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

January 31, 2007

Margaret Fitzgerald
Bullard Energy Center
URS Project Manager
2020 East 1st Street, Suite 400
Santa Ana, CA 92075

Dear Ms. Fitzgerald,

CORRECTED DATA REQUESTS 1 THROUGH 67 FOR THE BULLARD ENERGY CENTER (06-AFC-8)

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff is asking for 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.

The numbering order has changed due some duplicate questions; however, no new requests have been added. Please disregard the original set of data requests filed January 30, 2007 and use this corrected version. This set of data requests (#1-67) is being made in the areas of Air Quality, Alternatives, Biological Resources, Cultural Resources, Hazardous Materials Management, Land Use, Soil and Water Resources, Traffic and Transportation, and Visual Resources - Plume. Written responses to the enclosed data requests are due to the Energy Commission staff on or before March 1, 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, you must send a written notice to both Commissioner John L. Geesman, Presiding Committee Member for the Bullard Energy Center project, and to me, within 10 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 (f)).

If you have any questions, please call me at (916) 651-8891, or email me at mdyas@energy.state.ca.us.

Sincerely,

Mary Dyas, Project Manager
Energy Facility Siting Project Manager

Enclosure
cc: Dockets 06-AFC-8

PROOF OF SERVICE (REVISED 1-31-07) FILED WITH
ORIGINAL MAILED FROM SACRAMENTO ON 2-1-07

BULLARD ENERGY CENTER (06-AFC-8)
DATA REQUESTS

Technical Area: Air Quality
Author: William Walters

AIR QUALITY PERMIT APPLICATION

BACKGROUND

The proposed project will require permits (the Preliminary Determination of Compliance and Final Determination of Compliance) from the San Joaquin Valley Air Pollution Control District (SJVAPCD or "District"). These permits are integrated into the staff analysis. Therefore, staff will need copies of all correspondence between the applicant and the District in a timely manner in order to stay up to date on any permit issues that arise prior to completion of the Preliminary or Final Staff Assessment.

DATA REQUEST

1. Please provide copies of all substantive District correspondence regarding the BEC permit application, including e-mails, within one week of submittal or receipt. This request is in affect until the final Commission Decision has been recorded.

EMISSION OFFSETS

BACKGROUND

The applicant's proposed offset package is currently incomplete. The project still needs to obtain all of its PM10 offsets. Staff requires information providing and justifying the proposed offset package in its entirety for completing our analysis.

DATA REQUEST

2. Please provide a tabulated list showing quarterly emission and emission offset accounting indicating the proposed quantity used quarterly from each ERC source that will be used to fully offset the project's emissions.

3. Please show in this tabulated list the current updated ERC certificate number and former certificate number for all certificates that have been recently split and/or re-issued in the name of the project.

4. Please also show in this list the location, method, and date of emission reduction for each of the ERCs.

BACKGROUND

The applicant's offset package includes the use of interpollutant offset trading. In this case a fraction of the project's PM10 emissions are proposed to be offset using SOx ERCs. Staff requires additional information justifying the proposed interpollutant offset trading ratio to complete our analysis.

5. Please provide an technical analysis that supports the proposed interpollutant offset ratio.

6. Please provide correspondence with the District indicating that they have accepted the proposed SOx for PM10 interpollutant offset trading ratio.

STARTUP AND SHUTDOWN EMISSIONS

BACKGROUND

The requested startup and shutdown emission limits appear to be higher than that being requested for similar turbines currently being licensed. These higher startup emissions impact the quarterly and annual emissions and resulting offset needs. Staff needs additional information regarding the need for the startup/shutdown emissions estimate.

DATA REQUEST

7. Please explain why the NOx, CO, and VOC startup and shutdown emission levels indicated in Table 5.2-13 of the AFC are significantly different than the startup/shutdown estimates provided for the Walnut Creek Energy Park (05-AFC-2), Sun Valley Energy Project (05-AFC-3), and AES Highgrove Power Plant Project (06-AFC-2) that also will use the GE LMS100 turbines.

INITIAL COMMISSIONING

BACKGROUND

Staff requires additional information regarding the initial commissioning tests in order to evaluate the corresponding impact analysis. Specifically, exhaust parameters for each test are needed to evaluate the worst-case commissioning test.

8. Please provide the expected exhaust parameters (temperature and velocity) for the six specific initial commissioning tests identified on page 5.2-19 of the AFC.

Emissions Dispersion Modeling

BACKGROUND

The modeling methodology employed by the applicant creates separate runs for different receptor grids/grid spacing, pollutant averaging periods and types, and meteorological file years, which creates an unwieldy number of input and output modeling files. For example this method created 125 modeling output list files for normal operating emissions alone. All of these items can be combined to create a significantly lower number of modeling runs and files which would expedite staff's review. Staff needs the modeling analysis redone to minimize the number of modeling runs to a few dozen at most.

DATA REQUEST

9. Please combine all of the receptor grids, the pollutant averaging periods, and annual meteorological files and then rerun the construction and operations modeling to create single run modeling files. Pollutants should also be combined for cases with similar exhaust parameter inputs. The combined modeling files should also address any other modeling issues identified in these data requests.

Worst-Case Operating Emissions Impacts

BACKGROUND

The existing Island Water Park is located less than 2,500 feet south of the project site. Staff is concerned that employees or the public working on or otherwise using the open elevated water slide platforms at the water park would experience elevated short-term impacts during project operations. Staff needs additional information to assess the expected elevated short-term impacts to receptors at the water park.

DATA REQUEST

10. Please identify the locations and heights of the top of the water park slides and model the initial commissioning and startup/shutdown operating emission scenarios to determine maximum short-term impacts (1 and 8-hour) that could occur at those elevated locations. Please provide electronic copies of these modeling input/output files.

CONSTRUCTION EMISSION CALCULATIONS

BACKGROUND

The Urban Emissions (URBEMIS) model construction emission modeling files use assumptions that are inconsistent with those otherwise provided in the AFC documentation. Additionally, URBEMIS does not properly nor completely estimate fugitive dust emissions or provide a PM2.5 emissions estimate. The construction

emission calculations need to be revised and improved to include all emission causing activities and provide reasonable and consistent assumptions for the emission estimates. Please note that while the District may have identified URBEMIS as an approved method for determining construction emissions, it is the Energy Commission who will evaluate this project's construction emissions, and staff prefers a more site specific estimating approach than is possible by using URBEMIS. The emission factors and estimating methods identified for on-road and off-road equipment on the SCAQMD website, along with the use of USEPA fugitive dust emission calculations for actions not included on the SCAQMD website (such as unpaved roads and paved roads) would be considered an acceptable alternative approach to updating the URBEMIS modeling runs. Staff needs additional information and a revised emission analysis to evaluate the project's construction impacts and determine appropriate mitigation measures.

DATA REQUEST

11. Please identify how many heavy haul trips will be necessary to clear the existing equipment/debris currently located on the site, and indicate where it will be shipped.

12. The Geotechnical report, Appendix L of the AFC, appears to indicate fine soils exist at and near the surface of the site, with approximately 30 to 40 percent silt content for the three sieved samples. Please describe how much of the surface soils (in cubic yards) will need to be removed, how much fill will need to be imported, and describe the final disposal approach for the removed soils.

13. It is assumed that emulsified diesel fuel among several other exotic diesel engine mitigation measures are used in the URBEMIS model runs. These mitigation measures are not mentioned in other areas of the AFC. Please confirm or refute that the use of emulsified diesel and the other URBEMIS identified measures can be stipulated for construction, or remove them from the analysis.

14. There are problems with the URBEMIS model that cause fugitive dust emission mitigation efficiency to be grossly overestimated. In the case of the URBEMIS model runs provided with this estimate, the overall mitigation efficiency for fugitive dust control is over 85 percent even though no single fugitive dust operation would be controlled by more than 60 percent with the given inputs. Please provide an appropriate correction for the fugitive dust mitigation efficiency overestimate by URBEMIS considering the applicant's proposed fugitive dust mitigation measures.

15. Other URBEMIS model inputs appear to be problematic. For example: 1) the fugitive dust basis uses non-conservative default model values when the site is known to have fine soils, 10 lbs/acre versus the worst-case 38.2 lbs/acre; and 2) the construction schedule start date is too early considering the time necessary for licensing/permitting and the number of months are inconsistent with the overall 16 month schedule provided in Appendix I Attachment B Table IB-1.

Please review all of the modeling inputs, correct as necessary based on this request and other applicable data requests using URBEMIS or an alternative more site specific emission estimating approach and resubmit the construction emission estimates. If the URBEMIS modeling runs are revised please also submit the electronic input and output files.

16. It is unclear from the simplified on-road vehicle emission calculation method whether the worst case day and annual on-road emissions are correctly estimated. There are likely to be construction periods that would require comparatively higher numbers of heavy truck trips. For this project, that would likely occur when major concrete pours are required for the foundation. To confirm the on-road emission estimates, please identify the maximum number of daily heavy vehicle trips and Vehicle Miles Traveled (VMT) necessary during peak periods and the total number of heavy vehicle trips, by type and assumed round trip locations, needed for all preconstruction and construction activities.

17. Please provide a PM2.5 emission estimate for the construction phase. For engine emissions please either assume 100% of engine particulate emissions are PM2.5 or use approved California Air Resources Board (CARB) California Emission Inventory Development and Reporting System (CEIDARS) particulate size speciation profiles. For fugitive dust emissions, please use approved CEIDARS particulate size speciation profiles, or if USEPA fugitive dust emission factor calculations are used, use the appropriate referenced procedures for those methods.

18. The presentation of the URBEMIS results in Appendix I Attachment B is incomplete and has errors, such as indicating that it was information from another model rather than from URBEMIS. If the revised emission calculations are performed using URBEMIS, please provided a corrected hardcopy presentation of the results.

CONSTRUCTION DISPERSION MODELING

BACKGROUND

The construction dispersion modeling files appear to have errors, there are missing inputs parameters and missing files and inconsistencies in the input files versus the assumptions provided elsewhere in the AFC. Staff needs these apparent errors and inconsistencies corrected and/or explained and needs copies of the missing modeling files.

DATA REQUEST

19. The construction schedule assumption in the emission calculations shows construction will occur eight hours a day; however, the modeling files do not use hourly emission factors for the actual hours of the day construction will occur.

Additionally, the PM10 modeling did not include the PM10 fugitive dust emissions. Please rerun the construction emissions modeling analysis using appropriate hourly emission factors for the hours in the day assumed for construction and add appropriate fugitive dust emission sources in the PM10 model run. Also as noted previously, please combine receptors and meteorological files to reduce the number of modeling runs by a factor of ten.

20. The AFC notes that the ozone limiting method (OLM) is used for the 1-hour NO_2 impact determination. However, no NOx_OLM modeling files or simplified OLM method calculations are provided to confirm the results presented for the 1-hour NOx impacts. Please provide the NOx_OLM input/output files, including ozone input files if NOx_OLM was used, or provide the simplified OLM calculations and assumptions if that method was used to determine worst case 1-hour NOx impacts. Please note that other modeling corrections may be necessary based on the other data requests regarding construction emission estimates.

Cumulative Modeling Analysis

BACKGROUND

To complete the staff analysis, a cumulative modeling analysis, performed as described in the Section 5.2.3 of the AFC, needs to be completed by the applicant and submitted prior to publication of the Preliminary Staff Assessment.

DATA REQUEST

21. Please provide a copy of the District's correspondence regarding existing and planned cumulative projects located within six miles of the BEC site. Once this correspondence is provided, then staff will work with the applicant to decide which sources to include in the cumulative analysis required in Data Request 22.

22. Please provide the cumulative modeling analysis including all District identified cumulative sources no later than one month prior to the scheduled publication date of the Preliminary Staff Assessment.

Technical Area: Alternatives
Author: Stan Yeh

BACKGROUND

The AFC states (Sec. 4.2, pg. 4-1) that developers investigated alternative industrial sites in the greater Fresno area, but ascertained that natural gas volumes and electric interconnection capacity were extremely limited. However, exact locations, along with an analysis of the environmental issue areas (i.e., those areas examined for the proposed project site) for each alternative site were not provided. Staff needs additional information regarding the sites that were considered by the applicant but rejected for comparing and discussing feasible project alternatives.

DATA REQUEST

23. Please provide a detailed description (including a map, acreage, elevation, topography) of the alternative sites that were considered.

24. For each alternative site, please provide a brief analysis of all environmental issue areas that were examined for the proposed project site. Enough information should be provided for each issue area in order to determine which site has a greater impact.

BACKGROUND

The AFC states (Sec. 4.2, pg. 4-1) that if the BEC were to be constructed at an alternate location, the proposed project's goals and objectives would not be met as the BEC-PG&E agreement requires that the facility be constructed at the proposed location. However, reasons should be provided as to why the proposed project site best suits the requirements of PG&E and its customers.

DATA REQUEST

25. Please provide a detailed description as to why the proposed project site best suits the requirements of PG&E and its customers and why it is preferred in comparison to the alternative sites.

BACKGROUND

The AFC states (Sec. 4.4, pg. 4-2) that the BEC applicant briefly considered alternate technologies, such as generation facilities utilizing fuels such as coal, oil, biomass or geothermal brine, and that none of these fuels or technologies would be able to meet the reliability and dispatching requirements contained in the BEC-PG&E agreement. However, reasons are not provided as to why these alternate technologies are not feasible.

DATA REQUEST

26. Please provide a detailed description as to why each of the alternate technologies EIF considered for the BEC project would not meet its goals and objectives.

Technical Area: Biological Resources
Author: Heather Blair

BACKGROUND

The location for the proposed Bullard Energy Center (BEC) is in the historical range for the state and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*). The AFC states (Sec. 5.6.1.5, pg. 5.6-8) that a 1993 California Natural Diversity Database (CNDDB) record of the San Joaquin kit fox is adjacent to the west side of the proposed project site. Although the applicant's Data Adequacy Response 7 (revised, January 2, 2007) states that the U.S. Fish and Wildlife Service (USFWS) was contacted, consultation letters discussing potential impacts from the proposed project to the state and federally endangered San Joaquin kit fox were not included. A similar record of correspondence from the California Department of Fish and Game (CDFG) was also not provided in the AFC.

DATA REQUEST

27. Please provide any supporting documents (letter or record of conversation) that resulted from communication with USFWS and CDFG regarding potential impacts to the state and federally listed San Joaquin kit fox. Please provide contact information for the USFWS and CDFG agency personnel that were contacted.

Technical Area: Cultural Resources
Authors: Michael Lerch, Amanda Cannon, and Dorothy Torres

BACKGROUND

AFC Figure 5.7-2 shows that Gas Routes B and C were surveyed for cultural resources. Figure 1 of the Bullard Energy Center (BEC) Cultural Resources Technical Report, however, shows that these two routes were not surveyed. Staff needs to know if Gas Routes B and C were surveyed and whether any cultural resources were identified in these linear routes.

DATA REQUEST

28. Please confirm whether Gas Routes B and C were surveyed for cultural resources.

    a. If the two routes have been surveyed, please describe the results of the survey and if applicable: discuss the eligibility of any identified cultural resources for inclusion in the California Register of Historical Resources (CRHR), any potential construction-related impacts to CRHR-eligible cultural resources, and recommended mitigation measures. Please record any discovered or newly identified cultural resources on a Department of Parks and Recreation (DPR) form 523 and provide a copy of the form.

    b. If Gas Routes B and C have not been surveyed for cultural resources, please conduct cultural resource surveys for both routes and provide the results. If cultural resources are identified: address their eligibility for inclusion in the CRHR, potential construction-related impacts to the CRHR-eligible resources; and if applicable, recommended mitigation measures. Please record any discovered or newly identified cultural resources on a DPR 523 form and provide a copy of the form.

BACKGROUND

AFC Section 3.5.11 notes that excess materials will be removed from the project site and disposed of at an acceptable location and that fill will be imported to the site. It is possible these disposal and barrow areas contain surface or subsurface cultural resources that could be impacted by construction-related activities.

DATA REQUESTS

29. Please verify whether the fill source site(s) and excess material disposal areas are commercial locations. If they are not commercial locations, please conduct cultural resource pedestrian surveys, and provide reports of the dates, personnel, methods, and findings, or explain why no surveys are needed.

30. If cultural resources are identified during surveys, provide a discussion of their eligibility for inclusion in the CRHR, discuss potential construction-related

impacts to the resources, and if applicable, recommend mitigation measures. Please record any discovered or newly identified cultural resources on a DPR 523 form and provide a copy of the form.

BACKGROUND

AFC Section 5.7.1.12 briefly addresses the likelihood of buried cultural materials associated with the historical railroad spur crossing North Golden State Boulevard and in the proposed laydown area. This discussion, however, does not address the potential for buried cultural materials in (1) the laydown area with respect to local and regional geology, and soil conditions, (2) the likelihood of buried materials in the remainder of the project site and linear pipeline routes. Staff needs to know the potential for construction-related impacts to buried cultural resources for all project components.

DATA REQUEST

31. Please characterize the potential for buried cultural materials in the proposed laydown area with respect to local and regional geology and soil conditions and if applicable, the types of resources that may be encountered. Within a context of local and regional geology and soil conditions, previous archaeological work conducted in the area, and past disturbances by agricultural, industrial, and residential development, please address the likelihood and types of buried cultural materials that might be encountered in project site, linear pipeline routes, and the laydown area.

BACKGROUND

Rows of olive trees are located in the southern portion of the project laydown area and along the northeast side of North Golden State Boulevard adjacent to Gas Routes B and C. Depending on the age and historical association, trees may be considered a heritage resource. Staff needs to know if these trees are historical and whether they might be impacted by construction-related activities.

DATA REQUEST

32. Please identify whether the olive trees are more than 45 years old and whether they are within 50 feet of the proposed centerline of the gas line route. If the trees are located within 50 feet of centerline of the gas line route, and if they are more than 45 years old, please conduct sufficient historic research to document whether the trees may be eligible for the CRHR.

BACKGROUND

The Confidential Technical Report includes a copy of a Memorandum of Agreement for Treatment and Disposition of Human Remains and Associated Burial Artifacts. At a site visit on December 12, 2006, staff spoke with consultants to the applicant, Matthew Armstrong and Reid Farmer. They assured staff that the burial plan is a sample plan

and that staff would be included in developing a burial plan before any project representatives enter into a binding agreement. Staff's concern regarding this plan is to ensure that consultation by the lead agency (Energy Commission) has been conducted and all Native American groups that might be concerned have been consulted prior to a project owner entering into any sort of binding agreement with Native Americans.

DATA REQUEST

33. Please provide written assurance that staff will be provided an opportunity to conduct consultation with Native American groups and individuals prior to the signing of any binding agreements between those groups and the project applicant.

BACKGROUND

The Confidential Cultural Report includes responses from Native Americans who may have heritage concerns in the project area. When the Native American Heritage Commission (NAHC) provides a list of Native Americans who wish to be contacted regarding construction disturbances on land where they have heritage concerns, the NAHC requests that the project make a follow-up telephone call to Native Americans who have not responded.

DATA REQUESTS

34. Please provide copies of any additional written responses received from Native Americans since the AFC was compiled. If responses have been received by telephone, please provide a summary of each conversation. If the location of archaeological sites may be revealed in the information, please provide the responses under confidential cover.

35. Please make at least one telephone call to Native American individuals or groups whose names were provided by the NAHC, if they have not responded to the applicant's requests for comments. Please provide a copy of any written responses and a summary of any telephone conversations.

Technical Area: Hazardous Materials Management

Author: Dr. Alvin Greenberg

BACKGROUND

Neither the Traffic section nor the HazMat section of the AFC indicates the anticipated frequency of ammonia deliveries during operations or the anticipated route. This information is necessary in order to assess the impacts from transportation of ammonia to this project.

DATA REQUESTS

36. Please provide the number of aqueous ammonia deliveries (per month or per year) that are anticipated to occur during project operation as well as the delivery truck capacity and the anticipated delivery route.

BACKGROUND

Section 5.15.2.4 describes the cumulative hazardous materials assessment conducted for this project and states that "projects with the potential to handle NH4(OH) were identified and analyzed…[and] sites handling hazardous materials that could negatively interact with NH3 and with the potential for off-site migration were identified, analyzed, and discussed in Section 5.15.2, Environmental Consequences." However, a discussion of the facilities identified and analyzed in this assessment is not present in section 5.15.2.

DATA REQUESTS

37. Please provide the list of facilities identified and analyzed for hazardous materials cumulative impacts as indicated in section 5.15.2.4.

Technical Area: Land Use
Author: Negar Vahidi

BACKGROUND

According to the Section 5.4.1.2 of the AFC, the Project site is not designated as Prime or Unique Farmland or Farmland of Statewide Importance, however the off-site pipelines may traverse or run adjacent to Farmlands of Statewide importance or Prime farmlands if the lands were irrigated. The section goes on to state that among the areas affected by the Project, those consisting of Exeter Loam soils are considered to be Farmlands of Statewide Importance and areas that would be Prime if they were irrigated consist of San Joaquin Sandy Loam, 0 to 3 percent slopes, Hanford Sandy Loam, Hanford Gravelly Sandy Loam, Hanford Fine Sandy Loam, Silty Substratum, and Hesperia Fine Sandy Loam, Moderately Deep. However, Figure 5.4-1 shows that the Project site and laydown area would be located on Exeter Loam soils. Consequently, this implies that the Project site and laydown areas would be located on Farmlands of Statewide importance. Because the site is an industrial area, it is obviously not Farmland of Statewide Importance, however, the section is unclear as to where Prime or Unique Farmlands or Farmlands of Statewide Importance are located in relation to the Project site and off-site pipelines. Also, please note that the Agriculture/Soils section of the AFC in Section 5.4.1.2 states that the BEC's impact on Prime Farmland is described in Section 5.9, Land Use. However, Section 5.9 provides no such discussion. The aforementioned information is needed to conduct the analysis of Project impacts on designated agricultural resources.

DATA REQUEST

38. a. Please provide a map showing the Prime and Unique Farmlands and Farmlands of Statewide Importance (as designated by the State of California Department of Conservation), referred to as Farmlands, that are located in the vicinity of the project site and off-site pipelines (i.e., within 0.5 miles from the center line of each pipeline right-of-way).

    b. Please provide a discussion of the BEC's impact on Farmlands.

    c. Please provide the GIS database spreadsheets (preferably in Microsoft Excel format) used to prepare the maps.

    d. Please provide the exact acreages of Prime and Unique Farmlands and Farmlands of Statewide Importance (as designated by the State of California Department of Conservation) so that agricultural land disturbance impacts can be evaluated.

Technical Area: Soil and Water Resources
Author: Linda D. Bond

BACKGROUND

To determine the potential impacts and to ensure protection of water quality and soil resources, the Energy Commission requires a Drainage Erosion and Sediment Control Plan (DESCP) for the BEC site and all linear facilities for both the construction and operational phases of the project. 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 Storm Water Pollution Prevention Plan (SWPPP).

DATA REQUEST

39. Please provide a draft DESCP 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, operation and closure. 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 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 (construction site, laydown area, pipelines, etc.) 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 BEC (project site, laydown area, 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 BEC construction, laydown, 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 BEC construction and laydown 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 BEC project (project site, lay down area, transmission corridors, and pipeline corridors) whether such excavations or fill is temporary or permanent, and the amount of such 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.

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, during all project element (site, pipelines, etc.) excavations 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.

BACKGROUND

Information on existing topography and stormwater drainage that is provided in the AFC should be included in the DESCP. However, some of this information requires clarification.

The AFC describes the existing topography of the project site in various sections of the report. However, these descriptions of topography are not consistent. Page 5.5-1 Section 5.5.1.1 states that the site slopes to the south. In the same paragraph, the AFC also states that the site slopes to the southeast. Page 5.3-12, Section 5.3.1.1 states that the site slopes to the northwest. Data Adequacy Response No. 34, page WATRES-4 states that the site drains to the southwest.

The applicant proposes to allow stormwater from areas of the BEC not containing industrial activities to run off the site as sheet flow. The applicant also proposes to allow some of the stormwater from the industrial areas to flow through the stormwater retention basin and to discharge off the site. More detailed information is needed on the drainage plan to evaluate the potential impacts to soil and water from stormwater runoff.

DATA REQUEST

40. In Section E of the DESCP, please provide a clear description of topographic conditions at the project site and verify that the topographic map of existing conditions submitted with the DESCP is accurate.

41. In Section E of the DESCP, please verify whether the entire project site will be re-graded. If the site will not be entirely re-graded, please indicate on the proposed-drainage map in Section D of the DESCP the portions of the site that will not be re-graded.

42. In Section E of the DESCP,, please provide a clear description of the non-industrial portion of the site, which will not drain to the retention basin, and a clear description of the industrial portion of the site; include a description of the acreage for each portion and a description of all drainage improvements for each area. In Section D of the DESCP, please delineate these two areas on the proposed-drainage map and show all drainage improvements.

43. AFC Figure 3.3-1 shows an “outlet pipe” near the basin but does not indicate where or how basin overflow will discharge offsite. In Section D of the DESCP, clearly indicate on the proposed-drainage DESCP map all drainage features associated with the retention basin, including structural controls and discharge point for off-site stormwater discharge from the retention basin. In Section E of the DESCP, please provide a description of the amount of water that would discharge off the site from the basin during the 100-year storm event, including the percentage of stormwater from the site and the total volume of water.

BACKGROUND

The AFC reports that some soils at the site may contain toxic contaminants; therefore, management of site contamination, which does not exceed hazardous waste criteria, should also be addressed in the DESCP.

DATA REQUEST

44. In Section H and Section I of the DESCP, please describe how potential toxic contaminants in soil and stormwater will be managed to insure they are properly controlled and disposed.

BACKGROUND

The Clean Water Act requires a National Pollutant Discharge Elimination System (NPDES) permit for the discharges of stormwater associated with industrial activity. The AFC presents contradictory information on this issue. Table 5.5-15, which summarizes project conformance with LORS, states that an NPDES permit for industrial activities will not be required because the project will not produce stormwater discharges. However, Section 3.5.8 (page 3-32) of the application states that the project stormwater detention basin will include an outlet structure that will discharge a portion of peak stormflows to a ditch on the north side of the plant adjacent to the access road. Also, in our recent conversations with the Central Valley Regional Water Quality Control Board (RWQCB), they can not determine whether the project would need an NPDES without a more detailed explanation why Bullard should be exempted.

DATA REQUEST

45. Please clarify whether or not the project proposes to obtain a NPDES permit for industrial activity. If not, please provide a detailed explanation why the project should be exempt from this requirement and confirmation from the Central Valley RWQCB.

BACKGROUND

The applicant proposes to use fresh inland groundwater for cooling. Groundwater is overdrafted in Fresno, the area in which the project will be located. The applicant has proposed to offset project use of fresh water through two programs: (1) the importation of surface water for groundwater recharge and (2) the remediation of nitrate-contaminated groundwater. The applicant reports that both programs would be administered through the Fresno Metropolitan Water Resource Management Plan (FMWRMP). The AFC includes a letter from the city of Fresno that expresses support for this plan and indicates that negotiations for these offsets are in progress. This information will be used to determine if the proposed offset plan is viable and to evaluate the potential environmental impacts of proposed water use.

DATA REQUEST

46. Please provide an update on the proposed water supply offset plan for both groundwater recharge and nitrate treatment.

BACKGROUND

The AFC provides analyses of several water supply/cooling alternatives and wastewater disposal alternatives for the project. However, some of the information provided is incomplete or contradictory. Clarification and additional information is required to evaluate the viability of these alternatives and to determine that the project would conform to applicable laws, ordinances, regulations and standards (LORS) and the Energy Commission's cooling water policy identified in the 2003 Integrated Energy Policy Report.

DATA REQUEST

47. The AFC includes economic analyses of the relative costs for most of the water supply/cooling alternatives and wastewater disposal alternatives. Each alternative that is analyzed was assigned a low, medium or high rating for both operation and maintenance costs and capital costs. Please provide an estimated dollar-amount cost for implementing the following alternatives:

    Water Supply

    a. Dry cooling
    b. Herndon Canal water
    c. Municipal water supply
    d. Reclaimed water

    Wastewater Disposal

    e. Zero liquid discharge
    f. Evaporation pond
    g. Deep injection well
    h. Wastewater treatment plant
    i. Off-site treatment facility

48. The discussion of reclaimed water indicates that reclaimed water is available from the Fresno-Clovis Regional Water Reclamation Facility (FCRWRF) but is not the preferred alternative because of costs.

    a. Please clarify whether or not the project could purchase reclaimed water from the FCRWRF.

b. Table 5.5-6 indicates that use of reclaimed water would not satisfy LORS. However, the AFC does not explain this conclusion. Please explain why use of reclaimed water would not satisfy LORS.

c. Table 5.5-6 also indicates that use of reclaimed water would be technologically infeasible, but the discussion on page 5.5-12 states that use of reclaimed water will be reconsidered if it becomes "available." Please clarify why the use of reclaimed is currently technologically infeasible.

49. The discussion of agricultural wastewater on page 5.5-12 states that the quantity of water that is available is insufficient and that water quality is too variable to be useable.

a. Please describe the water quality conditions and the technologically feasibility of using agricultural wastewater.

b. Identify the location of the agricultural wastewater source that was evaluated and the volumes of water available on a monthly or seasonal basis from this source.

c. Identify the location of agricultural wastewater source nearest to the project that would have sufficient flows to supply the project.

d. Provide an estimated dollar-amount cost for using agricultural wastewater from the nearest reliable source.

50. The discussion of use of groundwater from the upper aquifer on page 5.5-13 states that "the City of Fresno prohibits the construction of groundwater supply wells outside of those for its own production." Please identify the City of Fresno ordinance or regulation that prohibits private supply wells in the upper aquifer.

51. The discussion of use of groundwater from the lower aquifer on page 5.5-13 states that the City of Fresno opposes the construction of new groundwater wells. Please identify the City of Fresno ordinance or regulation that prohibits private supply wells in the lower aquifer.

52. a. Table 5.5-7 indicates that use of evaporation ponds for wastewater disposal would not satisfy LORS. The AFC does not explain this conclusion. Please explain why use of evaporation ponds for wastewater disposal would not satisfy LORS.

b. The discussion of the use of evaporation ponds on page 5.5-15 states that the BEC site lacks sufficient space to construct evaporation ponds. Please identify how much land would be required to construct evaporation ponds.

c. Table 5.5-7 indicates that evaporation ponds would require high capital costs. Does this estimate include the cost of purchasing additional land for the

ponds? If not, include this cost when providing an estimated dollar-amount cost for implementing evaporation ponds (Data Request 49f).

53. The AFC discusses the use of a deep injection well as an alternative for the disposal of wastewater. Page 5.5-16 states that the applicant determined that the BEC site would not meet installation requirements based on geophysical well logs.

    a. Please provide copies of the well logs (and the well locations) that were used to analyze conditions at the project site.

    b. Describe the specific conditions and identify the evidence in the well logs that supports the conclusion that site conditions do not meet injection well requirements.

Technical Area: Traffic and Transportation
Author: Jason Ricks

BACKGROUND

The Union Pacific Railway is located 20 feet east of North Golden State Boulevard, across the street from the site. The AFC does not say whether any deliveries would be made via this rail line during construction or operation.

DATA REQUEST

54. Will any deliveries be made to the site (during construction or operation) by rail? If so, how would they be offloaded and delivered to the site?

BACKGROUND

Traffic accident history da**ta** was not provided in the AFC for several intersections in the proximity of the project site.

DATA REQUEST

55. Please provide accident history for the following intersections:

    a. Hwy 99 Southbound Off-Ramp / West Herndon Ave.

    b. Hwy 99 Northbound Off-Ramp / West Herndon Ave.

    c. Grantland Ave. / Parkway Drive

    d. Hwy 99 Southbound Off-Ramp / Shaw Ave.

    e. Hwy 99 Northbound On-Ramp / Shaw Ave.

    f. North Golden State Boulevard / West Herndon Ave.

    g. North Golden State Boulevard / Carnegie Ave.

    h. North Golden State Boulevard / Shaw Ave.

BACKGROUND

Sierra Sky Park (i.e., a local airport) is located 2.2 miles from the project site and serves 7 general aviation transients and 27 general aviation locals**,** but no information regarding flight patterns or approaches is provided. Similarly, no information regarding California Highway Patrol (CHP) over-flight of Hwy 99 is provided in the AFC.

DATA REQUEST

56. Please provide flight patterns for Sierra Sky Park airport.

57. Please verify whether CHP aircraft fly over Hwy 99 in the vicinity of the project site; and if so, identify any issues of concern from the CHP.

BACKGROUND

AFC Section 1.2.2 for the Bullard Energy Center indicates that aqueous ammonia (19 percent) will be delivered to the project site by tanker truck every week during operation, but does not identify the truck route. To evaluate potential traffic and safety issues, the potential truck route needs identification. This would include roadway conditions and any sensitive receptors along the route.

DATA REQUEST

58. Please describe the proposed truck route for hazardous material deliveries and provide a detailed map of the hazardous material route from the appropriate freeway exit to the facility. For the truck route, please discuss:

    - any road hazards such as railroad crossings, sharp curves, and intersections without traffic control such as signals, yield or stop signs, etc;
    - the land uses along the route; and
    - the location of any sensitive receptors along the route such as schools, hospitals, commercial or housing development, etc., affected by hazardous material deliveries.

59. Please provide an estimate of the number and type of hazardous materials deliveries each month including the expected quantity of each delivery.

BACKGROUND

Section 5.11.3.2 of the AFC for the Bullard Energy Center indicates that in-roadway construction will be required for the natural gas and water pipelines. For a complete analysis, staff needs additional information on the pipeline routes.

DATA REQUEST

60. For the proposed pipeline routes, please provide:

    a. the current level of service (LOS) for roadways that the pipelines will follow,
    b. the location of the pipeline within the roadway and the area required for the trenching operation,
    c. the number of traffic lanes to be closed, and timing of the closure,

d. the impact of lane closure on traffic flow,

e. the amount of roadway under construction at any one time, and

f. the duration of pipeline construction and installation activities.

g. The mitigation measures proposed to minimize impacts to traffic and any homes or businesses that will be affected.

BACKGROUND

Two schools are located within two miles of the project site. Teague Elementary School is located approximately 1.3 miles southwest of the site at 4725 N. Polk Avenue. Herndon-Barstow Elementary School is located approximately 1.0 mile northwest of the site at 6265 N. Grantland Ave. However, no information about school bus routes is provided in the AFC.

DATA REQUEST

61. a. Please identify and describe any school bus routes in the vicinity of the project.

b. If there are any school bus routes in the vicinity, please discuss how potential safety impacts for school children getting on or off busses or walking along the route would be eliminated.

c. Through discussion with the local school district, please identify student walking or bicycle routes in the project vicinity, potential safety impacts, and corresponding mitigation.

Technical Area: Visual Resources - Plume
Author: William Walters

COOLING TOWER OPERATING DATA

BACKGROUND

Staff plans to perform a plume modeling analysis for the cooling tower. Staff requires additional cooling tower operating information to complete this analysis. Staff has found that the cooling tower designs for LMS100 turbine projects typically create higher plume frequencies than cooling tower designs for combined cycle projects. Staff must assess several of the design and operating parameters of the BEC cooling tower to confirm its visible plume frequency potential.

DATA REQUEST

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

Parameter	**Cooling Tower Exhausts**		
Number of Cells	3 cells		
Cell Height*	12.8 meters (42 feet)		
Cell Diameter*	6.71 meters (22 feet)		
Tower Housing Length*	27.7 meters (91 feet)		
Tower Housing Width*	11.3 meters (37 feet)		
Ambient Temperature*	16.8°F	63.3°F	114°F
Ambient Relative Humidity	95.2%	76%	14.4%
Number of Cells in Operation			
Heat Rejection (MW/hr)	45.2	58.2	63.9
Exhaust Temperature (°F)			
Exhaust Flow Rate (lb/hr)			

*Ambient conditions and heat rejection, neglecting water makeup and blowdown, are based on the three heat balance cases provided in Section 3 and Appendix A of the AFC. Cell diameter and height are from the air quality modeling CD. Tower length and width are from AFC Table 3.4-1.

Additional combinations of temperature and relative humidity or curves showing heat rejection vs. ambient condition, if provided by the applicant, will be used to more accurately represent the cooling tower exhaust conditions. Please include appropriate design safety margins for the heat rejection, exhaust flow rate and exhaust temperature in consideration that the air flow per heat rejection ratio is often used as a condition of certification design limit.

63. Please provide the cooling tower manufacturer and model number information and a fogging frequency curve from the cooling tower vendor, if available.

64. Please confirm that under normal full load operation of the two turbines only two of the three cooling tower cells will be operating, as noted in Table 3.11.4 of the AFC. Also, please indicate under what ambient conditions that additional cooling tower cells may be shut down while still operating under full load for both turbines.

65. Please confirm that the cooling tower fan motors will not have variable speed/flow controllers.

COOLING TOWER/PLANT OPERATING SCHEDULE

BACKGROUND

This project is designed with specific assumptions regarding maximum hours of operation per quarter. Staff would like to integrate this operating schedule, or other reasonable worst-case operating profiles, into the reasonable worst-case assumptions developed for the plume modeling analysis. Staff needs additional information to understand the expected reasonable worst-case maximum quarterly operating schedule.

DATA REQUEST

66. Please indicate by quarter, or by day or day of week if desired, the hours of the day that the project would be expected to operate given the maximum quarterly operating schedule of 1,100 hours in each of the first and second quarters, 1,200 hours in the fourth quarter, and 1,600 hours in the third quarter (AFC page 5.2-36).

67. Please indicate any other reasonable worst-case hourly operating profiles for this project that are supported by PG&E data on expected maximum future load demand for life of the facility. Please provide all supporting PG&E reference materials for any reduced maximum hourly operating profiles.

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

APPLICATION FOR CERTIFICATION FOR THE *BULLARD ENERGY CENTER (BEC)*	**Docket No. 06-AFC-8 PROOF OF SERVICE**

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

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 06-AFC-8
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

APPLICANT

Gary Chandler, President
Bullard Energy Center, LLC
P.O. Box 95592South Jordan, UT
84095-0592
grchandler@gmail.com

David Jenkins
Environmental Consultant
Bullard Energy Center, LLC
1293 E Jessup way
Mooresville, IN 46158
davidjenk@gmail.com

APPLICANT'S CONSULTANTS

Margaret Fitzgerald,
Senior Project Manager
URS Corporation
2020 East First STreet, Suite 400
Santa Ana, CA 92705
maggie_fitzgerald@urscorp.com

COUNSEL FOR APPLICANT

Allan Thompson
21 "C" Orinda Way, No. 314
Orinda, CA 94563
allanori@comcast.net

INTERESTED AGENCIES

Larry Tobias
Ca. Independent System Operator
151 Blue Ravine Road
Folsom, CA 95630
LTobias@caiso.com

Electricity Oversight Board
770 L Street, Suite 1250
Sacramento, CA 95814
esaltmarsh@eob.ca.gov

INTERVENORS

ENERGY COMMISSION

JOHN L. GEESMAN
Presiding Member
jgeesman@energy.state.ca.us

JEFFREY D. BYRON
Associate Member
jbyron@energy.state.ca.us

Garret Shean
Hearing Officer
Gshean@energy.state.ca.us

Mary Dyas
Project Manager
Mdyas@energy.state.ca.us

Dick Ratliff
Staff Counsel
dratliff@energy.state.ca.us

Margret J. Kim
Public Adviser
pao@energy.state.ca.us

DECLARATION OF SERVICE

I, Joann Gonzales, declare that on January 31, 2007, I deposited copies of the attached Notice of Public Information Hearing & Site Visit, 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.

[signature]