

CALIFORNIA ENERGY COMMISSION

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2/17/2010

Mr. Greg Lamberg Senior Vice President
 RADBACK ENERGY
 145 Town and Country Drive, Suite 107
 Danville, CA 94526

DOCKET
09-AFC-4

DATE	<u>02/17/10</u>
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RECD.	<u>02/17/10</u>
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**RE: OAKLEY GENERATION STATION PROJECT (09-AFC-4)
 DATA REQUEST SET 1A (#s 44-67)**

Dear Mr. Lamberg:

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, numbers 44 through 67, is being made in the areas of: cultural resources (44-46), and soils & water (47-67). If possible, we would appreciate written responses to the enclosed data requests on or before March, 9, 2010, or at such later date as may be mutually agreeable.

If you are unable to provide the specific information requested, need additional time, or object to providing requested/specific information, please send a written notice to both of the committee members overseeing application, and to me, within 20 days of receipt of this letter. If you are unable to respond within this time or are choosing to object to providing information, this notification must contain the reason(s) for not providing the information, and the grounds for any objections, or the need for additional time (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions, please call me at (916) 653-4677 or email me at jdouglas@energy.state.ca.us.

Sincerely,

Joseph Douglas
 Project Manager

PROOF OF SERVICE (REVISED 2/4/10) FILED WITH
 ORIGINAL MAILED FROM SACRAMENTO ON 2/17/10
 MS

TECHNICAL AREA: CULTURAL RESOURCES

AUTHOR: Michelle C. Messinger

Where the disclosure of information on the location or the character of cultural resources may create a substantial risk of harm, theft, or destruction, one must submit such information under cover of an application for confidential designation pursuant to title 20, California Code of Regulations, section 2505.

BACKGROUND

The AFC does not appear to provide any information as to the depth of the project's direct ground disturbances in the project description or elsewhere in the document. According to Table 5.11-2, AFC, Vol. 2 grading is expected on the 22-acre project site, on the 20.4-acre site laydown area (7 acres of which are paved), on the 7.2-acre soil stockpile area (2.2 acres of which are paved) and on the 17.3-acre transmission line construction corridor. Drilling, trenching, and ground disturbance for pipeline and transmission tower footings is also expected. To assess potential impacts to possible buried archeological resources, staff needs complete information on the locations and on the greatest depths to which project-related ground disturbance would extend.

DATA REQUEST

44. Please provide a table similar to table 5.11-2 and revise the project description to reflect the locations and the anticipated maximum depth for all physical ground disturbances, such as grading, trenching, and excavations, associated with this project. Please be specific as to the anticipated depth of ground disturbances on the project site itself (facility per AFC, Vol. 1, Figure 2.1-1), the lay down areas, and along the transmission line.

BACKGROUND

Data Adequacy Worksheet item [Appendix B (g) (2) (B)] asked the applicant to provide cultural resources survey reports. Energy Commission staff received the requested reports; however, report S-33821 is incomplete. The submitted report only consists of the first 14 pages, while the table of contents shows over 36 pages and Appendix A, B, and C. Staff needs the balance of this report to complete the cultural resources analysis.

DATA REQUEST

45. Please provide a complete copy of the S-334821 report, including all appendices.

BACKGROUND

The AFC Confidential Appendix 5.3 B describes the former DuPont Oakley plant on DPR 523A pages 1-5 stating that the majority of the structures have been demolished with only the administration building, gatehouse, a water storage tank, fire pump house, pipe plant building, Resource Conservation and Recovery Act (RCRA) building, and two other buildings related to Freon storage remaining. The former DuPont Oakley plant began its operations in 1956 and "only the administration building, gate house, water storage tank, fire pump house and RCRA building appear to have been constructed before 1965." (AFC, Confidential Appendix 5.3 B, Cultural Resources Technical Report, DPR 523 A, page 1). In order to determine whether the existing DuPont buildings are historical resources for purposes of CEQA, there should also be an examination of whether there is a district considering the existing buildings and structures. A part of this discussion ought to address the potential historical resource not just from an architectural standpoint, under California Register of Historical Resources (CRHR) Criterion 3,

but also under Criterion 1 in order to determine whether the proposed project could have a potential direct and/or indirect adverse impact on historical resources. To complete the cultural resources analysis, staff needs to evidence a thorough consideration of the historical significance of the cultural resources in the project area of analysis.

DATA REQUEST

46. Please provide a reasoned and supported argument as to whether the Oakley DuPont plant is a district potentially eligible for the CRHR. The argument should develop an appropriate historical context, determine which of the buildings and structures associated with the plant may be potential contributors or non-contributors, and delimit what the boundary of the potential district would be.

Technical Area: Soil and Water

Author: Mark Lindley and Scott Stoller

PROJECT BACKGROUND

Radback Energy (Applicant) proposes to construct the Oakley Generating Station (OGS), a 624-megawatt (MW) natural gas fired, combined cycle power plant, in Oakley, California. The proposed facility includes two high efficiency General Electric combustion gas turbines (CTG), a steam turbine generator (STG), and a heat recovery steam generator (HRSG).

The project covers about 22 acres within a 210 acre site owned by DuPont. The project site is surrounded by vineyards, commercial and industrial uses, and adjacent power plants owned and operated by Mirant and Pacific Gas & Electric.

The proposed project incorporates an air cooled condenser to minimize water usage and the CTGs use inlet air evaporative cooling to maximize efficiency during operation at high ambient temperatures. Potable water will be provided by the Diablo Water District via an existing 24-inch water main. Wastewater will be discharged to an existing wastewater treatment plant operated by the Ironhorse Sanitary District. Stormwater will be routed through proposed bioswales to an existing mitigation wetland in the northwest corner of the site.

BACKGROUND

Water Supply

The applicant proposes to use potable water for all processes. The potable water will be supplied by the Diablo Water District, via an existing 24-inch piping connection. The AFC indicates that the average annual water supply will be approximately 240 acre-feet per year (afy) assuming 8,449 hours of operation. A “will serve” letter from the Diablo Water District, provided in Appendix 2J, indicates that the District can supply up to 250 afy of potable water for use at the proposed plant.

The AFC indicates that the Ironhorse Sanitary District is in the process of constructing a new wastewater treatment plant to produce recycled water that will meet Title 22 requirements. The “will-serve” letter from the Ironhorse Sanitary District indicates that the proposed new wastewater treatment plant is scheduled to be completed by the end of 2011.

The OGS will be designed and constructed to accommodate future use of recycled water through the addition of a microfiltration system to further treat recycled water. Backwash from the microfilters would be discharged back to the Ironhorse Sanitary District’s wastewater treatment plant. The AFC does not, however, indicate when recycled water would become available and does not provide details for water supply and treatment using a recycled water supply.

Staff needs additional information to determine when the Ironhorse Sanitary District will be able to provide an adequate, reliable recycled water supply to meet the average annual and peak demands of the OGS. Since a recycled water supply is anticipated to be available prior to completion of the OGS, operation with a recycled water supply is a reasonably foreseeable condition. Staff needs additional information to analyze this likely future recycled water use scenario.

DATA REQUEST

47. a. Please describe the OGS's commitment to use recycled water when it becomes available.

b. Please specify the industrial process and miscellaneous uses (e.g. landscape irrigation) planned for recycled water.
48. Please identify what agreements or contracts will be needed to provide the recycled water supply to the project from Ironhorse Sanitary District and the project.
49. Please identify the distance between the Ironhorse Sanitary District's proposed new wastewater treatment plant and OGS site; and describe how recycled water would be transported to OGS. Please discuss details of the installation of a recycled water supply pipeline including when the line will be installed, pipe size, route, installation methods, and specific best management practices (BMPs) to be used to stabilize the disturbed soil and limit impacts to soil and water.
50. Please discuss the timeline for Ironhorse Sanitary District to complete construction of the proposed new wastewater treatment plant and the availability of recycled water for use by the OGS. Please compare this timeline to the timeline for construction and operation of OGS.
51. Please discuss the status and schedule for completing any agreements or contracts needed for Ironhorse Sanitary District to construct the tertiary treatment upgrade and conveyance to serve the project.
52. Please discuss whether the capacity of the Ironhorse Sanitary District's proposed new wastewater treatment plant will be adequate to meet all of the water supply needs of the OGS.
 - a. Please provide a detailed description of the additional treatment measures that will be implemented when OGS converts to the use recycled water, and an estimate of the quality of the water produced for use in the power plant.
 - b. Given the projected efficiency of the additional treatment measures, please provide an estimate of the amount of recycled water required to produce the raw water makeup required by OGS.

BACKGROUND

Wastewater

The AFC indicates that the OGS will connect to an existing sanitary sewer line along Bridgehead Road. Assuming operation with potable water supplied by the Diablo Water District, approximately 132 afy of wastewater would be discharged to the Ironhorse Sanitary District's wastewater treatment plant. However, the AFC does not analyze project operation using a recycled water supply provided by the Ironhorse Sanitary District. For instance, the addition of a microfilter backwash process would increase average and peak wastewater discharge flow rates and impact wastewater quality.

DATA REQUEST

53. Please provide the anticipated quantity and quality of wastewater discharge following conversion to a tertiary treated recycled water supply.

54. Please discuss whether the existing sewer line has adequate capacity to convey wastewater discharge peak flows during operation with process water supplied by potable water from the Diablo Water District or recycled water from the Ironhorse Sanitary District.
55. Please provide a copy of the Ironhorse Sanitary District's Waste Discharge Requirements (WDRs).
 - a. Please discuss whether Ironhorse Sanitary District anticipates that their WDRs will change with the construction of the new treatment plant, and if so, how.
 - b. Please provide a comparison of OGS's process wastewater quality (assuming potable water supply and recycled water supply) and the Ironhorse Sanitary District's WDRs.
 - c. Please discuss Ironhorse Sanitary District's schedule for obtaining the necessary permits for treatment and delivery of a tertiary treated recycled water supply.

BACKGROUND

Soils/Construction Water Use

Soils on the entire project site, and most of the ancillary areas, are primarily comprised of Delhi Sand. The AFC indicates that this soil is derived from eolian (wind derived) deposits and is very susceptible to wind erosion. The AFC also indicates that construction is projected to last 33 months, with the majority of the construction water supply needed for dust control. The water for construction-related activities will be provided from an existing 24-inch municipal potable supply line onsite.

DATA REQUEST

56. Please provide an estimate of annual water supply needs for construction. Please estimate the annual volume of water required for dust suppression and other construction needs.
57. Please describe the measures that will be taken to limit wind erosion when dust suppression using sprayed water is not in progress (i.e. nights and weekends)

BACKGROUND

Stormwater

The AFC indicates that OGS's proposed stormwater management plans include routing stormwater runoff through bioswales and discharging it to an existing mitigation wetland in the northwest corner of the site. Runoff from the power block area would be routed through an oil-water separator prior to discharge into the bioswales. Calculations presented for the bioswales indicate that the swales have been designed assuming flow depths of 1.5 to 3 feet. By contrast, design guidelines commonly used for construction of vegetated bioswales recommend that flow depths for smaller frequent storms should be less than 4 inches.

The AFC indicates that the existing mitigation wetland in the northwest corner of the site has adequate capacity to contain the runoff produced during a 100-year event. However, Hydraulic Modeling System (HEC-HMS) calculations included in the AFC assume the existing site conditions (site comprised of vineyard rows, void of buildings with minimal impervious cover) and do not reflect the proposed developed site conditions. In addition, the AFC does not indicate how discharge from the wetland will be managed, if the wetland includes a primary and/or emergency outlet, and what the typical water levels in the wetland are assumed to be prior to a storm event or during the dry season.

The Contra Costa County Clean Water Program stipulates that storm water control plans for new construction projects creating or replacing over 10,000 square feet of impervious area must meet the requirements in their C3 Guidebook. The Energy Commission typically requires preparation and implementation of a Drainage Erosion and Sediment Control Plan (DESCP) to mitigate potential impacts to water and soil resources from the construction of a power plant. The DESCP would be updated and revised as the project moves through the design process. This document is a complement to the Construction Storm Water Pollution Prevention Plan (SWPPP) required by the Central Valley Regional Water Quality Control Board (CVRWQCB). As part of the Federal Clean Water Act (regulated under the National Pollutant Discharge Elimination System) administered locally by the CVRWQCB, the project applicant will need to submit a Notice of Intent (NOI) and apply for a General Construction Activity Storm Water Permit prior to initiating construction and a General Industrial Stormwater Activity Permit prior to operation of the proposed facility. The General Permit requires the implementation of a Storm Water Pollution Prevention Plan (SWPPP), which must be prepared before construction begins.

DATA REQUEST

58. a. Please provide updated sizing calculations for the proposed bioswales that demonstrate that the swales are wide enough to convey the water quality flowrate at a depth of less than 4 inches.
 - b. Please demonstrate that the swales can convey a 10-year peak flow rate with at least 6 inches of freeboard.
59. a. Please provide details (size, elevation, etc) of the primary and emergency outlets of the mitigation wetland at the northwest corner of the project site.
 - b. Please describe the receiving water that accepts discharge from the mitigation wetland.
60. a. Please provide updated HEC-HMS modeling for the OGS site under the proposed development conditions reflecting the proposed increase in impervious area. The modeling should reflect changes in runoff volumes for the project site (including the mitigation wetland) for the 10-year and 100-year 24-hour events.
 - b. Please identify typical water levels in the mitigation wetland during summer, winter, and storm periods. Modeling for extreme events should reflect the anticipated starting water levels encountered during storm periods.
61. Please submit a Stormwater Control Plan consistent with the requirements of Contra Costa County C3 Guidebook.
62. Please provide a draft Drainage Erosion and Sediment Control Plan (DESCP), containing elements A through I below, which outlines site management activities and erosion/sediment control BMPs to be implemented during site mobilization, excavation/demolition, construction, and post-construction activities. 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. The DESCP may be combined with the Stormwater Pollution Prevention Plan (SWPPP) required by the Regional Water Quality Control Board to limit the need for the project to develop separate stormwater management plans.
 - a. **Vicinity Map** – A map(s) at a minimum scale 1"=100' shall 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 OGS (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 DESCPC shall show the location of all nearby watercourses including swales, storm drains, and drainage ditches; the proximity of those features to the OGS construction, laydown, and landscape areas; and all transmission and pipeline construction corridors.
- d. **Drainage Map** – The DESCPC 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. **Narrative of Project Site Drainage** – The DESCPC 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 OGS construction and laydown areas.
- f. **Clearing and Grading Plans** – The DESCPC shall provide a delineation of all areas to be cleared of vegetation and areas to be preserved. The plan shall provide elevations, slopes, locations, and extent of all proposed grading as shown by contours, cross sections or other means. The locations of any disposal areas, fills, or other special features will also be shown. Illustrate existing and proposed topography by tying in proposed contours with existing topography.
- g. **Clearing and Grading Narrative** – The DESCPC shall include a table with the quantities of material excavated or filled for the site and all project elements of the OGS project (project site, lay down area, transmission corridors, and pipeline corridors) whether such excavations or fill are temporary or permanent, and the amount of such material to be imported or exported.
- h. **Best Management Practices Plan** – The DESCPC shall identify on the topographic site map(s) the location of the site-specific BMPs to be employed during each phase of construction (initial grading/demolition, project element excavation and construction, and final grading/stabilization). BMPs shall include measures designed to prevent wind and water erosion.
- i. **Best Management Practices Narrative** – The DESCPC shall show the location (as identified in H above), timing, and maintenance schedule of all erosion and sediment control BMPs to be used prior to initial grading, 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.

63. Please describe the stormwater quality monitoring program for compliance with the proposed SWPPP (location, frequency and parameters). In addition, please identify procedures to be followed in the event that stormwater discharged to the mitigation wetland exceeds allowable discharge limits.
64. Please indicate the stormwater testing schedule, to provide assurance that stormwater from process and non-process areas will be separated, and that oil/water separator performance is maintained.

BACKGROUND

Groundwater

The proposed stormwater management plans include discharging all stormwater runoff to the mitigation wetland in the northwest corner of the site. Given the sandy nature of the soils at the project site this mitigation wetland may provide a conduit for contaminants to migrate to the groundwater table. Additionally, neighboring groundwater wells may draw groundwater from the site vicinity.

DATA REQUEST

65. Please provide the seasonal high and low groundwater levels at the project site.
66.
 - a. Please identify all groundwater wells (monitoring and production) within 1 mile of the project site.
 - b. If possible, please provide pumping rates for production wells in the vicinity of the project site.
67. Please discuss what, if any, contaminants may be transported to the wetland and what the potential is for groundwater contamination.



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV**

**APPLICATION FOR CERTIFICATION
FOR THE *OAKLEY GENERATING STATION***

**Docket No. 09-AFC-4
PROOF OF SERVICE
(Revised 2/4/2010)**

APPLICANT

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DECLARATION OF SERVICE

I, Maria Santourdjian, declare that on February 17, 2010, I served and filed copies of the attached Data Request Set 1A (#44-67). The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:

[\[http://www.energy.ca.gov/sitingcases/contracosta/index.html\]](http://www.energy.ca.gov/sitingcases/contracosta/index.html). The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(Check all that Apply)

For service to all other parties:

sent electronically to all email addresses on the Proof of Service list;

by personal delivery or by depositing in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

AND

For filing with the Energy Commission:

sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (preferred method);

OR

depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION

Attn: Docket No. 09-AFC-4
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

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

Originally Signed by
Maria Santourdjian