



CH2M HILL
2485 Natomas Park Drive
Suite 600
Sacramento, CA 95833-2937
Tel 916.920.0300
Fax 916.920.8463

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08-AFC-10

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March 24, 2009

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Mr. Rod Jones
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Lodi Energy Center (08-AFC-10)
Data Response Set 3, Responses to CEC Staff Workshop Queries 3 through 27

Dear Mr. Jones:

Attached please find one original and 12 copies of Northern California Power Agency's responses to California Energy Commission Staff Workshop Queries 3 through 27 for the Application for Certification for the Lodi Energy Center (08-AFC-10).

If you have any questions about this matter, please contact me at (916) 286-0249 or Andrea Grenier at (916) 780-1171.

Sincerely,

CH2M HILL

A handwritten signature in black ink, appearing to read "Sarah Madams".

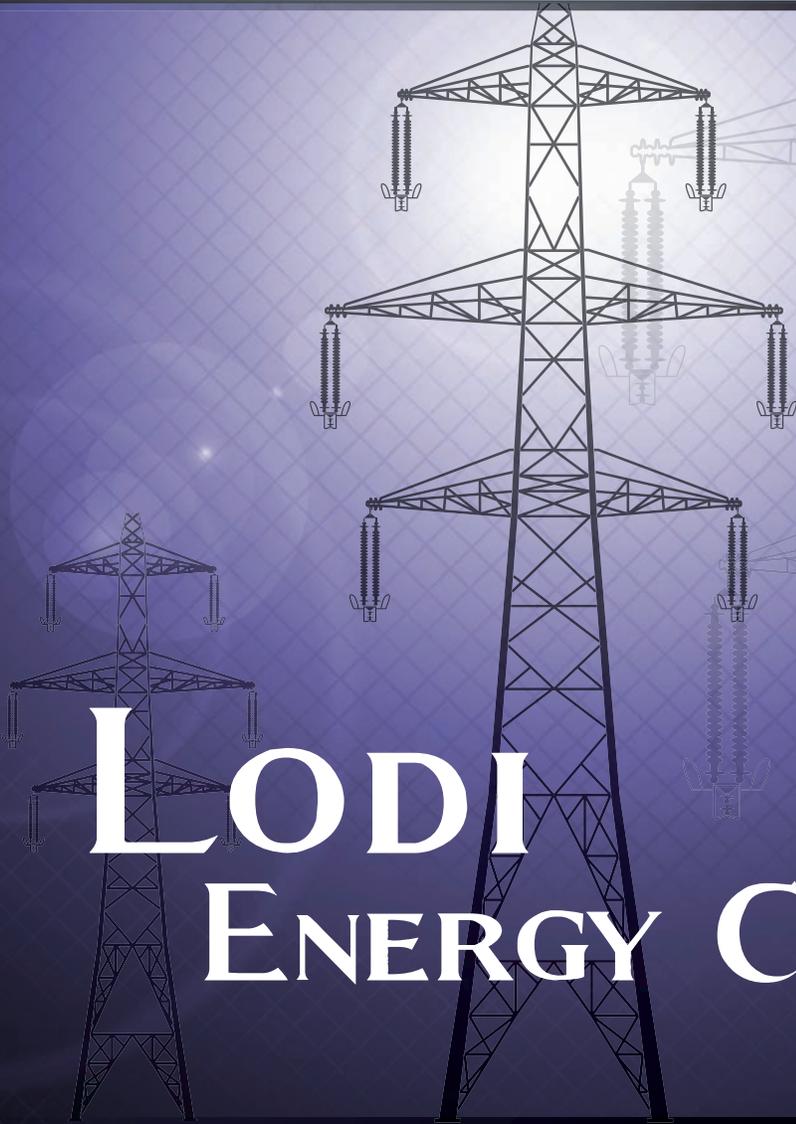
Sarah Madams
AFC Project Manager

Attachment

cc: A. Grenier
E. Warner/NCPA

Application for Certification

Data Responses, Set 3
(Workshop Queries 3 through 27)



LODI ENERGY CENTER

EY062008001SAC

March 2009

Submitted by



Submitted to

California Energy Commission

With Technical Assistance by

CH2MHILL

Supplement

Lodi Energy Center Project

(08-AFC-10)

Data Responses, Set 3

(Response to Workshop Queries 3 through 27)

Submitted to
California Energy Commission

Submitted by
Northern California Power Agency

With Assistance from

CH2MHILL
2485 Natomas Park Drive
Suite 600
Sacramento, CA 95833

March 2009

Contents

Section	Page
Introduction	1
Workshop Queries (3-27)	3

Table

WSQ8-1 Excerpts from the City of Lodi Municipal Code

Attachments

WSQ3-1 City of Lodi Recycled Water Agreement

WSQ9-1 Record of Conversation with the City of Lodi White Slough WPCF

WSQ22-1 Detailed Description of SO₂ to PM₁₀ Offset Ratio Methodology

Introduction

Attached are Northern California Power Agency's (NCPA) responses to the California Energy Commission (CEC) Data Request Set 3 (Workshop Queries numbers 3 through 27) regarding the Lodi Energy Center Project's (LEC) (08-AFC-10) Application for Certification (AFC). The workshop questions are additional information requests that were discussed during the CEC Data Response and Issue Resolution Staff Workshop that was held on February 23, 2009.

Because the workshop queries were not formally provided, but were discussed during the CEC Data Workshop, a brief synopsis of each question has been provided prior to the response. The workshop queries have been given a unique workshop query (WSQ) number. Any future workshop queries will be assigned sequential numbers. New or revised graphics or tables are numbered in reference to the WSQ number. For example, the first table used in response to WSQ 36 would be numbered Table WSQ36-1. The first figure used in response to WSQ42 would be Figure WSQ42-1, and so on.

Additional tables, figures, or documents submitted in response to a data request or workshop query (supporting data, stand-alone documents such as plans, folding graphics, etc.) are found at the end of each discipline-specific section and are not sequentially page-numbered consistently with the remainder of the document, though they may have their own internal page numbering system.

Workshop Queries (3–27)

Background

During the CEC Data Response and Issue Resolution Staff Workshop on February 23, 2009, Staff requested additional clarification on several responses provided in Data Response Set 1A, 1B, and 2. Although these questions have not been formally submitted as a Data Request, the Applicant has provided responses below as Workshop Queries (WSQ) 3 through 27.

Will Serve Letter

WSQ-3 The will serve letter provided as Attachment DR26-1 is dated from 2005. Is there a more recent version of this letter?

Response: The incorrect will serve letter was inadvertently included in Data Response Set 1A. The correct will serve letter is provided as Attachment WSQ3-1.

County Well Permits

WSQ-4 In conversations with San Joaquin County, both the underground injection well (UIW) and the potable water well for the LEC project will require a permit from the San Joaquin County Environmental Health Department. Please provide a copy of each of these permits and any comments received from the San Joaquin County Environmental Health Department.

Response: As we get closer to final design, the Applicant will submit copies of the well permit application and any comments received from the San Joaquin County Environmental Health Department to Staff.

Backup Water Supply

WSQ-5 Please provide a discussion regarding the use of an alternate water source as a backup water supply. If a backup water supply will not be used, please provide an explanation of what will occur at the LEC project if water is not available from the White Slough Water Pollution Control Facility (WPCF).

Response: As stated in NCPA's response to Data Request Set #1A, DR-31, the White Slough WPCF has had an availability of 100% and has met Title 22 Standards 98.8% of the time. It was additionally stated that the WPCF has a backup diesel generator capable of supplying the full electrical needs of the facility in the event of a power outage. This high level of reliability does not warrant the advance design and permitting of an alternative water source.

However, in the event that the WPCF is unable to provide process water, in an emergency the Applicant proposes to use the onsite potable water well for a maximum of two weeks, until the WPCF would be able to provide water to operate the LEC. If water from the WPCF

was unavailable after the 2-week period, NCPA will evaluate the options and technologies available and will present mitigation measures to the CEC for review and approval.

DESCP/SWPPP for the Construction of the Gas Line

WSQ-6 Because the natural gas line will be owned, operated, and constructed by Pacific Gas and Electric Company (PG&E), please provide any SWPPP policies/documentation from PG&E that will be used during construction of the gas line.

Response: A sample SWPPP has been requested from PG&E. Once it has been made available, a copy will be provided to Staff.

Quantity of Soil Needed for Elevation

WSQ-7 Please provide an estimate of the amount of soil needed to increase the elevation at the project site above the floodplain.

Response: The estimated volume of soil necessary to raise the project site above the floodplain is 8,000 cubic yards.

City or FEMA Certification for Siting on a Floodplain

WSQ-8 Data Response 34 does not provide a definitive response whether the site will require a FEMA map adjustment because the LEC site is located within the 100-year floodplain. Please confirm if the project will follow either the City of Lodi requirements for construction within a floodplain, or if the FEMA requirements will be followed. If the City requirements will be followed, please provide a description of what these requirements will entail, and if a FEMA map adjustment will be needed.

Response: The project shall follow the City of Lodi requirements for construction within a special flood hazard zone as contained in the Lodi Municipal Code Title 15 Buildings and Construction, Chapter 15.60 Flood Damage Prevention and Title 17 Zoning, Chapter 17.51 FP Floodplain District. Because the City of Lodi General Plan (1991) states that the City shall only permit development in the 100-year floodplain consistent with FEMA regulations, adherence to the City's floodplain development requirements will render the project consistent with FEMA requirements. A LOMR is not statutorily required for the project¹.

Table WSQ8-1 is excerpted from Titles 15 and 17, Chapters 15.60 and 17.51, respectively, of the City of Lodi Municipal Code. The full text of Title 15, Chapter 15.60 and Title 17, Chapter 17.51 can be found in the City of Lodi Municipal Code available at: <http://municipalcodes.lexisnexis.com/codes/lodi/>

¹ The LEC project does not fall under either situation described below and therefore is not required to submit a CLOMR to FEMA under the NFIP:

1. Project is on a stream or river that has been studied through detailed hydrologic and hydraulic analyses and for which base flood elevations have been specified, but a floodway has not been designated, and the community proposes to allow development that would result in more than a 1.0 foot increase in the base flood elevation.
2. Project is on a stream or river for which detailed analyses have been conducted and base flood elevations and a floodway have been designated, and the community proposes to allow development totally or partially within the floodway that would result in any (greater than 0.0 foot) increase in the base flood elevation.

TABLE WSO8-1

Excerpts from the City of Lodi Municipal Code

Title 15, Chapter 15.60

15.60.050 Definitions	“Special flood hazard area (SFHA)” means an area having special flood or flood-related erosion hazards, and shown on an FHBM or FIRM as Zone A, A1-30, AE or A99.
15.60.060 Lands to which this chapter applies	This chapter applies to all areas of special flood hazards, within the jurisdiction of the city.
15.60.080 Compliance.	No structure or land shall hereafter be constructed, located, extended, converted or altered without full compliance with the terms of this chapter and other applicable regulations.
15.60.120 Establishment of development permit.	<p>A development permit shall be obtained before construction or development begins within any area of special flood hazards, established in Section 15.60.070. Application for a development permit shall be made on forms furnished by the floodplain administrator and may include, but not be limited to: plans in duplicate drawn to scale showing the nature, location, dimensions and elevation of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities; and the location of the foregoing. Specifically, the following information is required:</p> <p>A. Proposed elevation, in relation to mean sea level, of the lowest floor (including basement) of all structures;</p> <p>B. Proposed elevation in relation to mean sea level to which any structure will be floodproofed;</p> <p>C. All appropriate certifications listed in Section 15.60.130(B)(4) of this section; and</p> <p>D. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.</p>
15.60.130 Floodplain administrator-Duties and responsibilities.	The community development director is appointed to administer and implement this chapter by granting or denying development permits in accordance with its provisions.
15.60.140 Standards of construction.	<p>In all areas of special flood hazards the following standards are required:</p> <p>A. Anchoring.</p> <p>1. All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.</p> <p>B. Construction Materials and Methods.</p> <p>1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.</p> <p>2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.</p> <p>3. All new construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.</p> <p>C. Elevation and Floodproofing.</p> <p>1. New construction and substantial improvement of any structure shall have the lowest floor, including basement, elevated to or above the base flood elevation. Nonresidential structures may meet the standards in subdivision 2 of this subsection. Upon the completion of the structure the elevation of the lowest floor including basement shall be certified by a registered professional</p>

TABLE WSO8-1

Excerpts from the City of Lodi Municipal Code

	<p>engineer or surveyor, or verified by the community building inspector to be properly elevated. Such certification or verification shall be provided to the floodplain administrator.</p> <p>2. Nonresidential construction shall either be elevated in conformance with subdivisions 1 or 2 of this subsection, or together with attendant utility and sanitary facilities:</p> <p>a. Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;</p> <p>b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and</p> <p>c. Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the floodplain administrator.</p> <p>3. Require, for all new construction and substantial improvements, that fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or meet or exceed the following minimum criteria:</p> <p>a. Either a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters; or</p> <p>b. Be certified to comply with a local floodproofing standard approved by the Federal Insurance Administration.</p>
Title 17, Chapter 17.51	
17.51.040 Rezone of flood hazard areas.	All areas within the boundaries of the special flood hazard areas which are also within the city are rezoned to the FP (floodplain) zone.
17.51.060 Development or construction permit.	No structure or land shall, after the effective date of the ordinance codified in this chapter, be located, extended, converted or altered within FP (floodplain) zoned lands without full compliance with the terms of this chapter, and without having first received a development or construction permit in accordance with the provisions of this title and, for developments requiring use permits, with the provisions of Sections 17.72.040 through 17.72.110.
17.51.110 Anchorage.	All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.
17.51.120 Construction practices and materials.	All new construction or substantial improvements shall be constructed with materials and utility equipment resistant to flood damage using methods and practices that minimize flood damage.
17.51.140 Nonresidential structures.	New nonresidential structures shall be floodproofed or elevated eighteen inches or more above the level of the base flood.
17.51.150 Prohibited storage or processing.	The storage or processing of materials that are in time of flooding buoyant, flammable or explosive, or could be injurious to human, animal or plant life, is prohibited.

TABLE WSQ8-1

Excerpts from the City of Lodi Municipal Code

17.51.170 Community development department duties.	It is the duty of the community development department to: A. Review all development permits to assure that the permit requirements of this chapter have been satisfied, and to ensure that construction or development sites are reasonably safe from flooding; B. Review permits for proposed development to assure that all necessary permits have been obtained from those federal, state or local governmental agencies from which prior approval is required
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Source: City of Lodi Municipal Code, 2008

Record of Conversation from WPCF

WSQ-9 Data Response 28 refers to a conversation between the Applicant and Del Kerlin at the White Slough WPCF. Please provide a copy of this record of conversation.

Response: The Record of Conversation (ROC) between Catherine Lambert, a water specialist with CH2M HILL, and Del Kerlin of the White Slough WPCF has been provided as Attachment WSQ9-1.

Stormwater Drainage

WSQ-10 Please confirm if stormwater will drain to Dredger's Cut adjacent to the southern boundary of LEC.

Response: Stormwater from the project will drain to onsite stormwater drains that will then be directed to the WPCF. The WPCF will then discharge this water to Dredger's Cut.

Climate Change

WSQ-11 Data Response 35 did not fully address concerns Staff has regarding climate change, and the potential for flooding at the LEC site. Since it is unknown at this time what possible effects may occur at the LEC site in regards to climate change, would the Applicant be willing to accept a Condition of Certification (COC) requiring compliance with future LORS regarding climate change and floodplain adjustments.

Response: As explained in the workshop, LEC believes that the request is speculative and would not agree to any condition of certification requiring future compliance with LORS regarding climate change and floodplain adjustments. Such a condition is not warranted by any finding of significant environmental impact under CEQA nor is it driven by any planned change in LORS. As with any law, ordinance, regulation or standard that changes after licensing, the LEC would be required to comply if such new requirement is applicable to existing facilities. There is no planned change in law, ordinance, regulation or standard at this time and therefore, we believe such speculation is beyond the CEC's CEQA or permitting jurisdiction.

Crops Near KOP-3

WSQ-12 Please provide a list of crops and approximate growing times for the field located adjacent to KOP-3.

Response: Assessor's Parcel 055-110-14 is located to the north of KOP-3 and is currently fallow. Per the landowner, corn, which will be planted in April, will grow to be between 6 to 8 feet in height. The typical growing cycle for corn is in the range of 60 to 70 days to full maturity.

Cooling Tower Fans

WSQ-13 Please confirm if the cooling tower fans will turn off or operate at half speed at any time (i.e., at freezing temperatures). Please provide the ambient conditions (temperature, relative humidity, wet bulb) where the fans would turn off or operate at half speed.

Response: At ambient temperatures less than 50°F, the fan speed will be reduced, and as the temperature continues to drop, the fans would be systematically shut off, until 32°F when all fans would be off.

Visible Plume Analysis

WSQ-14 Staff is suggesting a COC similar to the following, please update as needed for the LEC project.

VIS-4 The project owner shall ensure that the cooling tower is designed and operated as presented to the Energy Commission during the licensing of the PEC project. The cooling tower shall be designed and operated so that that the exhaust air flow rate per heat rejection rate (1) will not be less than 11.1 kilograms per second per megawatt when the ambient conditions are 16.8 degrees F and 60% relative humidity, (2) will not be less than 14.6 kilograms per second per megawatt when the ambient conditions are 63.3 degrees F and 60% relative humidity, and (3) will not be less than 12.5 kilograms per second per megawatt when the ambient conditions are 114 degrees F and 60% relative humidity. The project owner shall provide a cooling tower fogging frequency curve from the cooling tower manufacturer for this project's final cooling tower design.

Response: The following updated condition is suggested:

VIS-4 The project owner shall ensure that the cooling tower is designed and operated as presented to the Energy Commission during the licensing of the LEC project. The project owner shall provide a cooling tower fogging frequency curve from the cooling tower manufacturer for this project's final cooling tower design.

Because the LEC cooling tower will be located approximately 1,100 feet from Interstate 5 (I-5), the Applicant does not believe that the new cooling tower is likely to produce a vapor plume that will pose a hazard to traffic. If the CEC staff believes that the cooling tower vapor plume may pose a significant visual or safety impact, the Applicant would be willing to work with Staff to develop additional conditions of certification to ensure that any potential hazard is addressed.

Disturbance Along Gas Line

WSQ-15 In regards to Data Response #15, will PG&E require any additional laydown areas or staging areas for construction of the gas line, and if so, what type of ground disturbance is expected.

Response: As per the latest *CEC Rules of Practice and Procedure & Power Plant Site Certification Regulations*, field surveys conducted in June 2008 included the gas line, plus a 50-foot buffer along both sides of the gas line. Per PG&E, it is likely they will require some additional land adjacent to the 50-foot easement; however, their easement allows for the temporary use of such lands. They will also require a temporary construction laydown area along the route, however, are unable at this time to determine exactly where the laydown area would be located. The laydown area would be approximately 300 feet by 300 feet and would be used for staging materials, storing equipment, a temporary construction trailer, and for prefabricating certain components of the pipeline. For both the laydown area, and for the additional land adjacent to the easement, ground disturbance would be limited (if at all) to the top 1 to 3 inches of soil to smooth the area. Final determination of the location of the laydown area and any additional storage space needed adjacent to the 50-foot easement will be available once final construction design has been completed. Additionally, PG&E believes there is adequate access to the easement via existing roads, however, they cannot confirm this until final construction design has been completed.

Surveys at Temporary Off-ramp

WSQ-16 Have surveys been conducted at the temporary off-ramp provided as a heavy haul route in the AFC.

Response: A cultural resources survey of the proposed LEC off-ramp was conducted on March 17, 2009, by Natalie Lawson, M.A., RPA, a CRS who meets the qualifications for Principal Investigator stated in the Secretary of the Interior's standards and guidelines for archaeology and historic preservation (USNPS, 1983). This field survey was limited to the area of the proposed off-ramp, which is located west of I-5 and north of Thornton Road on a frontage road.

As per the latest *CEC Rules of Practice and Procedure & Power Plant Site Certification Regulations* (CEC, 2007), in addition to the off-ramp, a 200-foot minimum buffer was also surveyed for cultural resources.

The survey used linear pedestrian transects spaced at 10 meters and opportunistic examination of exposed soils to examine the survey areas to determine whether archaeological deposits might be present. Exposed soils, consisting mainly of previously disturbed agricultural sediments and road bed material, were inspected carefully, and no evidence of cultural materials was noted.

Much of the visibility within the laydown and/or parking areas is impaired by thick vegetation. Some areas have poor visibility, less than 10%, therefore any areas with good visibility were surveyed even when they were outside of transects. The area for the proposed off-ramp is partially disturbed. Part of this area appears to have been used as a borrow area as the area extends as much as three to four feet below the grade of the frontage road. A small earthen irrigation ditch is located adjacent to the area and a barbed wire fence

is located east of the frontage road. All observed soils in the surveyed area range from medium to dark brown silty loam with some gravel and fist-sized cobbles. Limited modern trash, including plastic and metal fragments were observed in the off-ramp area. Cultural sensitivity is considered low within the proposed area of the off-ramp as no cultural resources were observed during the field survey.

HDD under I-5 and Roads

WSQ-17 Will horizontal directional drilling (HDD) be used under I-5 or any roads during gas line construction, or if not, what will be used? Please provide width and depth of disturbance.

Response: Per PG&E, HDD will be used under I-5. Although a final determination has not yet been made by PG&E regarding the extent of disturbance needed for HDD, in the past PG&E has used a 150-foot-wide by 100-foot-long area for launching and receiving pits, and excavations were as deep as 6 to 7 feet. Additionally, PG&E will typically require a 1-acre site on either side of the HDD line for drill rig parking and support equipment. Ground disturbance at the 1-acre sites would be limited to the top 1 to 3 inches of soil to smooth the area. These details will be finalized once final construction design is completed by PG&E for the gas line and will be provided to Staff prior to construction.

An “open-cut” trench will be used for any county roadways that will be crossed. The open-cut trench would be similar in size and depth as that described in the AFC, approximately 4 feet wide, varying depths (typically 4 to 8 feet depending on PG&E requirements). Final design will be determined prior to construction.

Ground Disturbance at Laydown Areas

WSQ-18 Will there be any ground disturbance at the laydown areas (grading, trenching, etc.)

Response: Ground disturbance activities in the laydown area will be limited to the top 1 to 3 inches of soil to smooth the area. Activities will not include the movement of large amounts of soil, digging or filling holes.

Interpollutant Offset Ratio

WSQ-19 Please explain the relevance of the proposed SO_x to PM₁₀ interpollutant offset ratio given that the locations of the proposed project (in San Joaquin County) and the proposed SO_x credits (mainly Tulare and Kern Counties) are outside the boundaries of the Stanislaus County inventory used in the AFC.

Response: The SJVAPCD has a well-developed methodology for evaluating interpollutant offset ratios, and this methodology was followed in calculating the proposed SO_x to PM₁₀ ratio for this project. The District’s methodology, which is used consistently for developing offset ratios throughout the air basin, relies on county- or region-specific atmospheric chemistry in the project area, rather than in the area of the proposed offset sources. This SO_x to PM₁₀ calculation methodology attempts to characterize the conversion of locally emitted SO_x to PM₁₀. The fraction of imported SO_x is excluded from the calculation; the fraction of imported PM₁₀ is also excluded from the calculation.

The nature of the chemical reactions that produce secondary PM₁₀, however, make it reasonable to assume that imported SO₂ is converted to sulfate in the same ratio as locally generated PM₁₀. The District's ERC distance adjustment, which ranges from 1.2 to 1.5 depending on the distance of the ERC source from the project, is intended to address the reduced contribution (that is, the reduced likelihood that distantly emitted SO₂ will find its way to the local area) that a distant source makes (relative to local sources) to offsetting local projects.

Interpollutant Trading Ratio

WSQ-20 Please report the interpollutant trading ratio that would result by considering a district-wide inventory, since the proposed project would involve emission reductions from all areas of the air district.

Response: Because the interpollutant trading ratio involves both air monitoring data and area emissions inventories, a ratio based on a district-wide inventory would require district-wide air quality data. Because there are no air quality data that represent district-wide ambient concentrations, it is not clear how a meaningful district-wide interpollutant ratio could be developed. As discussed in response WSQ-19, local conditions are considered to be a better indication of local conversion of precursors to secondary pollutants.

Inventory of SO₂ Emissions

WSQ-21 Please explain whether the inventory of SO₂ emissions used in the interpollutant ratio analysis (shown as 4.20 tons per day) includes the banked SO₂ ERCs for that area, and if not, why not.

Response: The planning inventory used to determine the interpollutant offset ratio does not include the banked SO₂ ERCs (or the banked PM₁₀ ERCs) for the area. The ratio of ambient sulfate to SO₂ emissions is a function of SO₂ actually emitted, not the amount of SO₂ in the paper inventory.

Explanation of Notes

WSQ-22 Please provide explanations for "Notes" 1 through 10 in the "Detailed Description of SO₂ to PM₁₀ Offset Ratio Methodology" AFC Attachment 5.1F-1.2; the AFC only shows notes 1 through 5.

Response: A complete copy of the attachment, Attachment WSQ22-1, which includes notes 6 through 10, is attached.

Maximum Hourly NOx Emission Rates

WSQ-23 Please confirm the maximum hourly NOx emission rate during startup, the proposed duration of startups, and the maximum proposed number of startups per hour.

Response: The maximum hourly NOx emission rate during startups, the expected maximum duration of startups, and the assumed maximum number of startup and shutdown hours per day are provided on pages 5.1-26-7 and in Tables 5.1-19 and 5.1-21 of the AFC. As discussed in the AFC, the maximum hourly NOx emission rate during startups and shutdowns is 160 pounds per hour, while the average hourly NOx emission rate during

a multi-hour startup is 100 pounds per hour. Under cold start conditions, where the CTG has been shut down for more than 12 hours, it is assumed that the CTG will require up to 6 hours to come into compliance with permitted emission rates. Under hot start conditions, where the CTG has been shut down for less than 12 hours, it is assumed that the CTG can come into compliance within 2 hours.

Maximum daily NO_x emissions were calculated assuming that the CTG will be in startup or shutdown for up to 6 hours and will be at base load operation for up to 18 hours, with up to 12 hours of duct firing. These operating assumptions were used as the basis for calculating maximum allowable daily emissions and were not intended to be proposed as permit limitations.

Anticipated Number of Shutdowns

WSQ-24 Please identify the anticipated number of shutdowns in the hourly, daily, and annual emission estimates because this information does not appear in AFC Table 5.1-15 or Table 5.1A-6.

Response: The anticipated number of shutdowns is expected to be equal to the anticipated number of startups, and emission from these shutdowns are included in the hourly, daily, and annual emissions estimates.

Clarification of Maximum and Average Hour of startup

WSQ-25 Please clarify what is meant in AFC Table 5.1-19 where the terms of maximum and average hour of startup are shown and why the NO_x figures would differ, especially because a Rapid Response configuration should achieve compliance well within one hour of startup. Also please explain why maximum and average emissions differ only for NO_x and not for VOC and CO.

Response: There are different types of Rapid Response technologies being marketed by GE. The Rapid Response configuration proposed for this project is not expected to achieve compliance "well within" one hour of startup. NCPA has not been able to obtain a performance guarantee for startup emissions or startup times from GE, and in the absence of these guarantees, NO_x emissions during startups must be based on available performance data from other standard configuration 7FA CTGs in combined cycle service.

Vendor Information

WSQ-26 Please provide all technical information, including vendor specifications that support the NO_x emissions and durations proposed for startups. This information should include enough detail to determine NO_x emissions by mass or concentration per unit of time or per increasing load during a startup event, on vendor letterhead. If necessary, proprietary or confidential information may be submitted pursuant to the Energy Commissions siting regulations for the designation of confidential records.

Response: The NO_x duration and emissions proposed for startups are based on experience with other 7FA CTGs in combined cycle service, and are consistent with permit limits for similar projects. As discussed previously, NCPA has not been able to obtain performance guarantees from GE for the Rapid Response configuration CTG/HRSG that has been specified for the proposed project.

Corrected Cell Exhaust Diameter

WSQ-27 Please provide a corrected cell exhaust diameter and a corrected tower width, if necessary (i.e., assuming the plot plan is not the problem). This also impacts the air quality and HRA modeling files, but it is likely that this mistake would cause overestimation of impacts rather than underestimation.

Response: The cooling tower width shown in Table 5.1B-1 of the AFC – 13 meters (42.67 feet) – is correct. However, the dimension shown as the cell diameter, 4.267 meters (14 feet), is actually the cell radius, and the diameter should be twice the dimension shown, 8.53 meters (28 feet). As indicated by the CEC Staff, because the exhaust velocity was correct, this error in stack diameter overestimates the modeled PM₁₀ impacts from the project because the cooling tower exhaust momentum and thus the cooling tower plume rise and dispersion were underestimated.

ATTACHMENT WSQ3-1

City of Lodi Recycled Water Agreement

CITY COUNCIL

JOANNE MOUNCE,
Mayor

LARRY D. HANSEN,
Mayor Pro Tempore

SUSAN HITCHCOCK

BOB JOHNSON

PHIL KATZAKIAN

CITY OF LODI

MUNICIPAL SERVICE CENTER

1331 SOUTH HAM LANE

P.O. BOX 3006

LODI, CALIFORNIA 95241-1910

(209) 333-6740

FAX (209) 333-6841

EMAIL pwdept@lodi.gov

<http://www.lodi.gov>

BLAIR KING,
City Manager

RANDI JOHL,
City Clerk

D. STEPHEN SCHWABAUER,
City Attorney

F. WALLY SANDELIN
Public Works Director

October 16, 2008

Ed Warner
NCPA
661 Commerce Dr
Roseville, CA 95678

Subject: Agreement to Serve Recycled Water to NCPA

The City of Lodi has agreed to serve recycled water to NCPA's Lodi Energy Center (LEC). NCPA has submitted an Application for Certification (AFC) with the California Energy Commission (CEC). We understand the CEC requested NCPA to provide additional information concerning the potential effects of project demand on the City of Lodi's recycled water supply on other users of recycled water, including, but not limited to, recycled water availability for other uses during construction and operation of the facility.

The City of Lodi currently serves NCPA's STIG facility, the San Joaquin County Mosquito and Vector Control facility, and adjacent City owned agricultural land with recycled water. As discussed in our letter dated November 29, 2005, the City of Lodi has sufficient capacity to serve the LEC. This commitment will not adversely affect any existing or future planned recycled water users.

We trust that this addresses the CEC's request. If you need additional information please do not hesitate to contact me at (209) 209-333-6740.

Sincerely,



Charles E. Swimley Jr., P.E.
Water Services Manager

CES/myn

cc: F. Wally Sandelin, Public Works Director
George Morrow, Electric Utility Director
D. Stephen Schwabauer, City Attorney

ATTACHMENT WSQ9-1

**Record of Conversation with
the City of Lodi White Slough WPCF**

CH2MHILL TELEPHONE CONVERSATION RECORD

Call To: Del Kerlin

Phone No.: (209) 333-6749

Date: January 16, 2009

Call From: Catherine Lambert/SAC

Time: 9:30 AM

Message

Taken By: Catherine Lambert/CH2M HILL

Subject: Recycled water use and NPDES permit for White Slough WPCF

I spoke with Del Kerlin at the White Slough WPCF. Recycled water from the plant is permitted through the plant's NPDES permit. Currently, the users of recycled water include the STIG-1 plant, the mosquito ponds, and irrigation of City-owned lands. The NPDES permit does not specify specific users or quantities, although both the Regional Board and CDPH regulate the quality and uses of recycled water. Del stated the largest user of recycled water is for irrigated land (150-200 million gallons per month). The other two users, existing industrial and mosquito ponds, use a smaller amount: depending on demand and 30-40 million gallons per month, respectively. Del does not anticipate the plant's NPDES permit will need to be revised to include the distribution of recycled water to the LEC.

Del Kerlin, White Slough WPCF
12751 N. Thornton Rd.
Lodi, CA 95242
(209) 333-6749

ATTACHMENT WSQ22-1

Detailed Description of SO₂ to PM₁₀ Offset Ratio Methodology

**PM10 Interpollutant Offset Ratio Analysis
Northern San Joaquin Valley**

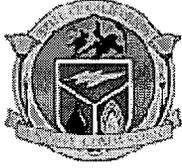
PM10

	Notes	Units	Estimate
"Vegetative Burning" Total	1	µg/m ³	30.16
Industry Component (30%)	2	µg/m ³	9.05
Regional Background (20%)	3	µg/m ³	1.81
Industry minus Background		µg/m ³	7.24
County Contribution	4	µg/m ³	3.62
Organic Carbon PM10 Inventory - Stanislaus County	5	ton/day	4.28
County Impact		µg/m ³ per ton	0.85

Sulfate

Ammonium Sulfate	6	µg/m ³	7.40
Regional Background	7	µg/m ³	1.00
Sulfate minus Background		µg/m ³	6.40
County Contribution	8	µg/m ³	3.20
SO2 Inventory - Stanislaus County	9	ton/day	4.20
County Impact		µg/m ³ per ton	0.76
Tons of SOx to Equal Effect of 1 ton PM10	10		1.11

1. Per SJVUAPCD and CARB, PM10 emissions from stationary industrial combustion sources are included in the Vegetative Burning category from Chemical Mass Balance modeling performed for the SJVUAPCD 2007 PM10 Attainment Plan (Modesto 14th Street station)
2. Per SJVUAPCD, 30% of this category is attributed to stationary industrial combustion sources.
3. Per SJVUAPCD, regional background is estimated to be 20% of net concentration after previous adjustment to Vegetative Burning category.
4. Contribution from sources within Stanislaus County is 50% of net concentration after previous adjustments to Vegetative Burning category.
5. Organic carbon PM10 inventory for Stanislaus County that contributes to this monitoring location; from 2007 PM10 Planning inventory
6. Ammonium sulfate category from Chemical Mass Balance modeling performed for the SJVUAPCD from 2007 PM10 Planning inventory
7. Per SJVUAPCD, regional background of ammonium sulfate is estimated to be 1 µg/m³.
8. Contribution from sources within Stanislaus County is 50% of net concentration after previous adjustment to Vegetative Burning category.
9. SO2 inventory for Stanislaus County that contributes to this monitoring location; from 2007 PM10 Planning inventory
10. PM10 County Impact divided by Ammonium Sulfate County Impact.



**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 *Lodi Energy Center***

DOCKET No. 08-AFC-10

**PROOF OF SERVICE
(Revised 2/17/09)**

APPLICANT

Ken Speer
Assistant General Manager
Northern California
Power Agency
651 Commerce Drive
Roseville, CA 95678
ken.speer@ncpagen.com

Ed Warner
Project Manager
Northern California
Power Agency
P.O. Box 1478
Lodi, CA 95241
ed.warner@ncpagen.com

APPLICANT'S COUNSEL

Scott Galati
Galati Blek
455 Capitol Avenue, Ste. 350
Sacramento, CA 95814
sgalati@gb-llp.com

APPLICANT'S CONSULTANT

Andrea Grenier
Grenier & Associates, Inc.
1420 E. Roseville Pkwy,
Ste. 140-377
Roseville, CA 95661
andrea@agrenier.com

Sarah Madams
CH2MHILL
2485 Natomas Park Drive,
Ste. 600
Sacramento, CA 95833
smadams@ch2m.com

APPLICANT'S ENGINEER

Steven Blue
Project Manager
Worley Parsons
2330 E. Bidwell, Ste. 150
Folsom, CA 95630
Steven.Blue@WorleyParsons.com

INTERESTED AGENCIES

California ISO
e-recipient@caiso.com

INTERVENORS

ENERGY COMMISSION

Karen Douglas
Chairman and Presiding
Member
kldougla@energy.state.ca.us

Jeffrey D. Byron
Commissioner and Associate
Member
jbyron@energy.state.ca.us

Kenneth Celli
Hearing Officer
kcelli@energy.state.ca.us

Rod Jones
Project Manager
rjones@energy.state.ca.us

Melanie Moultry
Staff Counsel
MMoultry@energy.state.ca.us

Elena Miller
Public Adviser
publicadviser@energy.state.ca.us

DECLARATION OF SERVICE

I, Mary Finn, declare that on March 24, 2009, I served and filed copies of the attached Data Response Set 3. 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: **[www.energy.ca.gov/sitingcases/lodi]**. 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, CA 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. 08-AFC-10

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.



Mary Finn _____