 15 percent O_2.
6. Please describe the proposed method for monitoring compliance with the ammonia slip limit.

BACKGROUND

Mitigation for PM10 and PM2.5 Impacts

The applicant proposes to mitigate PM10 emissions during the fall and winter season. By estimating the magnitude of PM10 emissions likely to occur on a monthly basis (AFC Appendix 8.1A), and by using a 30-year forecast of plant operation, Eastshore proposes to offset 6.4 tons of PM10/PM2.5. This proposed level of mitigation would not be adequate to offset or reduce impacts caused by year-round PM10/PM2.5 emissions, which at 70.7 tons per year (AFC Table 8.1-10), appear to cause new violations of the PM2.5 NAAQS (as described above).

The applicant's offset calculations are based on a PM10 emission rate of 0.60 lb/hr-per-engine (AFC Appendix 8.1A), but the engines would be allowed to emit 2.43 lb/hr-per-engine (in AFC Table 8.1-4). The PM10/2.5 impacts occurring at the proposed

maximum emission rate must be fully mitigated. Either a more-stringent PM10/2.5 hourly emission limit should be proposed (as described above), or the proposed mitigation should be increased to cover the impacts of the allowed emissions. SO2 impacts as a precursor to PM10/2.5 impacts must also be mitigated (AFC page 8.1-56).

The AFC shows a vendor-specified SO2 emission rate of 0.23 lb SO2/hr per engine, with 0.2 lb SO2/hr portion per engine that would be caused by "the contribution from lube oil" (Appendix 8.1A). The contribution of lube oil to SO2 emissions raises questions because staff expects SO2 emissions to generally be dictated by the contribution of sulfur in fuel combustion (shown to be 0.03 lb/hr in AFC Appendix 8.1A). For example, it is not clear whether the higher levels of SO2 emissions from lube oil would occur commonly or only occasionally, and the presence of lube oil in the combustion chamber implies that additional unburned hydrocarbon and PM10 emissions may occur. If possible, clarifying the lube oil consumption/combustions scenarios could result in a lower SO2 emission limit, which would minimize the potential SO2 and secondary PM10/2.5 impacts.

The applicant proposes to mitigate PM10 emissions occurring only during 895 hours of operation between October and April (AFC Table 8.1A-13), but the facility would be allowed to operate 4,000 hours per year. A seasonal mitigation scheme must be carefully crafted to be enforceable. Emission reductions cannot be certified on a seasonal basis in the Bay Area Air Quality Management District (AQMD) as they can be in other air districts that have seasonal accounting systems. Because the project does not include any proposed limitation on seasonal operation, there would be no way to ensure that project emissions are not unevenly biased to occur in the winter months. Therefore, mitigation should be increased to accommodate the proposed annual capacity factor of 45.7 percent.

DATA REQUEST

7. Please identify sufficient PM10/2.5 mitigation for the proposed maximum PM10/2.5 emission rate for each engine at the proposed annual capacity factor of 45.7 percent. Staff suggests a one-to-one ratio of PM10 reductions for the proposed total of PM10 and SO2 emissions.

8. Please describe and provide supporting analysis for any inter-pollutant trading ratio that would be used to mitigate PM10/2.5 impacts with reductions of other pollutants.

9. Please describe whether any of the proposed emission reductions would be biased to occur during winter months and whether the reductions would be biased to PM2.5 instead of PM10.

10. Please consider and describe the feasibility of curtailing operation of the project with a limit on the number of operating hours during the winter season.

11. Please describe whether the presence of lube oil would cause maximum hourly SO2 emissions of 0.23 lb/hr per engine during normal operations or whether these emissions would be limited to other conditions, such as startup and

shutdown. If the contribution of lube oil is occasional, please also describe whether it would be feasible to use lower sulfur lube oil, and/or accept a lower annual SO2 emission limit.

12. Please discuss whether engine lube oil consumption/combustion contributes to the emissions shown in the AFC, or would contribute emissions of unburned hydrocarbons (precursor organic compounds) or PM10/2.5 beyond those shown in the AFC.

13. Please submit timely updates to staff regarding the proposed air pollutant emissions mitigation strategies including emission reduction credits held by the applicant. Confidential filings are acceptable, but the strategy will be described in the Preliminary Staff Assessment.

BACKGROUND

Air Quality Modeling Analysis

Regarding air quality modeling for construction, a key stated assumption is that much of the project area is disturbed during the entire construction process (AFC Appendix Section 8.1E.3). This implies that the wind-driven portion of the fugitive dust emissions would occur around the clock. A preliminary review of the modeling files on CD shows that particulate matter annual impacts from diesel exhaust (file: ESEDPM1.OUT) are determined by dividing the annual emissions into each hour and multiplying a "2.4" hour-of-day factor on each of the ten daytime hours.

However, the applicant's methods for determining particulate matter impacts from dust and other sources are handled very differently (files: ESEPGAN2 and ESEPG24). The source called PAREA1 (in file: ESEPG24) seems like it should include all diesel and fugitive dust particulate matter emissions, because the 24-hour impacts of diesel plus dust sources are not analyzed in any other file, but PAREA1 is only modeled at 2.7 lb/day [i.e., 1.348x10-6 g/s/m2 over 10 hours per day and the 6.22 acre site]. As such, this model run (file: ESEPG24) does not seem to account for all the fugitive dust expected (3.8 lb/day) or the diesel exhaust (16.0 lb/day) shown in AFC Table 8.1E-1. Because sources seem to be underestimated in the files, the impacts shown in AFC Table 8.1E-2 do not seem to be supported by the modeling files.

DATA REQUEST

14. Please provide or identify air quality modeling files that include all construction-related sources of particulate matter (total of 19.8 lb/day shown in Table 8.1E-1) and the 24-hour period maximum PM10 impact. The files should support the results shown in Table 8.1E-2, which do not seem to be supported.

BACKGROUND

The proposed natural gas-fired fuel heater (at 2 MMBtu/hr as in Data Adequacy Supplement dated October 31, 2006) is not included in the modeling analysis.

DATA REQUEST

15. Please include the natural gas-fired fuel heater in the impact assessment or conduct a sensitivity/screening analysis for this source to provide a rationale for rejecting it from facility-wide modeling.

BACKGROUND

Cumulative impacts have not yet been evaluated (AFC Section 8.1.8.13), and the protocol for cumulative modeling indicates that "reasonably foreseeable projects" will be included in the analysis (AFC Appendix 8.1H). The Russell City Energy Center (01-AFC-7) is a facility that received an Energy Commission license but has not yet begun construction. Staff understands that the ultimate location and timing of the plant is now in question with the amendment filed November 7, 2006. However, it is not clear in the protocol how this potential source will be addressed in the cumulative impacts analysis. Staff recommends including this source.

DATA REQUEST

16. Please propose a strategy for including the Russell City Energy Center in the cumulative air quality impacts analysis

17. Please prepare a cumulative analysis that incorporates the licensed, or amended Russell City project.

EASTSHORE ENERGY CENTER
(06-AFC-6)
DATA REQUESTS

Technical Area: Biological Resources
Author: John Mathias

BACKGROUND

The AFC states that the Applicant will undertake informal consultation with the U. S. Fish and Wildlife Service (USFWS) regarding the need for a Biological Opinion. Staff needs confirmation on whether or not formal consultation with USFWS will be needed in order to complete the project's analysis.

DATA REQUEST

18.

a. Please provide copies of any written correspondence with USFWS. If written correspondence is not available, please provide a detailed summary of any communication with the USFWS, including the names and contact information of USFWS staff whom the Applicant has contacted.

b. If formal consultation will be required, please provide an estimate of when that process will be completed.

Technical Area: Cultural Resources
Authors: John Dougherty, Cindy Baker, and Beverly E. Bastian

BACKGROUND

The AFC notes that the City of Hayward has a historic preservation ordinance and a Historic Property List (AFC p. 8.3-5) but does not mention that the Historic Property List was checked for any listed properties in the Eastshore project's "project area" (AFC p. 8.3-14). Additionally, the AFC states that historical societies were contacted, but the contacted societies are not named, and the results of the contacts are not discussed (AFC p. 8.3-18).

DATA REQUESTS

19. Please check the City of Hayward's Historic Property List and provide the names and locations of any listed properties located within the Eastshore project's "project area."
20. Please provide the names of the historical societies and archaeological organizations contacted, the dates of the contacts, and the names and locations of any cultural resources identified by these groups as being located within the Eastshore project's "project area."

BACKGROUND

The information from the California Historical Resources Information System (CHRIS), which the applicant provided under confidential cover to staff, included:

- site forms for five known resources;
- a copy of one cultural resources survey report whose coverage included the Eastshore project site and the three transmission line route options; and
- bibliographic data for 15 additional survey reports that the CHRIS identified as having been conducted within the one-half-mile-radius literature review area for the Eastshore project, but copies of which were not provided by the applicant to staff.

The AFC states that all 16 reports (one provided to staff and 15 not provided) were reviewed for information pertinent to the Eastshore project (pp. 8.3-15), but no findings from these reports were discussed in the AFC.

The CHRIS-provided material also included a map annotated to show known cultural resources and the coverage of the 16 cultural resources surveys conducted within the project's literature review area. The original of this map appears to have been annotated in color so the various survey coverages would be distinguishable from each other. It is not possible to distinguish the coverages of the 16 surveys on the black-and-white copy of the map provided to staff.

Staff needs a color copy of the map to obtain detailed information on the coverages of the previous cultural resources surveys conducted in the area. Staff also needs copies

of the 15 survey reports that were not provided by the applicant with the AFC to ensure a complete compilation of all potentially significant cultural resources on or near the proposed project.

DATA REQUESTS

21. Please provide copies of the 15 CHRIS-identified cultural resources survey reports reviewed by the applicant but not already provided to staff.

22. Please provide a color copy of the CHRIS-provided map annotated to show known cultural resources and the coverage of the 16 cultural resources surveys conducted within the project's literature review area.

BACKGROUND

The CHRIS-provided materials include copied portions of historic maps indicating that the Union Pacific Railroad, which forms the proposed Eastshore project's northeast boundary and the eastern boundary of the proposed laydown area, is of sufficient age to be a potential historic resource. This railroad appears as the "Central Pacific Railway" on both the 1878 Thompson and West map and the 1899 USGS Hayward quadrangle map. On the U. S. Army Corps of Engineers 1942 Hayward quadrangle map, it is labeled as the "Southern Pacific Railroad." The CHRIS did not provide a Department of Parks and Recreation (DPR) 523 form for this resource. The AFC does not identify this potentially historic railroad right-of-way as a cultural resource, nor is there a discussion of the significance of this property in local and regional history.

Additionally, the 1899 USGS Hayward quadrangle shows the "Mt. Eden station" (presumably a railway station, consisting of two structures) in the northern corner of the proposed Eastshore project laydown area, next to the railroad tracks. It is possible that there are subsurface remains of this facility, including foundations and privy and/or trash pits.

The applicant's archaeologists found no surface indications of any kind of cultural resources (AFC p. 8.3-17), but weeds precluded good ground visibility. Staff needs more information on these resources in order to ensure having a complete compilation of all potentially significant cultural resources on or near the proposed project, to evaluate the significance of the railroad and the Mt. Eden historic archaeological site, and to assess the project's potential impacts on these resources.

DATA REQUESTS

23.

a. Please have a qualified architectural historian record the historic railroad on DPR 523 forms and perform historical research on the railroad to complete the Building, Structure, and Object detail form, including date of construction, operational history, impacts to local and regional economic development resulting from its construction and operation, modifications

through time, and the evaluation of the railroad's significance in the Mt. Eden area.

b. Please have the architectural historian assess the potential impact of the project (including that of the overhead transmission lines) on the historic railroad.

c. Please also have the architectural historian research and write a brief history of the Mt. Eden Station.

d. Please provide the DPR forms and project impact assessment for the railroad, and the Mt. Eden history, to staff.

24. a. Please provide details of the planned project use of the former location of the Mt. Eden Station. If the project will require continuous heavy equipment traffic over the area, removal of soils by the project, or use as soil storage with later soil removal by grading, then please have a qualified historical archaeologist involved. The archeologist will need to determine by carefully controlled mechanical grading in the area where the Mt. Eden station was located, whether any subsurface remains survive. If remains are found, please have them mapped, photographed, and recorded on DPR 523 forms, and the forms provided to staff.

b. Staff will need the information above for completion of its Final Staff Assessment. Please provide a schedule for the archeologist grading activity.

BACKGROUND

If the forthcoming geotechnical report recommends over-excavation and engineered filling for all or part of the proposed plant site, and removed soils may be disposed of off-site and/or new soils brought in from off-site, staff needs information on the potential for the Eastshore project to impact cultural resources in the disposal and borrow sites that could be used.

DATA REQUESTS

25. If potential disposal and borrow sites are not commercial operations and consequently have not been surveyed for cultural resources, please conduct such surveys and provide the personnel qualifications, methods, and findings to staff.

BACKGROUND

The AFC indicates that contact with Native Americans up to the date of filing the AFC consists of one letter providing information about the proposed Eastshore project to a group of Native Americans identified by the Native American Heritage Commission (NAHC) as having traditional ties to Alameda County (p. 8.3-18). The AFC does not indicate that any telephone contacts have been made to these Native Americans. The NAHC requests that, in addition to a letter, follow-up telephone calls be made about a project to the Native Americans who were contacted.

DATA REQUESTS

26. Please provide copies of any communications from, or records of any communications with, Native Americans received since September 15, 2006, regarding the proposed Eastshore project.

27. Please make the follow-up telephone calls requested by the NAHC and provide copies of telephone logs of the calls, showing that the letters were received and documenting any verbal information (or lack of information) provided by Native Americans about the proposed project.

Technical Area: Geology
Author: Patrick Pilling, Ph.D., P.E., G.E.

BACKGROUND

Existing subsurface information is essential to completely evaluate a site with respect to potential geologic hazards and how the existing materials may impact design, construction, and operation of the facility. Appendix 10G.1 references a geotechnical investigation for this site that was performed on August 24, 2006, as being contained in Appendix 8.14A; however, a copy of the geotechnical investigation is not included in Appendix 8.14A.

DATA REQUEST

28. Please provide a copy of the geotechnical investigation that has been performed at the project site.

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

BACKGROUND

Aqueous ammonia (19%) will be used in the SCR process to control oxides of nitrogen. The AFC states that the Off-site Consequence Analysis (OCA) will be provided during the AFC process (section 8.12.5). The AFC also discusses the delivery of aqueous ammonia to the facility but does not state the size (capacity) of the delivery trucks nor the preferred hazardous materials transport route.

Staff needs the OCA modeling results (including the methodology and input/output files), the capacity of the delivery tanker, and the preferred route(s) from the supplier to the facility in order to evaluate potential impacts to on-site workers and the off-site public.

Also, Table 8.12-3 of the AFC lists the chemicals proposed for use at the power plant during operations. Staff needs the specific identity and CAS number of all chemicals proposed for use.

DATA REQUESTS

29. Please provide the Off-site Consequence Analysis as per the California Accidental Release Prevention Program (Cal-ARP) guidance, including the methodology and the input/output files.

30. Please provide the following information regarding the transportation of aqueous ammonia:

    a. the size (capacity) of the delivery trucks, and

    b. the exact preferred route(s) from the supplier to the facility

31.

    a. Please provide a more detailed description of the aqueous ammonia storage tank and secondary containment area including dimensions and placement of the tank, the secondary containment structure, and the location and dimensions of the tanker truck transfer pad.

    b. Please provide a preliminary design drawing of these features that would be helpful.

32. Please provide the chemical name and CAS number for the corrosion inhibitor listed, following the material found in Table 8.12-3 of the AFC.

Technical Area: Paleontology
Author: Patrick Pilling, Ph.D., P.E., G.E.

BACKGROUND

Reviewing existing technical reports is essential to completely evaluate a site with respect to paleontological resources. Section 8.16.3.1 references an existing paleontological resource/inventory report for the Russell City project; however, a copy of this report was not included with the AFC.

DATA REQUEST

33. Please provide a copy of the report titled Paleontological Resource Inventory/Impact Assessment Technical Report that has been prepared for this nearby site.

Technical Area: Public Health
Author: Dr. Alvin Greenberg

BACKGROUND

The AFC states that the current version of ISCST3 was used in the air dispersion modeling of emissions from the project and that the Hot Spots Analysis and Reporting Program (HARP) model was used to assess cancer risk and chronic and acute impacts because HARP contains an earlier version of ISCST3. Staff needs certain data in order to independently confirm the HRA results as found in the AFC. Staff also needs distances to certain receptors to complete its analysis of impacts.

The project applies Toxics-Best Available Control Technology (T-BACT) to the 14 lean-burn engines. Toxic pollutant emissions from facility equipment are assumed to result in a reduction factor of 40% of California Air Toxics Emissions Factor (CATEF) uncontrolled emission factors due to the efficiency of the oxidative catalyst. The AFC states that this assumption is "highly conservative."

DATA REQUESTS

34. Please provide the HARP transaction file (.tra) **and/or** the following information that was used in the HARP modeling:
    a. Stack parameters and locations in Universal Transverse Mercator (UTM) coordinates
    b. Information on Project buildings and tanks used in building downwash analysis (locations in UTM coordinates and dimensions)
    c. Meteorological data used
35. Please provide a table and a map showing distances from the combustion turbine stacks to various the following receptors including:
    a. the fenceline,
    b. the location of the cancer risk of the Maximum Exposed Individual (MEI),
    c. the location of the acute hazard MEI,
    d. the location of the chronic hazard MEI,
    e. the location of the Points of Maximum Impact (PMI) for cancer risk and acute & chronic hazards, and
    f. the six few representative sensitive receptors nearest to the project, and
    g. the location of any schools within 2 miles of the project fenceline.
36. Please provide references and other background information to support the assumption of 40% reduction in emissions.

Technical Area: Soil and Water Resources
Author: Richard Latteri

BACKGROUND

The Eastshore Energy Center proposes to use potable water for all construction, operation and landscaping activities as outlined in Section 8.14.4.1 of the AFC. Potable water for the Eastshore project is to be provided by the City of Hayward. The City of Hayward's sole source of potable water is the San Francisco Regional Water System operated by the San Francisco Public Utilities Commission. The primary source of water for the San Francisco Regional Water System is the Hetch Hetchy Reservoir located in the Sierra Nevada mountains in Tuolumne County.

The State Water Resource Control Board's policy on the Use and Disposal of Inland Waters Used for Power Plant Cooling (Resolution 75-58) states that the use of fresh inland water should only be used for power plant cooling if other sources or other methods of cooling would be environmentally undesirable or economically unsound. The SWRCB policy requires that power plant cooling water should come from, in order of priority: wastewater being discharged to the ocean; ocean water; brackish water from natural sources or irrigation return flow; inland waste waters of low total dissolved solids; and other inland waters. Additionally, Water Code Section 13551 finds the use of potable water for industrial and irrigation uses is a waste or an unreasonable use of potable water within the meaning of Section 2 of Article X of the California Constitution if recycled water is available.

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.

DATA REQUEST

37. 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, plant operation, and landscape irrigation of the Eastshore project. Please provide the daily potable water consumption as an average and maximum flow in gallons per minute and the annual potable water consumption in acre-feet per year.

38. Please provide a "Will Serve" letter from the City of Hayward, which commits the City to the long-term (30 – 35 years) delivery of potable water, a discussion of the reliability of this supply including a backup water source for plant operation, and the potential impact from project use to other municipal and industrial users over the 30 – 35 year delivery period.

39. Please provide the rationale and economic justification for not using an alternative nonpotable water source consistent with the SWRCB Resolution 75-58.

40. Please provide an economic analysis comparing the use of degraded groundwater (if available) and secondary/tertiary treated recycled water versus the use of potable water over a 35 year period that encompasses both the demolition/construction and operation phases of the Eastshore project.

BACKGROUND

To determine the potential impacts to water and soil resources from the construction of the Eastshore Energy Center project, the Energy Commission requires a Drainage Erosion and Sediment Control Plan (DESCP). The DESCP will be updated and revised as the project moves from the preliminary to final design phases and is to be a separate document from the Construction Storm Water Pollution Prevention Plan (SWPPP). The DESCP submitted prior to site mobilization must be designed and sealed by a professional engineer/erosion control specialist.

The City of Hayward is a co-permittee of the Alameda County Clean Water Program, which is a coordinated effort by local governments in Alameda County to improve water quality in San Francisco Bay. In February of 2003, the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) approved a new Municipal Stormwater Permit (Order No. 2003-0021) for Alameda County, which requires more stringent Best Management Practices (BMPs) prior to stormwater discharge from new development or redevelopment. While Appendix 8.14A of the AFC and the Eastshore Energy Center Data Adequacy Supplement contain several erosion/sediment control BMPs and water pollution control drawings, these will need to be aggregated into a draft DESCP.

DATA REQUEST

41. Please provide a draft DESCP containing elements A through I below outlining site management activities and erosion/sediment control BMPs to be implemented during site mobilization, excavation/demolition, construction, and post-construction activities. Within the draft DESCP, please provide a discussion of those additional requirements of Order No. 2003-0021 as they relate to construction and post-construction BMPs. The level of detail in the draft DESCP should 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 when such information will be available.

    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 disturbance for the Eastshore project (project site, lay down/demolition areas, 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 DESCP shall show the location of all nearby watercourses including swales, storm drains, and drainage ditches. Indicate the proximity of those features to the Eastshore project construction, lay down/demolition, and landscape areas and all transmission and pipeline construction corridors.

D. **Drainage Map** – The DESCP 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 DESCP 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 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 Eastshore project construction and laydown/demolition areas.

F. **Clearing and Grading Plans** – The DESCP 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 DESCP shall include a table with the quantities of material excavated or filled for the site and all project elements of the Eastshore project (project site, lay down/demolition areas, transmission corridors, 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 DESCP 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, and final grading/stabilization). BMPs shall include measures designed to prevent wind and water erosion in areas with existing soil contamination. Treatment control BMPs used during construction should enable testing of groundwater and/or stormwater runoff prior to discharge to San Francisco Bay.

I. **Best Management Practices Narrative** – The DESCP 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, 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.

Technical Area: Transmission System Engineering
Author: Laiping Ng

BACKGROUND

Section 2.2.5 and Section 5.2.3 of the AFC indicate that the Eastshore Power Plant Switchyard will consist of two step-up transformers. Figure 2.2-5, 115 kV Substation Single Line Diagram, and Figure 5.2-1(E1), Switchyard Single Line Diagram, also shows two 75/90/110 MVA, 13.8/115 kV, step-up transformers. However, the PG&E System Impact Study indicated that there will be only one 75/100/125 MVA, 13.8/115 kV, step-up transformer.

Staff needs clarification regarding the proposed project Substation and switchyard in order to prepare the Staff Assessment for the Eastshore Energy Center project.

DATA REQUEST

42. Please indicate the ratings and number of 13.8/115 kV step-up transformers that will be used for the proposed project.
43. Please resubmit the 115 kV Substation and switchyard diagrams with the appropriate design and showing all equipment for generator's interconnection with the switchyard including any bus duct connectors, switchgear, disconnect switches, generator step-up transformers, breakers and their respective ratings.

Technical Area: Visual Resources
Author: Mark R. Hamblin

BACKGROUND

AFC page 8.11-3, Table 8.11-1 indicates that the height of the exhaust stack is 70 feet inclusive of the exhaust silencer. AFC, page 8.11-2 the second bullet states "Fourteen (14) approximately 70-foot tall stacks, each with a separate continuous emissions monitoring system (CEMS)."

On AFC page 8.11-13 it states "A visual simulation, which added the proposed power plant to the Key Observation Point (KOP) 1 photo, was prepared. It is not included in this assessment because the proposed power plant, and in particular, the 70-foot-high exhaust stacks, would not be visible from this intersection, located approximately 2,800 feet from the site. No change to the views in any direction from this location would occur as a result of either constructing or operating the proposed project. No changes to the visual quality of the views from this residential area are expected as a result of project implementation."

On December 18, 2006 the U.S. EPA's revised national ambient air quality standards (NAAQS) for particulate matter less than 2.5 micrometers (PM2.5) downward from 65 to 35 micrograms per cubic meter for 24-hour average concentration, becomes effective (Federal Register Vol.71, No. 200, pg. 61144, October 17, 2006; effective December 18, 2006). The U.S. EPA's revised standards may trigger an increase in the height of the proposed project's 70-foot exhaust stacks resulting in visibility from KOP 1 - Gettysburg Avenue and Bradford Avenue intersection.

DATA REQUEST

44. If the height of the project's exhaust stack(s) is increased as a result of the implementation of U.S. EPA's revised air quality standards for PM2.5 or PM10, please provide a new color full-page photo-simulation of the project from KOP 1.

Technical Area: Worker Safety/Fire Prevention
Author: Dr. Alvin Greenberg

BACKGROUND

Sections 2.2.12 and 8.7.4.5 of the AFC describes in a very limited manner the fire prevention, suppression, and response systems for the proposed power plant during the construction and operational phases. Section 8.7.4.5 describes the off-site fire response, paramedic services, and Hazardous Materials (HazMat) spillmat response available in a brief and cursory manner. The AFC does not describe the fire prevention, suppression, and response systems that would be on-site in great detail nor the off-site response capabilities of the Hayward Fire Department and the potential impacts on the Hayward Fire Department.

Staff needs more specific information on the fire prevention and response plans, including HazMat spill response and Emergency Medical Services (EMS) response during the Construction and Operational Phases.

DATA REQUESTS

45. Please provide specific information on the fire prevention and response methods planned for the project's Construction Phase and Operational Phase. This will include both fixed and portable systems and include response from the Hayward Fire Department.

46. Please provide a detailed description of the planned EMS and HazMat spill response capability for the Construction and Operational Phases.

47. Please provide a chart showing the locations of Hayward Fire Department Stations, their distance from the project site in miles, the fire response time, the EMS response time, and the HazMat response time all estimated by the fire department. Because the Hayward Fire Department does not have a HazMat Incidence Team, please include distances and response times for the Alameda County HazMat Incidence Team.

48.

    a. Please identify any impacts this project will have on the Hayward Fire Department, and the Alameda County Fire Department and HazMat Incidence Team, and its ability to respond to a fire, HazMat spill, or EMS issue at this project site and cumulatively with the Russell City project site. Also identify and training, personnel, or equipment needs of the Hayward Fire Department and the Alameda County Fire Department and HazMat Incidence Team.

    b. Please discuss the potential for cumulative impacts, given other projects in the area such as the Russell City Energy Center.

49. Please describe in detail the HazMat training and equipment anticipated to be provided to on-site project personnel.

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

APPLICATION FOR CERTIFICATION FOR THE EASTSHORE POWER PLANT PROJECT	**Docket No. 06-AFC-6 PROOF OF SERVICE**

INSTRUCTIONS: All parties shall 1) send an original signed document plus 12 copies OR 2) mail one original signed copy AND e-mail the document to the web address below, AND 3) all parties shall also send a printed OR electronic copy of the documents that shall include a proof of service declaration to each of the individuals on the proof of service:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 06-AFC-6
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DECLARATION OF SERVICE

I, Geoffrey W. Carter, declare that on December 15, 2006, I deposited copies of the attached Eastshore Energy Data Requests (1-49), 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.

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.