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February 16, 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 2, Responses to CEC Staff Data Requests 56B-74, and Workshop Queries 1 and 2

Dear Mr. Jones:

Attached please find one original and 12 copies of Northern California Power Agency's. responses to California Energy Commission Staff Data Requests 56B through 74 and Workshop Queries 1 and 2 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

Sarah Madams
AFC Project Manager

Attachment

cc: A. Grenier
E. Warner/NCPA

Application for Certification

Data Response Set 2

(Responses to Data Requests 56B through 74 and Workshop Queries 1 and 2)

Lodi Energy Center

February 2009

EY062008001SAC

Submitted by

NCPA
NORTHERN CALIFORNIA POWER AGENCY

Submitted to

California Energy Commission

With Technical Assistance by

CH2MHILL

Supplement

Lodi Energy Center Project

(08-AFC-10)

Data Responses, Set 2

(Response to Data Requests 56B to 74 and Workshop Queries 1 and 2)

Submitted to

California Energy Commission

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Northern California Power Agency

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Contents

Section Page

Introduction....1
Air Quality (56B–64)....2
Hazardous Materials Management (65–70)....14
Visual Resources (71–74)....19
Workshop Queries (1-2)....23

Tables

DR56B-1 GHG Emissions during Construction

DR57-1 Emissions from Worker Commutes and Material Deliveries during Project Operation

DR58-1 Actual Historical Emissions from the STIG Plant

DR64-1 Maximum CTG Combustor Tuning Emission Rates

DR71-1 Cooling Tower Parameters

Figures

DR68-1 Ammonia Tank Expansion for LEC
DR73-1 LEC Fogging Frequency Curve

Attachments

DR56B-1 GHG Emissions Calculations for the Construction Phase of the LEC

DR57-1 Criteria Pollutant and GHG Emissions Calculations from Worker Commutes and Material Deliveries during Operation of the LEC Project

DR58-1 NCPA Combustion Turbine Project #2 (STIG plant) Facility 2006, 2007, and 2008 Emissions Data

DR59-1 Existing STIG CTG and the Fire Pump Engine Permits to Operate

DR62-1 Analysis of the ERCs Proposed to be Surrendered

DR67-1 HMBP for the STIG Plant Site

Introduction

Attached are Northern California Power Agency's (NCPA) responses to the California Energy Commission (CEC) Data Request Set 2 (numbers 56B[1] through 74) and Workshop Queries 1 and 2 regarding the Lodi Energy Center Project's (LEC) (08-AFC-10) Application for Certification (AFC). The workshop queries are additional information requests that were raised during the CEC informational hearing and site visit on January 15, 2009.

The responses are grouped by individual discipline or topic area. Within each discipline area, the responses are presented in the same order as the CEC presented them and are keyed to the Data Request numbers (56B through 74) and Workshop Query (WSQ) 1 and 2. New or revised graphics or tables are numbered in reference to the Data Request number. For example, the first table used in response to Data Request 36 would be numbered Table DR36-1. The first figure used in response to Data Request 42 would be Figure DR42-1, 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.

The workshop queries have been given unique workshop query (WSQ) numbers and are provided at the end of this Data Response package. There may be additional workshop queries that arise in future workshops or publicly noticed project meetings. Any future workshop queries will be assigned sequential numbers.

[1] Data Request Set 1 was misnumbered due to a missing #52 data request in the Waste Management section. As a result, Data Request Set 1 included responses to 1 through 56. Data Request 2 has inadvertently started at #56. For continuity, we have used the numbering established by CEC Staff on Data Request 2, but have identified Data Response 56 as 56B.

Air Quality (56B–64)

Background

Greenhouse Gas Emissions

Energy Commission staff plans to describe the quantity of greenhouse gas (GHG) emissions created during construction of the project, based on the construction equipment activity estimates and fuel use projections in AFC Appendix 5.1E. These include carbon dioxide, nitrous oxide, and methane (unburned natural gas). The GHG emissions estimates should consider activity related to construction of linear facilities, worker travel, and material deliveries using diesel trucks during construction. AFC Table 5.1-22 shows the GHG emissions from primary stationary sources related to operation of the Lodi Energy Center. However, staff also seeks to quantify emissions from worker commutes and material deliveries during operation of the proposed project.

Data Request

56B. Please show the total and annual GHG emissions for the construction phase of the proposed project including all activities at the construction site and any construction activities for linear facilities (gas and water pipelines and transmission lines), worker travel, and trucked material deliveries.

Response: GHG emissions for the construction phase of the project are summarized in Table DR56B-1. Calculations are shown in detail in Attachment DR56B-1.

TABLE DR56B-1
GHG Emissions During Construction

Activity Type/Location	CO_2e, MT/peak year	Activity Period (months)	CO_2e, total MT during Activity Period
Onsite construction	26,550	24	36,383
Deliveries to construction site	1,487	24	1,930
Worker travel to/from construction site	1,507	24	1,888
Construction of linear facilities	284	2	284
Deliveries to linear facilities construction areas	155	2	155
Worker travel to/from linear facilities construction areas	14	2	14

Data Request

57. Please quantify emissions of criteria pollutants and GHGs from worker commutes and material deliveries during operation of the proposed project.

Response: Criteria pollutant and GHG emissions from worker commutes and material deliveries during operation of the proposed project are summarized in Table DR57-1. Calculations are shown in detail in Attachment DR57-1.

TABLE DR57-1
Emissions From Worker Commutes and Material Deliveries During Project Operation

Pollutant	Emissions from Worker Commutes, tpy	Emissions from Material Deliveries, tpy
NOx	5.67×10^{-2}	0.59
SO_2	5.25×10^{-4}	5.10×10^{-4}
CO	0.59	0.22
VOC	5.60×10^{-2}	4.61×10^{-2}
PM_{10}	5.46×10^{-3}	2.45×10^{-2}
$PM_{2.5}$	1.89×10^{-3}	2.14×10^{-2}
CO_2e	51	59

Background

Baseline Conditions

The site of the 255 megawatt (MW) Lodi Energy Center project proposed by the Northern California Power Agency (NCPA) includes the existing NCPA Combustion Turbine Project (CTP #2) facility that consists of one 49 MW GE LM-5000 natural gas-fired, steam-injected (STIG) combustion gas turbine and one 240 HP Cummins diesel fire pump engine. The existing sources and the proposed project would both be owned and operated by NCPA (AFC p. 2-1). Though the existing potential to emit is shown in AFC Table 5.1-14 and the unit is considered in the cumulative impact analysis of AFC Appendix 5.1G, but information is provided to quantify baseline emissions from the existing facility.

Data Request

58. Please quantify the existing actual emissions from the CTP #2 facility for the two year prior to filing the AFC, namely from August 2006 up to and including August 2008.

Response: After a discussion with staff regarding the purpose of this data request, we are providing emissions inventory data for the NCPA Combustion Turbine Project #2 (STIG plant) facility for calendar years 2006, 2007, and 2008. Please note that the 2008 emissions data is preliminary and incomplete at this time, and only includes the first 9 months of the calendar year. Supporting information and documentation is provided in Attachment DR58-1.

TABLE DR58-1
Actual Historical Emissions from the STIG Plant

Pollutant[b]	Emissions, Tons[a]		
	2006	2007	2008[c]
NOx	3.7	3.5	3.3
SO_2	0.2	0.2	0.2
CO	3.8	4.7	4.6
VOC	3.4	4.3	4.0
$PM_{10}/PM_{2.5}$	1.4	1.8	1.7
CO_2	30,908.4	39,329.2	37,017.8

[a]All emissions, including CO_2, are shown in tons.

[b]NOx, SO_2 and CO_2 emissions from EPA's Clean Air Markets database, accessed at http://camddataandmaps.epa.gov/gdm/index.cfm. VOC and $PM_{10}/PM_{2.5}$ emissions are calculated from fuel use, hours of operation and the permitted emission rates. CO for 2007 and 2008 from CEMS; CO for 2006 calculated from average 2007-08 emission rate in lb/MMBtu and 2006 fuel use.

[c]Emissions shown for 2008 are preliminary and reflect only the first 9 months of the year.

Data Request

59. Please provide a copy of the San Joaquin Valley Air Pollution Control District permit to operate for the NCPA sources at the CTP #2 facility.

Response: Copies of the permits to operate for the existing STIG CTG and the fire pump engine are provided in Attachment DR59-1.

Data Request

60. Please describe whether the CTP #2 facility is likely to change its operational patterns as a result of the proposed Lodi Energy Center.

Response: NCPA is a Joint Action Agency. NCPA members include municipalities, rural electric cooperatives, irrigation districts and other publicly owned entities. Members individually choose to participate in NCPA projects according to their individual needs. The STIG plant has different participating members, or owners, than the proposed LEC, so operations of the two projects are not interdependent and the development of LEC is not related to the operations at the STIG plant. Therefore, the STIG plant is not likely to change its operational patterns as a result of the LEC project.

Background

Fire Pump or Emergency Generator

The AFC does not mention whether a new fire pump or an emergency generator would need to be installed for the LEC project.

Data Request

61. Please confirm whether a new fire pump or an emergency generator would be needed for the project. If so, provide manufacturer's specifications and the anticipated operating schedule and emissions rates.

Response: No new fire pump engine or emergency generator is needed for the project. A review of the existing fire pump capacity and system has been conducted in conjunction with the conceptual requirements of the new plant expansion. A model was created using the fire pump's performance curves, conceptual fire water loop pipe routing and sizing, and conceptual flow and head requirements. The results demonstrate that the pump has sufficient capacity to supply the new plant expansion.

A new emergency generator will not be required due to a redundant PG&E 12-kV tie into the existing plant. This 12-kV distribution line will be used as an independent source of power from the existing switchyard to provide power to critical equipment and loads.

Background

Emission Reduction Credits (ERCs)

Staff would like to demonstrate that the emission reductions proposed as part of the Lodi project would mitigate project impacts to PM10 and PM2.5, as the proposed project would be a source of both. It is not clear how the offset package in AFC Table 5.1F-4 would achieve PM2.5 mitigation, noting that natural gas combustion results primarily in PM2.5 emissions. For example, emission reductions for PM10 would be mainly provided by surrendering ERC Certificate No. S-2479-4, which originated from the shutdown of a feed-mill (AFC Table 5.1F-4). This type of reduction provides PM10 mitigation, but it may not provide notable PM2.5 mitigation.

Data Request

62. Please provide an analysis of the ERCs that are proposed to be surrendered and identified in AFC Table 5.1F-4 that demonstrates the level of PM2.5 mitigation for the proposed project.

Response: The requested analysis is provided in Attachment DR62-1.

Background

Ammonia Slip

The applicant's proposal for ammonia slip emissions is higher than the level that Energy Commission staff believes to be achievable. The applicant's proposal (AFC p. 5.1-28) is to limit ammonia slip emissions to 10 parts per million by volume dry basis (ppmvd), and this higher level of ammonia slip is not consistent with many of the proposed combined cycle projects before the Commission or consistent with the projects (both combined cycle and

simple cycle) that have been recently approved by the Commission. The recently approved Victorville 2 and Walnut Creek Energy Center projects proposed an ammonia slip of 5 ppmvd. Current projects before the Commission including the Carlsbad, Palmdale, Marsh Landing, Willow Pass, Tracy Combined Cycle and CPV Vacaville Station, plus all projects in the South Coast AQMD (Canyon Anaheim, Sentinel, Sun Valley, San Gabriel, El Segundo, High Grove and Southeast Region Energy Project), are all proposing an ammonia slip of 5 ppmvd. Staff believes that the Lodi Energy Center should control ammonia emissions to the extent feasible to avoid contributing to violations of the PM10 and PM2.5 standards.

Considering that it is well known that ammonia emissions are a precursor to PM2.5 formation, and it is technically feasible to design a combined cycle project to meet a 5 ppmvd ammonia slip level, staff needs to understand why the Lodi Energy Center should be allowed an ammonia slip level of 10 ppmvd.

Data Request

63. a. Please provide a technical discussion as to why the HRSG design that includes the Selective Catalytic Reduction system of the Lodi Energy Center cannot be engineered to meet an ammonia slip specification of 5 ppmvd.

    b. Please identify measures, including increasing catalyst surface area that might allow the project to meet the 5 ppmvd level for ammonia.

Response: While it may be "well known that ammonia emissions are a precursor to $PM_{2.5}$ formation," there is no evidence that ammonia emissions are a significant contributor to $PM_{2.5}$ formation in the San Joaquin Valley. In fact, the SJVAPCD's proposed 2008 $PM_{2.5}$ attainment planning document[2] cites several studies that show that the valley is ammonia-rich, and under ammonia-rich conditions, small increases or reductions in ammonia emissions will not affect $PM_{2.5}$ concentrations. For example, Appendix F to the Plan states:

> *…[R]eductions in NOx emissions will be more effective in reducing secondary ammonium nitrate aerosol concentrations than reductions in ammonia emissions. Reductions in VOC emissions will reduce secondary organic aerosol concentrations and may reduce ammonium nitrate. Comparisons of ammonia and nitric acid concentrations show that ammonia is far more abundant than nitric acid, which indicates that ammonium nitrate formation is limited by the availability of nitric acid, rather than ammonia….The results indicate ammonium nitrate formation is ultimately controlled by NOx emission rates and the other species, including VOCs and background ozone, which control the rate of NOx oxidation in winter, rather than by ammonia emissions.*[3]

We respectfully suggest that there is no evidence to demonstrate that reducing the ammonia slip limit from 10 ppm to 5 ppm for the LEC project will have any effect on ambient PM_{10} or $PM_{2.5}$ concentrations in the project area, and therefore we do not believe there is any air quality-related justification for imposing a 5 ppm ammonia slip limit for the project. The proposed 10 ppm ammonia slip limit is consistent with SJVAPCD requirements, and the

[2] "2008 $PM_{2.5}$ Plan," SJVAPCD, Proposed March 13, 2008; accessed at http://www.valleyair.org/Air_Quality_Plans/AQ_Proposed_PM25_2008.htm

[3] "Processes Influencing Secondary Aerosol Formation in the San Joaquin Valley During Winter", Frederick W. Lurmann, Steven G. Brown, Michael C. McCarthy, and Paul T. Roberts, Sonoma Technology, Inc., 1360 Redwood Way, Suite C., Petaluma, CA 94954

District's requirements are based on the need to attain and maintain compliance with the $PM_{2.5}$ and PM_{10} standards, respectively.

a. The Applicant has proposed an ammonia slip level consistent with San Joaquin Valley APCD requirements. The Applicant has not argued that a 5 ppm ammonia slip level is not feasible, only that the SJVAPCD has a 10 ppm ammonia slip requirement and that the reduction of ammonia slip is not necessary to reduce any impact to less-than-significant levels.

b. Please see Response 63a. Because the Applicant is not proposing a 5 ppm ammonia slip, no additional measures to meet this 5 ppm value have been identified.

Background

Combustor Tuning

On some recent projects, most notably the Carlsbad Energy Center Project, language has been included in the local air district's Preliminary Determination of Compliance permit conditions that allow for an operational mode known as "tuning" whereby the normal emission limits for steady-state operation are proposed not to apply. Staff believes that this "tuning" circumstance was proposed by the Carlsbad applicant but was not part of the AFC project description. Staff needs to know whether the Lodi Energy Center would require similar language in its permit conditions, and if so, then a full discussion of the tuning circumstances should be included in the project description.

Data Request

64. Please describe whether the chosen model combustion turbine would require periodic combustor tuning. If so, please provide the following information:

    a. The proposed frequency of combustor tuning.

    b. When tuning would take place, for example during the normal annual maintenance inspection, or at some other manufacturer-specified time period.

    c. A description of what the combustor tuning process entails.

    d. The criteria pollutant emission rates that would occur (concentrations and mass emission levels), and the duration in which emission rates over those of normal steady-state operation would occur.

Response: The Frame 7 combustion turbine that has been selected for the project will require periodic tuning of the dry low-NOx combustor.

a. NCPA expects combustor tuning to be required approximately every 8, 000 hours or 450 starts, following the replacement of components of the gas turbine combustor assemblies that have a limited operational life.

b. Combustor tuning would take place following combustor component replacement. After the new combustor components are installed, the gas turbine's fuel system must be tuned to meet manufacturer's specifications for emissions and acoustic dynamics.

c. The main principles of combustor tuning are: (1) to maintain emissions (usually both NOx and CO) within compliance levels; (2) maintain flame stability (since in premix combustion mode the combustion air-fuel mixture is extremely lean); and (3) keep dynamic pressure pulsations in the combustion system to a minimum. Dynamic pressure pulsations are internal pressure pulsations that can become quite high under the right circumstances and can cause the combustion components to vibrate. These pulsations can take different forms and occur at different frequencies, but they can be damaging to combustion components.

During tuning, the combustor pressures and emissions levels are monitored while the fuel flow-rate split is adjusted at various load points. Manufacturer-specific, proprietary matrices are consulted and used in the tuning process to help achieve the desired operation.

d. Criteria pollutant emission rates during combustor tuning are not expected to exceed the emission rates expected under startup conditions (see Table 5.1-19 of the AFC). Each combustor tuning event is not expected to require more than 12 hours. Hourly and total emissions expected during combustor turning are summarized in Table DR64-1.

TABLE DR64-1
Maximum CTG Combustor Tuning Emission Rates

	NO_x	CO	VOC*
Pounds per maximum hour	160	900	16
Total pounds during tuning period, not to exceed 12 hours	600	5400	96

*VOC emission rates are estimates as GE does not provide these values.

ATTACHMENT DR56B-1

GHG Emissions Calculations for the Construction Phase of the LEC

Table DR56-1

On-Site Construction Greenhouse Gas Emissions for the NCPA Lodi Energy Center: Peak Year

	# of Units per Day Total for the Construction Period[1]	Hours per Day[1]	Days per Month[1]	Months per Year	Load Factor[9] (%)	Horse-power[1]	BSFC[2] (lb/hp-hr)	Diesel Fuel Density (lb/gallon)	Diesel Fuel Used (gallons)	Diesel HHV (MMBtu/ gallon)	CO_2 Emission Factor[3] (kg/gallon)	CH_4 Emission Factor[4] (kg/MMBtu)	N_2O Emission Factor[4] (kg/MMBtu)	Global Warming Potential Factor[5] for CO_2	Global Warming Potential Factor[5] for CH_4	Global Warming Potential Factor[5] for N_2O	Global Warming Potential CO_2 Emissions as CO_2e (MT)	Global Warming Potential CH_4 Emissions as CO_2e (MT)	Global Warming Potential N_2O Emissions as CO_2e (MT)	Total (MT)
Pile Drivers	2	8	25.8	12	0.62	255	0.367	7.09	40,539	0.137	10.14	0.003	0.0006	1	21	310	4.11E+02	3.50E-01	1.03E+00	4.12E+02
Roller Compactor	4	8	25.8	12	0.56	100	0.408	7.09	31,927	0.137	10.14	0.003	0.0006	1	21	310	3.24E+02	2.76E-01	8.14E-01	3.25E+02
Backhoe	30	8	25.8	12	0.55	150	0.367	7.09	317,312	0.137	10.14	0.003	0.0006	1	21	310	3.22E+03	2.74E+00	8.09E+00	3.23E+03
Forklift	21	8	25.8	12	0.60	175	0.367	7.09	282,696	0.137	10.14	0.003	0.0006	1	21	310	2.87E+03	2.44E+00	7.20E+00	2.88E+03
Bulldozer	3	8	25.8	12	0.61	400	0.367	7.09	93,847	0.137	10.14	0.003	0.0006	1	21	310	9.52E+02	8.10E-01	2.39E+00	9.55E+02
Motor Grader	5	8	25.8	12	0.61	135	0.367	7.09	52,789	0.137	10.14	0.003	0.0006	1	21	310	5.35E+02	4.56E-01	1.35E+00	5.37E+02
Cranes, 25 ton	16	8	25.8	12	0.43	160	0.367	7.09	141,130	0.137	10.14	0.003	0.0006	1	21	310	1.43E+03	1.22E+00	3.60E+00	1.44E+03
Excavator	9	8	25.8	12	0.57	195	0.367	7.09	128,252	0.137	10.14	0.003	0.0006	1	21	310	1.30E+03	1.11E+00	3.27E+00	1.30E+03
Cranes, 230 ton	20	8	25.8	12	0.43	220	0.367	7.09	242,567	0.137	10.14	0.003	0.0006	1	21	310	2.46E+03	2.09E+00	6.18E+00	2.47E+03
Cranes, 400 ton	7	8	25.8	12	0.57	255	0.367	7.09	130,444	0.137	10.14	0.003	0.0006	1	21	310	1.32E+03	1.13E+00	3.32E+00	1.33E+03
Cranes, 15 ton	11	8	25.8	12	0.43	101	0.367	7.09	61,248	0.137	10.14	0.003	0.0006	1	21	310	6.21E+02	5.29E-01	1.56E+00	6.23E+02
Manlift	24	8	25.8	12	0.62	30	0.408	7.09	63,625	0.137	10.14	0.003	0.0006	1	21	310	6.45E+02	5.49E-01	1.62E+00	6.47E+02
Scrapers	6	8	25.8	12	0.46	550	0.367	7.09	194,618	0.137	10.14	0.003	0.0006	1	21	310	1.97E+03	1.68E+00	4.96E+00	1.98E+03
Welding Unit	12	8	25.8	12	0.51	70	0.408	7.09	61,060	0.137	10.14	0.003	0.0006	1	21	310	6.19E+02	5.27E-01	1.56E+00	6.21E+02
Water truck	32	8	25.8	12	onroad	onroad	onroad	7.09	186,057	0.137	10.14	0.003	0.0006	1	21	310	1.89E+03	1.61E+00	4.74E+00	1.89E+03
Dump truck	10	8	25.8	12	onroad	onroad	onroad	7.09	93,029	0.137	10.14	0.003	0.0006	1	21	310	9.43E+02	8.03E-01	2.37E+00	9.46E+02
Boom truck	30	8	25.8	12	onroad	onroad	onroad	7.09	418,629	0.137	10.14	0.003	0.0006	1	21	310	4.24E+03	3.61E+00	1.07E+01	4.26E+03
Tandem dump truck	5	8	25.8	12	onroad	onroad	onroad	7.09	46,514	0.137	10.14	0.003	0.0006	1	21	310	4.72E+02	4.01E-01	1.19E+00	4.73E+02
Concrete pump truck	3	8	25.8	12	onroad	onroad	onroad	7.09	23,257	0.137	10.14	0.003	0.0006	1	21	310	2.36E+02	2.01E-01	5.93E-01	2.37E+02
Total																				**2.65E+04**

1 AFC for the NCPA Lodi Energy Center, Appendix 5.1E - Construction Emissions; Attachment 5.1E-1 (Detailed Construction Emissions Calculations)
2 EPA Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression-Ignition, April 2004, Table A2.
3 CARB Regulation for the Mandatory reporting of Greenhouse Gas Emissions, December 2, 2008, Appendix A, Table 4.
4 CARB Regulation for the Mandatory reporting of Greenhouse Gas Emissions, December 2, 2008, Appendix A, Table 6.
5 CARB Regulation for the Mandatory reporting of Greenhouse Gas Emissions, December 2, 2008, Appendix A, Table 2.
6 SCAQMD CEQA Handbook, EMFAC2007 (version 2.3) Emissions Factors for On-Road Passenger Vehicles & Delivery Trucks, March 2007, Scenario Year 2009
7 SCAQMD CEQA Handbook, EMFAC2007 (version 2.3) Emissions Factors for On-Road Heavy-Heavy-Duty Diesel Trucks, March 2007, Scenario Year 2009.
8 CARB Regulation for the Mandatory reporting of Greenhouse Gas Emissions, December 2, 2008, Appendix A, Table 8.
9 EPA Nonroad Engine and Vehicle Emission Study Report, November 2001, Table 2-05.

Table DR56-2
On-Site Construction Greenhouse Gas Emissions for the NCPA Lodi Energy Center: Total for the Construction Perio

	# of Units per Day Total for the Construction Period[1]	Hours per Day[1]	Days per Month[1]	Months per Year	Load Factor[9] (%)	Horse-power[1]	BSFC[2] (lb/hp-hr)	Diesel Fuel Density (lb/gallon)	Diesel Fuel Used (gallons)	Diesel HHV (MMBtu/ gallon)	CO_2 Emission Factor[3] (kg/gallon)	CH_4 Emission Factor[4] (kg/MMBtu)	N_2O Emission Factor[4] (kg/MMBtu)	Global Warming Potential Factor[5] for CO_2	Global Warming Potential Factor[5] for CH_4	Global Warming Potential Factor[5] for N_2O	Global Warming Potential CO_2 Emissions as CO_2e (MT)	Global Warming Potential CH_4 Emissions as CO_2e (MT)	Global Warming Potential N_2O Emissions as CO_2e (MT)	Total (MT)
Pile Drivers	3	8	25.8	12	0.62	255	0.367	7.09	60,808	0.137	10.14	0.003	0.0006	1	21	310	6.17E+02	5.25E-01	1.55E+00	6.19E+02
Roller Compactor	5	8	25.8	12	0.56	100	0.408	7.09	39,908	0.137	10.14	0.003	0.0006	1	21	310	4.05E+02	3.44E-01	1.02E+00	4.06E+02
Backhoe	46	8	25.8	12	0.55	150	0.367	7.09	486,544	0.137	10.14	0.003	0.0006	1	21	310	4.93E+03	4.20E+00	1.24E+01	4.95E+03
Forklift	29	8	25.8	12	0.60	175	0.367	7.09	390,389	0.137	10.14	0.003	0.0006	1	21	310	3.96E+03	3.37E+00	9.95E+00	3.97E+03
Bulldozer	4	8	25.8	12	0.61	400	0.367	7.09	125,130	0.137	10.14	0.003	0.0006	1	21	310	1.27E+03	1.08E+00	3.19E+00	1.27E+03
Motor Grader	6	8	25.8	12	0.61	135	0.367	7.09	63,347	0.137	10.14	0.003	0.0006	1	21	310	6.42E+02	5.47E-01	1.61E+00	6.44E+02
Cranes, 25 ton	25	8	25.8	12	0.43	160	0.367	7.09	220,516	0.137	10.14	0.003	0.0006	1	21	310	2.24E+03	1.90E+00	5.62E+00	2.24E+03
Excavator	9	8	25.8	12	0.57	195	0.367	7.09	128,252	0.137	10.14	0.003	0.0006	1	21	310	1.30E+03	1.11E+00	3.27E+00	1.30E+03
Cranes, 230 ton	32	8	25.8	12	0.43	220	0.367	7.09	388,107	0.137	10.14	0.003	0.0006	1	21	310	3.94E+03	3.35E+00	9.89E+00	3.95E+03
Cranes, 400 ton	9	8	25.8	12	0.57	255	0.367	7.09	167,714	0.137	10.14	0.003	0.0006	1	21	310	1.70E+03	1.45E+00	4.27E+00	1.71E+03
Cranes, 15 ton	19	8	25.8	12	0.43	101	0.367	7.09	105,792	0.137	10.14	0.003	0.0006	1	21	310	1.07E+03	9.13E-01	2.70E+00	1.08E+03
Manlift	40	8	25.8	12	0.62	30	0.408	7.09	106,042	0.137	10.14	0.003	0.0006	1	21	310	1.08E+03	9.15E-01	2.70E+00	1.08E+03
Scrapers	9	8	25.8	12	0.46	550	0.367	7.09	291,927	0.137	10.14	0.003	0.0006	1	21	310	2.96E+03	2.52E+00	7.44E+00	2.97E+03
Welding Unit	46	8	25.8	12	0.51	70	0.408	7.09	234,062	0.137	10.14	0.003	0.0006	1	21	310	2.37E+03	2.02E+00	5.96E+00	2.38E+03
Water truck	24	8	25.8	12	onroad	onroad	onroad	7.09	186,057	0.137	10.14	0.003	0.0006	1	21	310	1.89E+03	1.61E+00	4.74E+00	1.89E+03
Dump truck	12	8	25.8	12	onroad	onroad	onroad	7.09	93,029	0.137	10.14	0.003	0.0006	1	21	310	9.43E+02	8.03E-01	2.37E+00	9.46E+02
Boom truck	54	8	25.8	12	onroad	onroad	onroad	7.09	418,629	0.137	10.14	0.003	0.0006	1	21	310	4.24E+03	3.61E+00	1.07E+01	4.26E+03
Tandem dump truck	6	8	25.8	12	onroad	onroad	onroad	7.09	46,514	0.137	10.14	0.003	0.0006	1	21	310	4.72E+02	4.01E-01	1.19E+00	4.73E+02
Concrete pump truck	3	8	25.8	12	onroad	onroad	onroad	7.09	23,257	0.137	10.14	0.003	0.0006	1	21	310	2.36E+02	2.01E-01	5.93E-01	2.37E+02
Total																				**3.64E+04**

1 AFC for the NCPA Lodi Energy Center, Appendix 5.1E - Construction Emissions; Attachment 5.1E-1 (Detailed Construction Emissions Calculations)
2 EPA Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression-Ignition, April 2004, Table A2.
3 CARB Regulation for the Mandatory reporting of Greenhouse Gas Emissions, December 2, 2008, Appendix A, Table 4.
4 CARB Regulation for the Mandatory reporting of Greenhouse Gas Emissions, December 2, 2008, Appendix A, Table 6.
5 CARB Regulation for the Mandatory reporting of Greenhouse Gas Emissions, December 2, 2008, Appendix A, Table 2.
6 SCAQMD CEQA Handbook, EMFAC2007 (version 2.3) Emissions Factors for On-Road Passenger Vehicles & Delivery Trucks, March 2007, Scenario Year 2009.
7 SCAQMD CEQA Handbook, EMFAC2007 (version 2.3) Emissions Factors for On-Road Heavy-Heavy-Duty Diesel Trucks, March 2007, Scenario Year 2009.
8 CARB Regulation for the Mandatory reporting of Greenhouse Gas Emissions, December 2, 2008, Appendix A, Table 8.
9 EPA Nonroad Engine and Vehicle Emission Study Report, November 2001, Table 2-05.

Table DR56-3
Construction Building Material Truck Deliveries - GHG Emissions

Analysis Period	Truck Trips[a]	Average Round Trip Haul Distance (miles)	Vehicle Miles Traveled This Period	GHG Emission Factors (lbs/mile) CO2[b]	CH4[c]	N20[c]	Global Warming Potential Factor[d] for CO2	Global Warming Potential Factor[d] for CH4	Global Warming Potential Factor[d] for N2O
Peak Year	15,841	49.8	788,892	4.2	1.12E-05	1.06E-05	1	21	310
Total for Construction Period	20,563	49.8	1,024,017	4.2	1.12E-05	1.05727E-05	1	21	310

Analysis Period	Global Warming Potential CO2 Emiss. as CO2 (lbs/year)	Global Warming Potential CH4 Emiss. as CO2 (lbs/year)	Global Warming Potential N2O Emiss. as CO2 (lbs/year)	Total CO2e (lbs/year)	Total CO2e (MT/year)
Peak Year	3,274,645	186	2,586	3,277,417	1,487
Total for Construction Period	4,250,639	242	3,356	4,254,236	1,930

Table DR56-4
Construction Worker Vehicle Travel - GHG Emissions

Analysis Period	Vehicle Trips	Average Round Trip Haul Distance (miles)	Vehicle Miles Traveled Per Year	GHG Emission Factors (lbs/mile) CO2[b]	CH4[c]	N20[c]	Global Warming Potential Factor[d] for CO2	Global Warming Potential Factor[d] for CH4	Global Warming Potential Factor[d] for N2O
Peak Year	75,730	49.8	3,771,338	0.86	3.92E-05	6.01E-05	1	21	310
Total for Construction Period	94,872	49.8	4,724,626	0.86	3.92E-05	6.01E-05	1	21	310

Analysis Period	Global Warming Potential CO2 Emiss. as CO2 (lbs/year)	Global Warming Potential CH4 Emiss. as CO2 (lbs/year)	Global Warming Potential N2O Emiss. as CO2 (lbs/year)	Total CO2e (lbs/year)	Total CO2e (MT/year)
Peak Year	3,249,651	3,105	70,301	3,323,057	1,507
Total for Construction Period	4,071,071	3,890	88,072	4,163,032	1,888

Notes:
a. AFC for the NCPA Lodi Energy Center, Appendix 5.1E - Construction Emissions; Attachment 5.1E-1 (Detailed Construction Emissions Calculations)
b. Emfac2007 V2.3, San Joaquin County, all HHD Diesel models in the range from 1965 to 2008
c. CARB Final Emission Factors for Mandatory Reporting Program, December 2, 2008, emission factors onroad vehicles, heavy Diesel trucks.
d. CARB Final Emission Factors for Mandatory Reporting Program, December 2, 2008, global warming potential table.

Table DR56-5
Linears Construction Greenhouse Gas Emission Calculation for the NCPA Lodi Energy Cente

	# of Units per Day Total for the Construction Period[1]	Hours per Day[1]	Days per Month[1]	Months per Year	Load Factor[9] (%)	Horse-power[1]	BSFC[2] (lb/hp-hr)	Diesel Fuel Density (lb/gallon)	Diesel Fuel Used (gallons/ year)	Diesel HHV (MMBtu/ gallon)	CO_2 Emission Factor[3] (kg/gallon)	CH_4 Emission Factor[4] (kg/MMBtu)	N_2O Emission Factor[4] (kg/MMBtu)	Global Warming Potential Factor[5] for CO_2	Global Warming Potential Factor[5] for CH_4	Global Warming Potential Factor[5] for N_2O	Global Warming Potential CO_2 Emissions as CO_2e (MT/year)	Global Warming Potential CH_4 Emissions as CO_2e (MT/year)	Global Warming Potential N_2O Emissions as CO_2e (MT/year)	Total (MT/year)
Drilling equipment, 300 HP	1	8	25.8	2	0.75	300	0.367	7.09	4,808	0.137	10.14	0.003	0.0006	1	21	310	4.88E+01	4.15E-02	1.23E-01	4.89E+01
Roller Compactor, 100 HP	2	8	25.8	2	0.56	100	0.408	7.09	2,993	0.137	10.14	0.003	0.0006	1	21	310	3.04E+01	2.58E-02	7.63E-02	3.05E+01
Rubbertire Backhoe, 150 HP	2	8	25.8	2	0.55	150	0.367	7.09	3,526	0.137	10.14	0.003	0.0006	1	21	310	3.58E+01	3.04E-02	8.98E-02	3.59E+01
X-ray equipment, 300 HP	2	8	25.8	2	0.51	300	0.367	7.09	4,904	0.137	10.14	0.003	0.0006	1	21	310	4.97E+01	4.23E-02	1.25E-01	4.99E+01
Dewatering equipment, 300 HP	2	8	25.8	2	0.51	300	0.367	7.09	6,539	0.137	10.14	0.003	0.0006	1	21	310	6.63E+01	5.64E-02	1.67E-01	6.65E+01
Welding Unit, 70 HP	2	8	25.8	2	onroad	onroad	onroad	7.09	0	0.137	10.14	0.003	0.0006	1	21	310	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dump truck, 210 HP	2	8	25.8	2	onroad	onroad	onroad	7.09	2,584	0.137	10.14	0.003	0.0006	1	21	310	2.62E+01	2.23E-02	6.58E-02	2.63E+01
Boom truck, 220 HP	1	8	25.8	2	onroad	onroad	onroad	7.09	1,292	0.137	10.14	0.003	0.0006	1	21	310	1.31E+01	1.12E-02	3.29E-02	1.31E+01
Concrete pump truck, 350 HP	1	8	25.8	2	onroad	onroad	onroad	7.09	1,292	0.137	10.14	0.003	0.0006	1	21	310	1.31E+01	1.12E-02	3.29E-02	1.31E+01
Total																				**2.84E+02**

1 AFC for the NCPA Lodi Energy Center, Appendix 5.1E - Construction Emissions; Attachment 5.1E-1 (Detailed Construction Emissions Calculations)
2 EPA Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling - Compression-Ignition, April 2004, Table A2.
3 CARB Regulation for the Mandatory reporting of Greenhouse Gas Emissions, December 2, 2008, Appendix A, Table 4.
4 CARB Regulation for the Mandatory reporting of Greenhouse Gas Emissions, December 2, 2008, Appendix A, Table 6.
5 CARB Regulation for the Mandatory reporting of Greenhouse Gas Emissions, December 2, 2008, Appendix A, Table 2.
6 SCAQMD CEQA Handbook, EMFAC2007 (version 2.3) Emissions Factors for On-Road Passenger Vehicles & Delivery Trucks, March 2007, Scenario Year 2009.
7 SCAQMD CEQA Handbook, EMFAC2007 (version 2.3) Emissions Factors for On-Road Heavy-Heavy-Duty Diesel Trucks, March 2007, Scenario Year 2009.
8 CARB Regulation for the Mandatory reporting of Greenhouse Gas Emissions, December 2, 2008, Appendix A, Table 8.
9 EPA Nonroad Engine and Vehicle Emission Study Report, November 2001, Table 2-05.

Table DR56-6: Linear Facilities Construction Deliveries - GHG Emissions

Analysis Period	Truck Trips[a]	Average Round Trip Haul Distance (miles)	Vehicle Miles Traveled Per Year	GHG Emission Factors (lbs/mile) CO2[b]	CH4[c]	N20[c]	Global Warming Potential Factor[d] for CO2	Global Warming Potential Factor[d] for CH4	Global Warming Potential Factor[d] for N2O
Peak Year	1651	49.8	82,230	4.2	1.12E-05	1.06E-05	1	21	310
Total for Construction Period	1651	49.8	82,230	4.2	1.12E-05	1.05727E-05	1	21	310

Analysis Period	Global Warming Potential CO2 Emiss. as CO2 (lbs/year)	Global Warming Potential CH4 Emiss. as CO2 (lbs/year)	Global Warming Potential N2O Emiss. as CO2 (lbs/year)	Total CO2e (lbs/year)	Total CO2e (MT/year)
Peak Year	341,331	19	270	341,620	155
Total for Construction Period	341,331	19	270	341,620	155

Notes:

a. AFC for the NCPA Lodi Energy Center, Appendix 5.1E - Construction Emissions; Attachment 5.1E-1 (Detailed Construction Emissions Calculations)
b. Emfac2007 V2.3, San Joaquin County, all HHD Diesel models in the range from 1965 to 2008
c. CARB Final Emission Factors for Mandatory Reporting Program, December 2, 2008, emission factors onroad vehicles, heavy Diesel trucks.
d. CARB Final Emission Factors for Mandatory Reporting Program, December 2, 2008, global warming potential table.

Table DR56-7: Linear Facilities Construction Worker Vehicle Travel - GHG Emissions

Analysis Period	Vehicle Trips[a]	Average Round Trip Haul Distance (miles)	Vehicle Miles Traveled Per Year	GHG Emission Factors (lbs/mile) CO2[b]	CH4[c]	N20[c]	Global Warming Potential Factor[d] for CO2	Global Warming Potential Factor[d] for CH4	Global Warming Potential Factor[d] for N2O
Peak Year	697	49.8	34,691	0.86	3.92E-05	6.01E-05	1	21	310
Total for Construction Period	697	49.8	34,691	0.86	3.92E-05	6.01E-05	1	21	310

Analysis Period	Global Warming Potential CO2 Emiss. as CO2 (lbs/year)	Global Warming Potential CH4 Emiss. as CO2 (lbs/year)	Global Warming Potential N2O Emiss. as CO2 (lbs/year)	Total CO2e (lbs/year)	Total CO2e (MT/year)
Peak Year	29,892	29	647	30,567	14
Total for Construction Period	29,892	29	647	30,567	14

a. AFC for the NCPA Lodi Energy Center, Appendix 5.1E - Construction Emissions; Attachment 5.1E-1 (Detailed Construction Emissions Calculations)
b. Emfac2007 V2.3, San Joaquin County, all light duty gasoline vehicle models in the range from 1965 to 2008
c. CARB Final Emission Factors for Mandatory Reporting Program, December 2, 2008, emission factors onroad vehicles, heavy Diesel trucks.
d. CARB Final Emission Factors for Mandatory Reporting Program, December 2, 2008, global warming potential table.

Table DR56-8: Daily and Annual Emissions for Linear Facilities Construction

Daily Construction Emissions (peak month)						
	(lbs/day)					
	NOx	CO	VOC	SOx	PM2.5	PM10
Construction Equipment	27.83	18.48	2.74	0.04	1.33	1.33
Fugitive Dust					0.56	6.62
Subtotal =	27.83	18.48	2.74	0.04	1.89	7.95
Worker Travel	0.48	4.99	0.47	0.00	0.05	0.05
Truck Deliveries	68.51	25.18	5.32	0.06	2.82	2.82
Subtotal =	68.99	30.17	5.80	0.06	2.87	2.87
Total =	96.81	48.65	8.54	0.10	4.76	10.82

Total Construction Emissions (2-month period)						
	(tons/yr)					
	NOx	CO	VOC	SOx	PM2.5	PM10
Construction Equipment	0.50	0.31	0.05	0.00	0.02	0.02
Fugitive Dust					0.01	0.11
Subtotal =	0.50	0.31	0.05	0.00	0.03	0.14
Worker Travel	0.02	0.16	0.02	0.00	0.00	0.00
Truck Deliveries	1.57	0.58	0.12	0.00	0.06	0.06
Subtotal =	1.59	0.74	0.14	0.00	0.07	0.07
Total =	2.09	1.04	0.18	0.00	0.10	0.20

ATTACHMENT DR57-1

Criteria Pollutant and GHG Emissions Calculations from Worker Commutes and Material Deliveries during Operation of the LEC Project

Table DR57-1: Truck Deliveries During Plant Operations - GHG Emissions

Annual Truck Trips[a]	Average Round Trip Haul Distance (miles)	Vehicle Miles Traveled Per Year	GHG Emission Factors (lbs/mile) CO2[b]	CH4[c]	N20[c]	Global Warming Potential Factor[d] for CO2	Global Warming Potential Factor[d] for CH4	Global Warming Potential Factor[d] for N2O
624	49.8	31,075	4.2	1.12E-05	1.06E-05	1	21	310

Global Warming Potential CO2 Emiss as CO2 (lbs/year)	Global Warming Potential CH4 Emiss. as CO2 (lbs/year)	Global Warming Potential N2O Emiss. as CO2 (lbs/year)	Total CO2e (lbs/year)	Total CO2e (MT/year)
128,991	7	102	129,101	59

Table DR57-2: Truck Deliveries During Plant Operation -- Criteria Pollutant Emissions

Annual Truck Trips[a]	Average Round Trip Travel Distance (miles)	Vehicle Miles Traveled Per Year	Criteria Pollutant Emission Factors (lbs/VMT)[b] NOx	SO2	CO	VOC	PM10	PM2.5
624	49.8	31,075	3.82E-02	3.28E-05	1.40E-02	2.97E-03	1.58E-03	1.38E-03

Criteria Pollutant Emissions (tpy)					
NOx	SO2	CO	VOC	PM10	PM2.5
5.94E-01	5.10E-04	2.18E-01	4.61E-02	2.45E-02	2.14E-02

Notes:

a. 12 truck trips per week (AFC Section 5.12.2.4), 52 weeks/yr.

b. Emfac2007 V2.3, San Joaquin County, all HHD Diesel models in the range from 1965 to 2008

c. CARB Final Emission Factors for Mandatory Reporting Program, December 2, 2008, emission factors onroad vehicles, heavy Diesel trucks.

d. CARB Final Emission Factors for Mandatory Reporting Program, December 2, 2008, global warming potential table.

Table DR57-3: Power Plant Worker Vehicle Travel - GHG Emissions

Annual Vehicle Trips[a]	Average Round Trip Travel Distance (miles)	Vehicle Miles Traveled Per Year	GHG Emission Factors (lbs/mile) CO2[b]	CH4[c]	N20[c]	Global Warming Potential Factor[d] for CO2	Global Warming Potential Factor[d] for CH4	Global Warming Potential Factor[d] for N2O
2,555	49.8	127,239	0.9	3.92E-05	6.01E-05	1	21	310

Global Warming Potential CO2 Emiss. as CO2 (lbs/year)	Global Warming Potential CH4 Emiss. as CO2 (lbs/year)	Global Warming Potential N2O Emiss. as CO2 (lbs/year)	Total CO2e (lbs/year)	Total CO2e (MT/year)
109,638	105	2,372	112,115	51

Table DR57-4: Power Plant Worker Vehicle Travel -- Criteria Pollutant Emissions

Annual Vehicle Trips[a]	Average Round Trip Travel Distance (miles)	Vehicle Miles Traveled Per Year	Criteria Pollutant Emission Factors (lbs/mile)[b] NOx	SO2	CO	VOC	PM10	PM2.5
2,555	49.8	127,239	8.91E-04	8.25E-06	9.28E-03	8.80E-04	8.58E-05	2.97E-05

Criteria Pollutant Emissions (tpy)					
NOx	SO2	CO	VOC	PM10	PM2.5
5.67E-02	5.25E-04	5.90E-01	5.60E-02	5.46E-03	1.89E-03

a. Maximum of 7 new workers (AFC Section 5.10.3.4.1), traveling 365 days/yr.
b. Emfac2007 V2.3, San Joaquin County, all light duty gasoline vehicle models in the range from 1965 to 2008
c. CARB Final Emission Factors for Mandatory Reporting Program, December 2, 2008, emission factors onroad vehicles, gasoline light duty vehicles (2000 average model year).
d. CARB Final Emission Factors for Mandatory Reporting Program, December 2, 2008, global warming potential table.

ATTACHMENT DR58-1

NCPA Combustion Turbine Project #2 (STIG plant) Facility 2006, 2007, and 2008 Emissions Data

Attachment DR58
NCPA Lodi Energy Center
Calculation of Baseline Emissions for the Existing CTP #2

Calendar Year	2006	2007	2008 [a]
Fuel Use, MMBtu/yr [b]	524,329	666,956	627,677
Operating Hours [c]	1389	1823	1734
Emission Factors [d]			
VOC	0.0128 lb/MMBtu		
PM10	2.0 lb/hr		

Emissions, tons per year	2006	2007	2008 [a]	Source
NOx	3.7	3.5	3.3	EPA CAM Data (acid rain database)
SO2	2.2	2.2	2.2	EPA CAM Data (acid rain database)
CO	3.8	4.7	4.6	CEMS (2007, 2008) [e]
VOC	3.4	4.3	4.0	Calculated from emission factor and fuel use
PM10	1.4	1.8	1.7	Calculated from emission factor and hours of operation
CO2	30,908.4	39,329.2	37,017.8	EPA CAM Data (acid rain database)

Notes:
a. 2008 emissions for first 3 quarters only
b. From EPA CAM Data (acid rain database)
c. Provided by NCPA
d. Calculated from permit limits. See NCPA LEC AFC, Appendix 5.1A, Table 5.1A-1.
e. CO for 2006 estimated from 2007-08 average rate of 0.0144 lb/MMBtu.

ATTACHMENT DR59-1

Existing STIG CTG and Fire Pump Engine Permits to Operate

San Joaquin Valley
Air Pollution Control District

FACILITY: N-2697-0-2 **EXPIRATION DATE:** 05/31/2009

FACILITY-WIDE REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
3. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0; County Rules 110 (Fresno, Stanislaus, San Joaquin); 109 (Merced); 113 (Madera); and 111 (Kern, Tulare, Kings)] Federally Enforceable Through Title V Permit
4. The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit
5. Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020 (3/21/02). [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit
6. The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 and 9.12.1] Federally Enforceable Through Title V Permit
7. A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit
8. Every application for a permit required under Rule 2010 (12/17/92) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit
9. The operator shall maintain records of required monitoring that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit
10. The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

11. The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520, 9.5.1] Federally Enforceable Through Title V Permit

12. Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with section 10.0 of District Rule 2520 (6/21/01). [District Rules 2520, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit

13. If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520, 9.7] Federally Enforceable Through Title V Permit

14. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520, 9.8.2] Federally Enforceable Through Title V Permit

15. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520, 9.8.3] Federally Enforceable Through Title V Permit

16. The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit

17. The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit

18. The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520, 9.9] Federally Enforceable Through Title V Permit

19. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.1] Federally Enforceable Through Title V Permit

20. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit

21. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3] Federally Enforceable Through Title V Permit

22. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520, 9.13.2.4] Federally Enforceable Through Title V Permit

23. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (11/15/01). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

24. No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in the Table of Standards of District Rule 4601 (10/31/01) for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit

25. All VOC-containing materials for architectural coatings subject to Rule 4601 (10/31/01) shall be stored in closed containers when not in use. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit

26. The permittee shall comply with all the Labeling and Test Methods requirements outlined in Rule 4601 sections 6.1 and 6.3 (10/31/01). [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit

27. With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13.1 and 10.0] Federally Enforceable Through Title V Permit

28. If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit

29. If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR 82, Subpart B. [40 CFR 82, Subpart B] Federally Enforceable Through Title V Permit

30. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8021 and 8011] Federally Enforceable Through Title V Permit

31. Outdoor handling, storage and transport of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under Section 4.0 of Rule 8031 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8031 and 8011] Federally Enforceable Through Title V Permit

32. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8041 and 8011] Federally Enforceable Through Title V Permit

33. Whenever open areas are disturbed or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8051 and 8011] Federally Enforceable Through Title V Permit

34. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8061 and Rule 8011] Federally Enforceable Through Title V Permit

35. Any unpaved vehicle/equipment area that anticipates more than 75 vehicle trips per day shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment area that anticipates more than 100 vehicle trips per day shall comply with the requirements of Section 5.1.2 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (11/15/01) or Rule 8011 (11/15/01). [District Rule 8071 and Rule 8011] Federally Enforceable Through Title V Permit

36. Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

37. The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit

38. The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit

39. When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permits shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit

40. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Rule 401 (Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, Tulare and Merced), Rule 110 (Fresno, Stanislaus, San Joaquin), Rule 109 (Merced), Rule 113 (Madera), and Rule 111 (Kern, Tulare, Kings). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

41. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following applicable requirements: SJVUAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (11/15/01); 4601, sections 5.1, 5.2, 5.3, 5.8 and 8.0 (10/31/01); 8021 (11/15/01); 8031 (11/15/01); 8041 (11/15/01); 8051 (11/15/01); 8061 (11/15/01); and 8071 (11/15/01). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

42. The reporting periods for the Report of Required Monitoring and the Compliance Certification Report begin January 1 of each year, unless alternative dates are approved by the District Compliance Division. These reports are due within 30 days after the end of the reporting period. [District Rule 2520] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-2697-1-3 **EXPIRATION DATE:** 05/31/2009

EQUIPMENT DESCRIPTION:
ONE GENERAL ELECTRIC LM5000 NATURAL GAS FIRED GAS TURBINE ENGINE WITH STEAM INJECTION, SELECTIVE CATALYTIC REDUCTION WITH AMMONIA INJECTION, AND AN OXIDIZATION CATALYST SERVING A 49 MW ELECTRICAL GENERATOR

PERMIT UNIT REQUIREMENTS

1. This unit shall be fired solely on PUC-quality natural gas. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, and the exhaust gas NOx, CO and O2 concentrations. [40 CFR 60.334 (b)(1)(2), District NSR Rule and District Rule 1080] Federally Enforceable Through Title V Permit
3. The turbine and associated ancillary equipment must be maintained and kept in good operating condition at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
4. A selective catalytic reduction (SCR) system shall be installed in the path of the heat recovery boiler where the temperature range is 450 to 750 degrees F. [District NSR Rule] Federally Enforceable Through Title V Permit
5. A SCR system shall have an effective catalyst volume of at least 100 cubic feet at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
6. The catalyst bed and other components of the SCR system shall be made available for visual inspection by the District at least once a year. The District shall be notified at least 30 days prior to scheduling such inspection. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The turbine shall be equipped with a CO catalyst to reduce CO and NMHC emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
8. The turbine shall be equipped with an automatic air/fuel ratio control system. [District NSR Rule] Federally Enforceable Through Title V Permit
9. The permittee shall provide a continuous temperature monitoring and recording system to indicate the flue gas temperature through the SCR system. [District NSR Rule] Federally Enforceable Through Title V Permit
10. The stack height shall be minimum of 50 feet, and shall be adequate for stack sampling pursuant to EPA reference methods for source testing. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit
12. The NOx CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 1080, 6.4 and 40 CFR 60.334(b)(2)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

13. The continuous NOx and O2 monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix F, and Part 60, Appendix B, or shall meet equivalent specifications established by mutual agreement of the District,the ARB, and the EPA. [District Rule 1080, 6.7] Federally Enforceable Through Title V Permit

14. A violation of NOx emission standards indicated by the NOx CEM shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

15. Operator shall notify the APCO no later than eight hours after the detection of a breakdown of the CEM. Operator shall inform the APCO of the intent to shut down the CEM at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

16. Operations during periods of startup or shutdown shall not constitute representative conditions for the purpose of a NOx performance test nor shall NOx emissions in excess of the level of the emission limit shown in this permit during periods of startup and shutdown be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard. [40 CFR 60.8(c)] Federally Enforceable Through Title V Permit

17. The owner or operator shall maintain records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, any periods during which a continuous monitoring system or monitoring device is inoperative, maintenance of any CEM system that has been installed pursuant to District Rule 1080 (as amended 12/17/92), and emission measurements. [40 CFR 60.7(b) and District Rule 1080, 7.0] Federally Enforceable Through Title V Permit

18. The owner or operator shall, upon written notice from the APCO, provide a summary of the data obtained from the CEM systems. This summary of data shall be in the form and the manner prescribed by the APCO. [District Rule 1080, 7.1] Federally Enforceable Through Title V Permit

19. Results of the CEM system shall be averaged over a three hour period, using consecutive 15-minute sampling periods in accordance with all applicable requirements of CFR 60.13(h). [40 CFR 60.13(h), and District Rule 4703, 5.1, 6.4] Federally Enforceable Through Title V Permit

20. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. Operators of CEM systems installed at the direction of the APCO shall submit a written report for each calendar quarter to the APCO. The report is due on the 30th day following the end of the calendar quarter and shall include the following: Time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; Averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; Applicable time and date of each period during which the CEM was inoperative, except for zero and span checks, and the nature of system repairs and adjustments; A negative declaration when no excess emissions occurred. [40 CFR 60.334 (j)(5) and District Rule 1080, 8.0] Federally Enforceable Through Title V Permit

22. The fuel consumption, based on the higher heating value of the fuel, shall not exceed 463 million Btu in any one hour. [District NSR Rule] Federally Enforceable Through Title V Permit

23. All emissions during start-up and shutdown periods shall be counted towards the applicable daily emissions limitations. [District NSR Rule] Federally Enforceable Through Title V Permit

24. The daily emission rates shall be calculated based on the hourly average stack concentrations and the calculated stack gas flow rates. [District NSR Rule] Federally Enforceable Through Title V Permit

25. The continuous emissions monitoring equipment shall be calibrated at least once per day. Relative Accuracy Testing shall be performed annually in accordance with 40 CFR Part 60, Appendices B & F or Part 75 if approved by the EPA. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

27. The unit shall comply with the Rule 4703 NOx limit of 5 ppmvd @ 15% O2 within two hours of the commencement of start-up and shut-down periods as defined in Rule 4703. Within three hours of commencing the start-up or shutdown sequence, the NOx emissions shall not exceed 3.0 ppmvd @ 15% O2 over a three hour rolling average. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

28. The unit shall comply with the Rule 4703 CO limit of 200 ppmvd @ 15% O2 within two hours of the commencement of start-up and shutdown periods as defined in Rule 4703. Within three hours of commencing the start-up or shutdown sequence, the CO emissions shall not exceed 200 ppmvd @ 15% O2 over a three hour rolling average [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

29. Sulfur compound emissions shall not exceed 0.0152% by volume, 150 ppmv, on a dry basis averaged over 15 consecutive minutes. [40 CFR 60.333(a); County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus)] Federally Enforceable Through Title V Permit

30. The ammonia slip shall not exceed 25 ppmv, dry, corrected to 15% O2. [District Rule 4102]

31. The NOx emissions shall not exceed 112.0 pounds during any one day. [District NSR Rule] Federally Enforceable Through Title V Permit

32. The PM10 emissions shall not exceed 48.0 pounds in any one day. [District NSR Rule] Federally Enforceable Through Title V Permit

33. The CO emissions shall not exceed 322.0 pounds in any one day. [District NSR Rule] Federally Enforceable Through Title V Permit

34. The VOC emissions shall not exceed 142.0 pounds during any one day. [District NSR Rule] Federally Enforceable Through Title V Permit

35. The fuel sulfur content shall not exceed 1.0 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

36. There shall be no visible emissions (except for uncombined water) from the entire system except during periods of startup and shutdown. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Visible emissions shall be inspected annually during operation. If visible emissions are observed, corrective action shall be taken to eliminate visible emissions. If visible emissions cannot be corrected within 24 hours, a visible emissions test using EPA Method 9 shall be conducted. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. The owner or operator shall be required to conform to the compliance testing and sampling procedures described in District Rule 1081 (as amended 12/16/93). [District Rule 1081] Federally Enforceable Through Title V Permit

39. The owner or operator shall conduct and provide source test information annually regarding the exhaust gas NOx and CO concentration corrected to 15% O2 (dry). EPA Methods 7E or 20 shall be used for NOx emissions. EPA Methods 10 or 10B shall be used for CO emissions. EPA Methods 3, 3A, or 20 shall be used for Oxygen content of the exhaust gas. [40 CFR 60.8(a), 40 CFR 60.335(a)(b), District NSR Rule and District Rules 2520, Section 9.3.2, 4703, 5.1, 6.3.1, 6.4.1, 6.4.2, and 6.4.3] Federally Enforceable Through Title V Permit

40. The owner or operator shall conduct and provide source test information annually regarding, the NH3 emissions, and shall be measured using BAAQMD Method ST-1B. [District NSR Rule and District Rule 1081] Federally Enforceable Through Title V Permit

41. Source testing shall be conducted using the methods outlined in this permit and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

42. If the turbine is fired on PUC-regulated natural gas, then maintain on file copies of natural gas bills. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

43. If the turbine is not fired on PUC-regulated natural gas, then the sulfur content of the natural gas being fired in the turbine shall be determined using ASTM method D 1072, D 4468, D 6667 or D 3246. [40 CFR 60.335(b)(10)(ii)] Federally Enforceable Through Title V Permit

44. If the turbine is not fired on PUC-regulated natural gas, the sulfur content of each fuel source shall be documented in a valid purchase contract, a supplier certification, tariff or transportation contract or tested daily in accordance with the requirements of 40 CFR 60.334 (h)(3) or (i)(2). [40 CFR 60.334(h)(3) and (i)(2)] Federally Enforceable Through Title V Permit

45. The operator shall submit a quarterly report of excess emissions and monitor downtime as defined and specified in 40 CFR 60.334 (b)(3) and (j). Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. [40 CFR 60.334 (b)(3) and (j)] Federally Enforceable Through Title V Permit

46. A daily log showing the hourly rate of ammonia injection and the pressure drop across the catalyst shall be maintained on the premises at all times. [District NSR Rule] Federally Enforceable Through Title V Permit

47. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus) as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

48. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332(a)(1), (b), 60.333 (b); 60.334, (b)(1), (b)(2), (b)(3), (h)(3), (i)(2), (j)(3); 60.335(a), (b)(1), (b)(2), and (b)(10)(ii); and District Rule 4703 (as amended 4/25/02), Sections 5.1.1, 5.2, 6.1, 6.3.1, 6.3.3, 6.4, 6.4.5, and 6.4.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

49. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.7(b), 60.8(a), (c), (d), and 60.13(b); District Rules 1080 (as amended 12/17/92), Sections 6.3, 6.4, 6.5, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, and 11.0; and 1081 (as amended 12/16/93) as of the date of permit issuance. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

50. The owners and operators of each affected source and each affected unit at the source shall have an Acid Rain permit and operate in compliance with all permit requirements. [40 CFR 72] Federally Enforceable Through Title V Permit

51. The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75. [40 CFR 75] Federally Enforceable Through Title V Permit

52. The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit

53. The owners and operators of each source and each affected unit at the source shall: (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide. [40 CFR 73] Federally Enforceable Through Title V Permit

54. Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act. [40 CFR 77] Federally Enforceable Through Title V Permit

55. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program. [40 CFR 72] Federally Enforceable Through Title V Permit

56. An allowance shall not be deducted in order to comply with the requirements under 40 CFR part 73, prior to the calendar year for which the allowance was allocated. [40 CFR 73] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

57. An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization. [40 CFR 72] Federally Enforceable Through Title V Permit

58. An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right. [40 CFR 72] Federally Enforceable Through Title V Permit

59. The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

60. The owners and operators of an affected unit that has excess emissions in any calendar year shall: (i) Pay without demand the penalty required, and pay up on demand the interest on that penalty; and (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77. [40 CFR 77] Federally Enforceable Through Title V Permit

61. The owners and operators of the each affected unit at the source shall keep on site the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority: (i) The certificate of representation for the designated representative for the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site beyond such five-year period until such documents are superceded because of the submission of a new certificate of representation changing the designated representative. [40 CFR 72] Federally Enforceable Through Title V Permit

62. The owners and operators of each affected unit at the source shall keep on site each of the following documents for a period of five years from the date the document is created. This period may be extended for cause, at any time prior to the end of five years, in writing by the Administrator or permitting authority; (ii) All emissions monitoring information, in accordance with 40 CFR part 75; (iii) Copies of all reports, compliance certifications and other submissions and all records made or required under the Acid Rain Program; (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission that demonstrates compliance with the requirements of the Acid Rain Program. [40 CFR 75] Federally Enforceable Through Title V Permit

63. The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR 75 Subpart I. [40 CFR 75] Federally Enforceable Through Title V Permit

64. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4703] Federally Enforceable Through Title V Permit

CT-2
STI6

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-2697-4-2 **EXPIRATION DATE:** 05/31/2009

EQUIPMENT DESCRIPTION:
240 HP CUMMINS MODEL 6CTA8.3-F1 DIESEL FIRED IC ENGINE WITH A TURBOCHARGER AND AFTERCOOLER SYSTEM POWERING AN EMERGENCY FIRE PUMP

PERMIT UNIT REQUIREMENTS

1. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus)] Federally Enforceable Through Title V Permit
2. Unit shall be fired only on diesel fuel with a sulfur content of less than 0.05% by weight. [County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus)] Federally Enforceable Through Title V Permit
3. If the IC engine is fired on Air Resources Board regulated diesel fuel, with a supplier certified sulfur content less than 0.05% by weight, the operator shall maintain copies of all fuel invoices and supplier certifications. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. If the IC engine is not fired on ARB regulated diesel fuel, with a supplier certified sulfur content less than 0.05% by weight, then the owner or operator shall determine the sulfur content of each delivery of diesel fuel being fired in the IC engine. The sulfur content shall be determined using ASTM method D 2880. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. The NOx emissions rate shall not exceed 6.12 grams/BHP-hr. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
7. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing and required regulatory purposes shall not exceed 200 hours per year. [District NSR Rule and District Rule 4701, 4.2.1] Federally Enforceable Through Title V Permit
8. The permittee shall maintain records of hours of emergency and non-emergency operation. Records shall include the date, the number of hours of operation, the purpose of the operation (e.g., load testing, weekly testing, rolling blackout, general area power outage, etc.), and the sulfur content of the diesel fuel used. Such records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 1070 and Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

ATTACHMENT DR62-1

Analysis of the ERCs Proposed to be Surrendered

Attachment DR62-1
NCPA Lodi Energy Center
CEQA Mitigation Summary with PM2.5

VOC	tons per year
Project VOC Emissions	17.5
VOC ERCs Required for CEQA Mitigation	**17.5**
VOC ERCs-- Cert No. S-2748-1	52.8
VOC ERCs Excess (Shortfall)	**35.3**

NOx	tons per year
Project NOx Emissions	71.5
NOx ERCs Required for CEQA Mitigation	**71.5**
NOx ERCs	
S-2706-2	0.5
S-2517-2	2.8
S-2519-2	3.8
S-2520-2	47.6
S-2521-2	2.3
S-2522-2	9.8
S-2523-2	0.7
S-2688-2	8.4
C-894-2	0.3
C-895-2	5.2
C-808-2	8.6
N-58-2	13.8
N-316-2	0.8
S-2363-2	32.3
S-2767-2	1.7
S-2769-2	8.1
S-2770-2	14.3
Total	161.0
NOx ERCs Excess (Shortfall)	**89.6**

SOx	tons per year
Project SOx Emissions	24.3
SOx ERCs Required for CEQA Mitigation	**24.3**
SOx ERCs	
S-2470-5	25.0
S-2486-5	16.3
S-2745-5	18.2
N-641-5	6.3
N-631-5	5.5
S-2503-5	4.9
N-624-5	1.8
Total	78.1
SOx ERCs Excess (Shortfall)	**53.7**
SOx ERCs Used for PM10	**31.5**
Additional SOx ERCs Used for PM2.5	**13.9**
SOx ERCs Excess (Shortfall)	**8.3**

Attachment DR62-1 (cont'd)

PM10	tons per year
Project PM10 Emissions	44.0
PM10 ERCs Required for CEQA Mitigation	**44.0**
PM10 ERCs	
S-2479-4	13.0
C-769-4	2.1
N-595-4	0.4
C-804-4	0.0
C-801-4	0.0
Total	15.6
PM10 ERCs Excess (Shortfall)	**(28.4)**
PM10 Reductions from SOx ERCs (at 1.11 to 1.0) (1)	**28.4**
PM10 Reductions Excess (Shortfall)	**0.0**

PM2.5	Tons per year
Project PM2.5 Emissions	44.0
PM2.5 ERCs Required for CEQA Mitigation	**44.0**
PM2.5 ERCs	
S-2479-4	2.2
C-769-4	0.4
N-595-4	0.4
C-804-4	0.0
C-801-4	0.0
Total	3.1
PM2.5 ERCs Excess (Shortfall)	**(40.9)**
PM2.5 Reductions from SOx ERCs (at 1.11 to 1.0) (1)	**28.4**
Additional PM2.5 Reductions Required	**-12.5**
Additional PM2.5 Reductions from SOx ERCs (2)	**12.5**
PM2.5 Reductions Excess (Shortfall)	**0.0**

Notes:

1. SOx:PM10 ratio evaluation from Attachment 5.1F-1. Use 1.11

Attachment DR62-2
NCPA Lodi Energy Center
Adjustment of PM10 ERCs for PM2.5 Fractions

ERC Certificate	PM10 ERCs, tpy	Source of Emissions Reductions	PM2.5 Fraction	Source of PM2.5 Fraction	PM2.5 ERCs, tpy
S-2479-4	13.0	Shutdown feedmill	0.167	AP-42 Table 9.9.1.1	2.2
C-769-4	2.1	Shutdown cotton gin	0.20	AP-42 App B-1 Cotton ginning	0.4
N-595-4	0.4	Boiler shutdown	1.0	Combustion source	0.4
C-804-4	0.0	Boiler shutdown	1.0	Combustion source	0.0
C-801-4	0.0	Boiler shutdown	1.0	Combustion source	0.0
Total	15.6				3.1

Hazardous Materials Management (65–70)

Background

Anhydrous Ammonia Storage Tank

Pages 5.5-18, 5.5-24, 5.5-25, and 5.5-26 of the AFC provide narrative discussions of the existing STIG anhydrous ammonia storage tank that will be used for the LEC, the current Risk Management Plan (RMP) and Hazardous Materials Business Plan (HMBP), an upgrade to the ammonia storage system, various safety systems for the storage tank, a Process Safety Management Plan (PSMP) that was prepared and submitted in September 2008 to the San Joaquin County Office of Emergency Services, and a security plan that will be prepared. Furthermore, the AFC states - and the project manger confirmed that the LEC site will be contiguous with the CTP#2 site with no fence between them. Thus, the security perimeter will surround both projects.

Staff needs the additional information contained in the plans referenced above in order to conduct its assessment and consider necessary and appropriate Conditions of Certification to protect workers and the off-site public.

Data Request

65. Please provide the current RMP addressing the anhydrous ammonia storage tank at the CTP #2 site.

Response: A copy of the current Risk Management Plan for the NCPA Combustion Turbine Project #2 (STIG plant) site is located on site and is available for review at the plant. To request a site visit, please contact Ed Warner/NCPA at (209) 333-6370, ext. 100.

Data Request

66. Please provide the current PSMP addressing the anhydrous ammonia storage tank at the CTP#2 site.

Response: The Process Safety Management Plan is incorporated into the Risk Management Plan for the STIG plant site. As discussed in Data Response 65, the Risk Management Plan is available for review at the plant. To request a site visit, please contact Ed Warner/NCPA at (209) 333-6370, ext. 100.

Data Request

67. Please provide the existing HMBP for the CTP #2 site.

Response: The HMBP for the STIG plant site has been provided as Attachment DR67-1.

Data Request

68. Please provide a written description and schematic drawing of the proposed upgrades and modifications to the anhydrous ammonia storage tank and piping system. Please be sure to identify all control valves (manual or remote activated) and ammonia sensors located at the tank, loading pad, ammonia skid, and along the piping route from the tank to the LEC.

Response: The modifications to the existing anhydrous ammonia storage tank and delivery system will be minor. The existing ammonia vaporizer may need to be increased in capacity to support the new plant expansion (see note #1 of Figure DR68-1). In addition, a tee type fitting will be added to the existing system allowing a new branch to interconnect with the new facility.

Also, a water deluge system is being added at the existing tank as part of the existing plant system upgrades. The deluge system's purpose will be to abate NH_3 in the event of a release. To support this system enhancement, the existing NH_3 sensor will monitor the conditions at the tank. In the event of a release, the operator will operate a system isolation valve manually from a safe distance from the tank area. The system will be designed per NFPA and the California Fire Code.

Data Request

69. Please identify the person responsible for the CTP #2 and LEC site security by name and phone number so that staff may call and discuss site security measures.

Response: The person responsible for both the STIG plant and LEC site security is Ed Warner. Mr. Warner may be reached at (209) 333-6370, ext. 100. In addition, Staff may also contact Joe Bitner, the LEC Field Superintendent, at (209) 333-6370, ext. 107.

Data Request

70. Please provide a narrative description, including references to all training manuals, for any joint exercise the CTP #2 facility has conducted with responsible agencies (e.g., Woodbridge Fire Protection District, San Joaquin County Environmental Health Dept., San Joaquin County Office of Emergency Services, San Joaquin County Sheriff's Dept., the California Highway Patrol, the California Office of Homeland Security, the Federal Bureau of Investigation) on emergency response procedures for fire, confined space rescue, hazardous materials releases, terrorist attacks, and/or the need for emergency medical services. Also include dates of these joint training exercises and a list of agencies involved.

Response: An annual training exercise with local agencies has not been conducted at the STIG plant facility; however, the following activities have taken place.

Annually, Airgas, the STIG plant ammonia vendor, comes on site and conducts comprehensive training that includes:

- Discussion and videos describing the hazards of exposure to and handling of anhydrous ammonia
- Discussion and description of the plant's ammonia system safety features, including leak detection and high flow shutoff valves

- Review and walkthrough of the ammonia off-loading procedure
- Review of the plant's emergency response plan

In addition, in mid-2008, Woodbridge Fire personnel visited the site to evaluate the ammonia storage facility and to provide recommendations as to the need to continually train plant personnel on the care and use of the self-contained breathing apparatus (SCBAs). As a result of the visit, Woodbridge Fire recommended the discontinued use of SCBAs due to the labor and costs associated with both maintaining the gear in compliance and with keeping employees properly trained and competent in their use. They also recommended discontinuing use of SCBAs to eliminate the potential of personnel donning the equipment and trying to fix a leak on the system. Based on this review, the STIG plant facility has revised both the emergency response plan and the Risk Management Plan to reflect this change.

FIGURE DR68-1
AMMONIA TANK EXPANSION FOR LEC
LODI ENERGY CENTER
LODI, CALIFORNIA

CH2MHILL

EY062008001SAC Figure_DR_68-1.ai 02.16.09 tdaus

ATTACHMENT DR67-1

HMBP for the STIG Plant Site

HAZARDOUS MATERIALS MANAGEMENT PLAN

COMBUSTION TURBINE PROJECT NO. 2

LODI, CALIFORNIA

2009

BUSINESS OWNER/OPERATOR IDENTIFICATION FORM
1/18/2008

Account #: 8195

I. IDENTIFICATION

BUSINESS NAME (4): NORTHERN CALIF POWER AGENCY
BUSINESS PHONE (5): 209-333-6370

SITE ADDRESS (6): 12745 | N | THORNTON | RD | (Street No. | Direction | Street Name | Street Type | Apt/Bldg/Suite)

CITY (7): LODI
STATE (8): CA
ZIP (9): 95242

DUN & BRADSTREET (10): 082900564
SIC CODE (4 DIGIT #) (11): 4911

OPERATOR NAME (12): NORTHERN CALIF POWER AGENCY
OPERATOR PHONE (13): 209-333-6372

II. BUSINESS OWNER

OWNER NAME (14): NCPA
OWNER PHONE (15): 916-781-3636

OWNER MAILING ADDRESS (16) (If different from site address): 180 CIRBY WAY

CITY (17): ROSEVILLE
STATE (18): CA
ZIP (19): 95678

III. ENVIRONMENTAL CONTACT

CONTACT NAME (20): RANDALL BLANK
CONTACT PHONE (21): 916-781-4265

MAILING ADDRESS (22) (If different from site address): 180 | | CIRBY | WAY | (Street No. | Direction | Street Name | Street Type | Apt/Bldg/Suite)

CITY (23): ROSEVILLE
STATE (24): CA
ZIP (25): 95678

IV. EMERGENCY CONTACTS

Primary		Secondary	
NAME (26)	ED WARNER	NAME (31)	NCPA DISPATCHER
TITLE (27)	PLANT MANAGER	TITLE (32)	N/A
BUSINESS PHONE (28)	209-333-6370	BUSINESS PHONE (33)	916-786-3518
24-HOUR PHONE (29)	209-768-5887	24-HOUR PHONE (34)	916-786-3518
PAGER # (30)	N/A	PAGER # (35)	N/A

EXTREMELY HAZARDOUS SUBSTANCES (EHS)

ON-SITE EHS (36): YES

If yes, and above Threshold Planning Quantities, attach a sheet of paper with a general description of the process and principle equipment involved with the EHS.

ADDITIONAL LOCALLY COLLECTED INFORMATION (37) Provide information requested on the 2nd page of this form

NAME OF DOCUMENT PREPARER (38): RANDALL BLANK

NAME OF OWNER/OPERATOR (39): NCPA

DATE (40):

BUSINESS OWNER/OPERATOR IDENTIFICATION PAGE

BUSINESS MAILING AND BILLING INFORMATION

MAILING ADDRESS (41)
If different from Site Address, otherwise leave blank
NOTE: All official mail will go to this address

Street No.	Direction	Street Name	Street Type
		P.O. BOX 1478	

CITY	STATE	ZIP
LODI	CA	95241

BILLING ADDRESS (42)
If different from Mailing Address, otherwise leave blank

Street No.	Direction	Street Name	Street Type

City	State	ZIP

ADDITIONAL BUSINESS INFORMATION

TYPE OF ORGANIZATION (43): ☐ Single Owner ☐ Partnership ☐ Corporation ☒ Public Agency

UNSTAFFED SITE NETWORK (44): NO

ASSESSOR PARCEL NO. (45): 055-130-15

PROPERTY OWNER NAME (46) (If different from Business Owner): NCPA

PHONE NO. (47): (916) 781-3636

PROPERTY OWNER ADDRESS (48): 180 CIRBY WAY (Street Address)

City	State	ZIP
ROSEVILLE	CA	95678

FIRE DISTRICT NO.: 7

FIRE DISTRICT NAME (49): WOODBRIDGE

NEAREST CROSS STREET (50): NORTH THORNTON & I-5 FRONTAGE

FACILITY LOCK BOX (51): YES

IF YES, WHERE IS IT LOCATED? (52): MAP LOCATION L/1: ATTACHED TO BACK OF GATE

NATURE OF BUSINESS (53): ELECTRIC POWER GENERATION

WASTE GENERATOR (54): YES

IF YES, WHAT IS YOUR EPA NO.? (55): CAR000004333

TRADE SECRET INFORMATION (56): NO

SPILL PREVENTION AND COUNTERMEASURES PLAN FOR THIS FACILITY (57): YES

TRAINING PROGRAM INFORMATION

Does your business have an employee training program that includes initial training and annual refreshers? (58): YES

Does your business maintain written training records that show the training subject, date(s) of training, names and signatures of employees trained, and names of instructor(s)? (59): YES

SAN JOAQUIN COUNTY HAZARDOUS MATERIALS MANAGEMENT PLAN
NAME OF BUSINESS: NORTHERN CALIF POWER AGENCY

01/08/2009 - 10:37:27 AM

EMERGENCY ASSIGNMENTS SECTION

The following person(s) are responsible for taking the actions indicated:

	Primary	Alternate
NOTIFY AND SUPERVISE ALL EMPLOYEES DURING AN EMERGENCY (1)	ED WARNER	SCOTT SEXTON
PROVIDE TECHNICAL AND OPERATIONAL INFORMATION TO PUBLIC AGENCIES (2)	ED WARNER	SCOTT SEXTON
IMMEDIATELY NOTIFY PUBLIC SAFETY AGENCIES (9-1-1), COUNTY OES, AND STATE WARNING CENTER (3)	ED WARNER	NCPA DISPATCHER
PROVIDE ACCESS TO THE FACILITY FOR PUBLIC SAFETY AGENCIES AND CLEAN-UP CONTRACTORS (4)	ED WARNER	SCOTT SEXTON
EXPEND FUNDS FOR EQUIPMENT AND CLEAN-UP CONTRACTORS (5)	ED WARNER	SCOTT SEXTON

EMPLOYEE EVACUATION AND ACCOUNTABILITY SECTION

Evacuation routes must be posted in prominent locations and must lead to the Assembly Area or Alternate Assembly Area. Any employee that is unaware of their posted evacuation route or evacuation assembly area should contact a supervisor.

EVACUATION LEADER (6)
(Responsible for directing evacuation and accounting for employees): ED WARNER

SHIFT INFORMATION (7)

SHIFT	HOURS	NUMBER OF EMPLOYEES
1.	0600-1600	7
2.	1600-0200	1
3.		

METHOD OF EMPLOYEE NOTIFICATION (8)
(e.g. siren, public address system, verbal orders, etc.): PLANT PAGING SYSTEM

EVACUATION ASSEMBLY AREA(S) (9)
(WHere eMployees aRe tO rEport tO): MAIN GATE

LOCATION OF HMMP FOR EMPLOYEE USE (10): CONTROL ROOM OFFICE AREA

SURROUNDING OCCUPANCIES AND LAND USE SECTION (11)

The following types of neighbors (e.g. residential, commercial, open space) are located within 1/8th mile of our facility. Names of hospitals, schools, and day-care centers within 1/8th mile of our facility are also shown. This information should be provided to the 9-1-1 operator at the time of the initial notification.

NORTH: WHITE SLOUGH DISCHARGE POND
EAST: WHITE SLOUGH WATER TREATMENT FACILITY
SOUTH: OPEN SPACE
WEST: OPEN SPACE

SPILL CONTROL PROCEDURES SECTION

SPILL CONTROL LEADER (12) (also oversees inspections of areas or systems vulnerable to earthquakes): **ED WARNER**

THE FOLLOWING INDIVIDUALS/POSITIONS ARE ASSIGNED TO HELP CONTROL A SPILL (13)

ED WARNER, RANDALL BLANK, SCOTT SEXTON, BRADLEY RUSK, SCOTT AISTRUP, JOHN QUITTER, TOM JOHNSON

AUTHORIZED SPILL CONTROL STRATEGIES (14)

This business has authorized the above personnel to perform the action(s) indicated below to control spills of hazardous materials on its property. Persons performing these actions will possess written procedures for performing them and will have received training on the procedures and equipment needed. Locations of needed equipment are shown on the facility map. **At a minimum our business must isolate the area of the spill and make notifications.**

Spills of Liquid Materials

- ☐ Plug and Patch Container
- ☒ Build Retention Dike
- ☒ Remove Sources of Ignition
- ☒ Position Container so as to Stop Leak
- ☒ Reduce Pressure in Container/System
- ☒ Isolate Area and Make Notifications
- ☒ Neutralize Spilled Material
- ☒ Secure System Valves and Closures
- ☒ Shutdown System Involved
- ☒ Apply Absorbent Material to Spill Area
- ☐ Other…

Release of Compressed Gases

- ☒ Shut Off Valves/Systems
- ☐ Ventilate Area of Release
- ☐ Reduce Pressure in Container/System
- ☐ Suppress Vapors with Water
- ☒ Isolate Area and Make Notifications
- ☒ Remove Sources of Ignition
- ☐ Other…

Spills of Solid or Powder Materials

- ☐ Cover Spill to Prevent Spread
- ☒ Neutralize Spilled Materials
- ☐ Position Container so as to Stop Leak
- ☐ Place Spilled Material into Drum or Bag
- ☐ Isolate Area and Make Notifications
- ☐ Other…

AUTHORIZED CLEAN-UP COMPANIES SECTION (15)

These clean-up companies will be accessed in the event that our business must expend funds to clean up a hazardous materials spill.

NAME	24-HOUR TELEPHONE NO.	AGREEMENT/CONTRACT NO.
RAMOS ENVIRONMENTAL SERVICES	**916-371-5747**	**YES/0223051**

California Hazardous Materials Inventory Form - Chemical Description

(1) ☐ ADD ☐ DELETE ☒ REVISE

PAGE (2) _____ OF (3) _____

BUSINESS NAME (4) NCPA

CHEMICAL LOCATION(S) (5) BATTERY ROOM

MAP # (6) / GRID # (7) M-110/H5

CHEMICAL NAME (8) BATTERY, WET (ACID FILLED)

TRADE SECRET (11) ☐ YES ☒ NO

COMMON NAME (9) LEAD ACID BATTERY

*EHS (12) ☒ YES ☐ NO

*IF EHS BOX IS "YES" ALL AMOUNTS MUST BE IN LBS

CAS # (10) MIXTURE

FIRE CODE HAZARD CLASS (13) LEAVE BLANK

TYPE (14) ☐ PURE ☒ MIXTURE ☐ WASTE

RADIOACTIVE (15) ☐ YES ☒ NO (16) _____ CURIES

PHYSICAL STATE (17) ☒ SOLID ☐ LIQUID ☐ GAS

FED HAZARD CATEGORIES (18) ☒ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☒ ACUTE HEALTH ☐ CHRONIC HEALTH

STATE WASTE CODE (19) _____

UNITS* (22) ☐ GAL ☒ LBS ☐ CU FT ☐ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE 12,000

DAYS ON SITE (20) 365

AVG DAILY AMT (24) ON SITE 12,000

LARGEST CONTAINER (21) 50

ANNUAL WASTE AMT (25) 0

STORAGE CONTAINER (26)

☐ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☐ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☒ Other...
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	
☐ PLASTIC/NONMETALLIC DRUM	☐ BAG	☐ TOTE BIN	

STORAGE PRESSURE (27) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
18-6	SULFURIC ACID SOLUTION	☒ YES ☐ NO	7664-93-9
20-8	LEAD DIOXIDE POSITIVE PLATE	☐ YES ☒ NO	1309-60
52-4	LEAD NEGATIVE PLATE	☐ YES ☒ NO	7439-92-1
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID # (DOT) 2794

(34) WHAT IS MATERIAL USED FOR? storage batteries provide DC power source for plant

For Official Use Only: ☐ C ☐ R ☐ S

SJC 1/2001

California Hazardous Materials Inventory Form - Chemical Description

PAGE (2) [ ] OF (3) [ ]

BUSINESS NAME (4) NORTHERN CALIF POWER AGENCY

CHEMICAL LOCATION(S) (5) CEMS BUILDING AND WAREHOUSE

MAP # (6) / GRID # (7) M-110/F4 | M-110/D5 | N/A | N/A | N/A

CHEMICAL NAME (8) CO CALIBRATION GAS

COMMON NAME (9) NON-FLAMMABLE GAS MIXTURE

CAS # (10) MIXTURE

TRADE SECRET (11) ☐ YES ☒ NO

*EHS (12) ☐ YES ☒ NO

*IF EHS BOX IS "Y" ALL AMOUNTS MUST BE IN LBS

FIRE CODE HAZARD CATEGORIES (13) LEAVE BLANK

TYPE (14) ☐ PURE ☒ MIXTURE ☐ WASTE

RADIOACTIVE (15) ☐ YES ☒ NO (16) N/A CURIES

PHYSICAL STATE (17) ☐ SOLID ☐ LIQUID ☒ GAS

FED HAZARD CATEGORIES (18) ☐ FIRE ☐ REACTIVE ☒ PRESSURE RELEASE ☒ ACUTE HEALTH ☒ CHRONIC HEALTH

STATE WASTE CODE (19) N/A

UNITS* (22) ☐ GAL ☐ LBS ☒ CU FT ☐ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE 288

DAYS ON SITE (20) 365

AVG DAILY AMT (24) ON SITE 144

LARGEST CONTAINER (21) 144

ANNUAL WASTE AMT (25) 0

STORAGE CONTAINER (26)

☐ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☒ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ OTHER
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	☐ Other...
☐ PLASTIC/NONMETALLIC DRUM	☐ BAG	☐ TOTE BIN	

STORAGE PRESSURE (27) ☐ AMBIENT ☒ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
<12.5	CARBON MONOXIDE	☐ YES ☒ NO	630-08-0
	NITROGEN	☐ YES ☒ NO	7727-37-9
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT) 1956

(34) WHAT IS MATERIAL USED FOR? cems calibration gas

DATE REC'D:

For Official Use Only: ☐ C ☐ R ☐ S

SJC 12/99

California Hazardous Materials Inventory Form - Chemical Description

PAGE (2) [ ] OF (3) [ ]

BUSINESS NAME (4) **NORTHERN CALIF POWER AGENCY**

CHEMICAL LOCATION(S) (5) **BOILER CHEM BERM**

MAP # (6) / GRID # (7) **M-110/E4** | **N/A** | **N/A** | **N/A** | **N/A**

CHEMICAL NAME (8) **ELIMIN-OX OXYGEN SCAVENGER**

TRADE SECRET (11) ☐ YES ☒ NO

COMMON NAME (9) **CARBOHYDRAZIDE**

*EHS (12) ☐ YES ☒ NO

CAS # (10) **MIXTURE**

*IF EHS BOX IS "Y" ALL AMOUNTS MUST BE IN LBS

FIRE CODE HAZARD CATEGORIES (13) **LEAVE BLANK**

TYPE (14) ☐ **PURE** ☒ **MIXTURE** ☐ **WASTE**

RADIOACTIVE (15) ☐ **YES** ☒ **NO** (16) **N/A** CURIES

PHYSICAL STATE (17) ☐ **SOLID** ☒ **LIQUID** ☐ **GAS**

FED HAZARD CATEGORIES (18) ☐ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☐ ACUTE HEALTH ☐ CHRONIC HEALTH

STATE WASTE CODE (19) **N/A**

UNITS* (22) ☒ **GAL** ☐ **LBS** ☐ **CU FT** ☐ **TONS**

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE **75**

DAYS ON SITE (20) **365**

AVG DAILY AMT (24) ON SITE **40**

LARGEST CONTAINER (21) **75**

ANNUAL WASTE AMT (25) **0**

STORAGE CONTAINER (26)

☐ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☐ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ OTHER
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	☐ Other...
☐ PLASTIC/NONMETALLIC DRUM	☐ BAG	☒ TOTE BIN	

STORAGE PRESSURE (27) ☒ **AMBIENT** ☐ **ABOVE AMBIENT** ☐ **BELOW AMBIENT**

STORAGE TEMPERATURE (28) ☒ **AMBIENT** ☐ **ABOVE AMBIENT** ☐ **BELOW AMBIENT** ☐ **CRYOGENIC**

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
	CARBOYHYDRAZIDE	☐ YES ☒ NO	**497-18-7**
	WATER	☐ YES ☒ NO	**7732-18-5**
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT) **N/A**

(34) WHAT IS MATERIAL USED FOR? Boiler Water Treatment

DATE REC'D:

For Official Use Only: ☐ C ☐ R ☐ S

SJC 12/99

California Hazardous Materials Inventory Form - Chemical Description

(1) ☐ ADD ☐ DELETE ☒ REVISE

PAGE (2) _____ OF (3) _____

BUSINESS NAME (4) NCPA

CHEMICAL LOCATION(S) (5) INSIDE FIRE PUMP HOUSE

MAP # (6) / GRID # (7) M-110/C2

CHEMICAL NAME (8) EXXON DIESEL 1

TRADE SECRET (11) ☐ YES ☒ NO

COMMON NAME (9) PETROLEUM DIESEL FUEL

*EHS (12) ☐ YES ☒ NO

*IF EHS BOX IS "YES" ALL AMOUNTS MUST BE IN LBS

CAS # (10) 8008-20-6

FIRE CODE HAZARD CLASS (13) LEAVE BLANK

TYPE (14) ☒ PURE ☐ MIXTURE ☐ WASTE

RADIOACTIVE (15) ☐ YES ☒ NO (16) _____ CURIES

PHYSICAL STATE (17) ☐ SOLID ☒ LIQUID ☐ GAS

FED HAZARD CATEGORIES (18) ☒ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☒ ACUTE HEALTH ☒ CHRONIC HEALTH

STATE WASTE CODE (19) _____

UNITS* (22) ☒ GAL ☐ LBS ☐ CU FT ☐ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE 300

DAYS ON SITE (20) 365

AVG DAILY AMT (24) ON SITE 300

LARGEST CONTAINER (21) 300

ANNUAL WASTE AMT (25) 0

STORAGE CONTAINER (26)

☐ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☐ CYLINDER	☐ RAIL CAR
☒ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ Other...
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	
☐ PLASTIC/NONMETALLIC DRUM	☐ BAG	☐ TOTE BIN	

STORAGE PRESSURE (27) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID # (DOT) 1202

(34) WHAT IS MATERIAL USED FOR? to run diesel engine driven fire pump

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SJC 1/2001

California Hazardous Materials Inventory Form - Chemical Description

PAGE (2) [ ] OF (3) [ ]

BUSINESS NAME (4): NORTHERN CALIF POWER AGENCY

CHEMICAL LOCATION(S) (5): SEA VAN/TURBINE /GENERATOR LUBE OIL TANKS

MAP # (6) / GRID # (7): M-110/H3 | M-110/H4 | M-110/C6 | N/A | N/A

CHEMICAL NAME (8): LUBRICATING OILS

TRADE SECRET (11): ☐ YES ☒ NO

COMMON NAME (9): LUBRICATING OIL

*EHS (12): ☐ YES ☒ NO

CAS # (10): N/A

*IF EHS BOX IS "Y" ALL AMOUNTS MUST BE IN LBS

FIRE CODE HAZARD CATEGORIES (13): LEAVE BLANK

TYPE (14): ☒ PURE ☐ MIXTURE ☐ WASTE

RADIOACTIVE (15): ☐ YES ☒ NO (16) [ ] CURIES

PHYSICAL STATE (17): ☐ SOLID ☒ LIQUID ☐ GAS

FED HAZARD CATEGORIES (18): ☐ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☐ ACUTE HEALTH ☐ CHRONIC HEALTH

STATE WASTE CODE (19): N/A

UNITS* (22): ☒ GAL ☐ LBS ☐ CU FT ☐ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE: 1,380

DAYS ON SITE (20): 365

AVG DAILY AMT (24) ON SITE: 1,000

LARGEST CONTAINER (21): 500

ANNUAL WASTE AMT (25): 0

STORAGE CONTAINER (26):

☒ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☒ UNDER GROUND TANK	☐ CARBOY	☐ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ OTHER
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	☐ Other...
☒ PLASTIC/NONMETALLIC DRUM	☐ BAG	☐ TOTE BIN	

STORAGE PRESSURE (27): ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28): ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT): 1270

(34) WHAT IS MATERIAL USED FOR?: LUBRICATION

DATE REC'D:

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California Hazardous Materials Inventory Form - Chemical Description

(1) ☐ ADD ☐ DELETE ☒ REVISE

PAGE (2) [ ] OF (3) [ ]

BUSINESS NAME (4) NCPA

CHEMICAL LOCATION(S) (5) OUTSIDE NEAR ELECTRICAL EQUIPMENT ROOM

MAP # (6) / GRID # (7) M-110/H6

CHEMICAL NAME (8) MIXTURE

TRADE SECRET (11) ☐ YES ☒ NO

COMMON NAME (9) PETROLEUM HYDROCARBON, INDUSTRIAL OIL

*EHS (12) ☐ YES ☒ NO

*IF EHS BOX IS "YES" ALL AMOUNTS MUST BE IN LBS

CAS # (10) MIXTURE

FIRE CODE HAZARD CLASS (13) LEAVE BLANK

TYPE (14) ☐ PURE ☒ MIXTURE ☐ WASTE

RADIOACTIVE (15) ☐ YES ☒ NO (16) [ ] CURIES

PHYSICAL STATE (17) ☐ SOLID ☒ LIQUID ☐ GAS

FED HAZARD CATEGORIES (18) ☒ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☐ ACUTE HEALTH ☐ CHRONIC HEALTH

STATE WASTE CODE (19) [ ]

UNITS* (22) ☒ GAL ☐ LBS ☐ CU FT ☐ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE 12,100

DAYS ON SITE (20) 365

AVG DAILY AMT (24) ON SITE 12,100

LARGEST CONTAINER (21) 12,100

ANNUAL WASTE AMT (25) [ ]

STORAGE CONTAINER (26)

☒ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☐ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ Other...
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	
☐ PLASTIC/NONMETALLIC DRUM	☐ BAG	☐ TOTE BIN	

STORAGE PRESSURE (27) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
0-40	HYDRO TREATED MIDDLE DISTILLATE	☐ YES ☒ NO	64742-46-7
50-100	LIGHT NAPHTHENIC	☐ YES ☒ NO	64742-53-6
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID # (DOT) 1270

(34) WHAT IS MATERIAL USED FOR? cooling medium for transformer

For Official Use Only: ☐ C ☐ R ☐ S

SJC 1/2001

California Hazardous Materials Inventory Form - Chemical Description

PAGE (2) [ ] OF (3) [ ]

BUSINESS NAME (4) **NORTHERN CALIF POWER AGENCY**

CHEMICAL LOCATION(S) (5) **BOILER CHEMICAL SKID**

MAP # (6) / GRID # (7) **M-110/E4** | **N/A** | **N/A** | **N/A** | **N/A**

CHEMICAL NAME (8) **NALCO 352**

TRADE SECRET (11) ☐ YES ☒ NO

COMMON NAME (9) **AMINE**

*EHS (12) ☐ YES ☒ NO

*IF EHS BOX IS "Y" ALL AMOUNTS MUST BE IN LBS

CAS # (10) **MIXTURE**

FIRE CODE HAZARD CATEGORIES (13) **LEAVE BLANK**

TYPE (14) ☐ **PURE** ☒ **MIXTURE** ☐ **WASTE**

RADIOACTIVE (15) ☐ **YES** ☒ **NO** (16) **N/A** CURIES

PHYSICAL STATE (17) ☐ **SOLID** ☒ **LIQUID** ☐ **GAS**

FED HAZARD CATEGORIES (18) ☐ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☒ ACUTE HEALTH ☐ CHRONIC HEALTH

STATE WASTE CODE (19) **N/A**

UNITS* (22) ☒ **GAL** ☐ **LBS** ☐ **CU FT** ☐ **TONS**

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE **105**

DAYS ON SITE (20) **365**

AVG DAILY AMT (24) ON SITE **50**

LARGEST CONTAINER (21) **105**

ANNUAL WASTE AMT (25) **0**

STORAGE CONTAINER (26)

☐ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☐ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ OTHER
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	☐ Other...
☐ PLASTIC/NONMETALLIC DRUM	☐ BAG	☒ TOTE BIN	

STORAGE PRESSURE (27) ☒ **AMBIENT** ☐ **ABOVE AMBIENT** ☐ **BELOW AMBIENT**

STORAGE TEMPERATURE (28) ☒ **AMBIENT** ☐ **ABOVE AMBIENT** ☐ **BELOW AMBIENT** ☐ **CRYOGENIC**

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
40-70%	**MORPITOLINE**	☐ YES ☒ NO	**110-91-8**
	WATER	☐ YES ☒ NO	**7732-18-5**
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT) **N/A**

(34) WHAT IS MATERIAL USED FOR? Boiler Corrosion Inhibitor

DATE REC'D:

For Official Use Only: ☐ C ☐ R ☐ S

SJC 12/99

California Hazardous Materials Inventory Form - Chemical Description

PAGE (2) [ ] OF (3) [ ]

BUSINESS NAME (4) **NORTHERN CALIF POWER AGENCY**

CHEMICAL LOCATION(S) (5) **CEMS BUILDING AND WAREHOUSE**

MAP # (6) / GRID # (7) **M-110/F4** | **M-110/D5** | **N/A** | **N/A** | **N/A**

CHEMICAL NAME (8) **NOX CALIBRATION GAS**

TRADE SECRET (11) ☐ YES ☒ NO

COMMON NAME (9) **NON-FLAMMABLE GAS MIXTURE**

*EHS (12) ☐ YES ☒ NO

CAS # (10) **MIXTURE**

*IF EHS BOX IS "Y" ALL AMOUNTS MUST BE IN LBS

FIRE CODE HAZARD CATEGORIES (13) **LEAVE BLANK**

TYPE (14) ☐ **PURE** ☒ **MIXTURE** ☐ **WASTE**

RADIOACTIVE (15) ☐ **YES** ☒ **NO** (16) **N/A** CURIES

PHYSICAL STATE (17) ☐ **SOLID** ☐ **LIQUID** ☒ **GAS**

FED HAZARD CATEGORIES (18) ☐ FIRE ☐ REACTIVE ☒ PRESSURE RELEASE ☒ ACUTE HEALTH ☒ CHRONIC HEALTH

STATE WASTE CODE (19) **N/A**

UNITS* (22) ☐ **GAL** ☐ **LBS** ☒ **CU FT** ☐ **TONS**

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE **872**

DAYS ON SITE (20) **365**

AVG DAILY AMT (24) ON SITE **400**

LARGEST CONTAINER (21) **144**

ANNUAL WASTE AMT (25) **0**

STORAGE CONTAINER (26)

☐ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☒ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ OTHER
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	☐ Other...
☐ PLASTIC/NONMETALLIC DRUM	☐ BAG	☐ TOTE BIN	

STORAGE PRESSURE (27) ☐ **AMBIENT** ☒ **ABOVE AMBIENT** ☐ **BELOW AMBIENT**

STORAGE TEMPERATURE (28) ☒ **AMBIENT** ☐ **ABOVE AMBIENT** ☐ **BELOW AMBIENT** ☐ **CRYOGENIC**

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
<2.3	**NITRIC OXIDE**	☐ YES ☒ NO	**10102-43-9**
BALANCE	**NITROGEN**	☐ YES ☒ NO	**7727-37-9**
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT) **1956**

(34) WHAT IS MATERIAL USED FOR? cems calibrations

DATE REC'D:

For Official Use Only: ☐ C ☐ R ☐ S

SJC 12/99

California Hazardous Materials Inventory Form - Chemical Description

PAGE (2) [ ] OF (3) [ ]

BUSINESS NAME (4) NORTHERN CALIF POWER AGENCY

CHEMICAL LOCATION(S) (5) CEMS BUILDING AND WAREHOUSE

MAP # (6) / GRID # (7) M-110/F4 | M-110/D5 | N/A | N/A | N/A

CHEMICAL NAME (8) O2 GAS MIXTURE

TRADE SECRET (11) ☐ YES ☒ NO

COMMON NAME (9) NON-FLAMMABLE GAS MIXTURE

*EHS (12) ☐ YES ☒ NO

CAS # (10) MIXTURE

*IF EHS BOX IS "Y" ALL AMOUNTS MUST BE IN LBS

FIRE CODE HAZARD CATEGORIES (13) LEAVE BLANK

TYPE (14) ☐ PURE ☒ MIXTURE ☐ WASTE

RADIOACTIVE (15) ☐ YES ☒ NO (16) N/A CURIES

PHYSICAL STATE (17) ☐ SOLID ☐ LIQUID ☒ GAS

FED HAZARD CATEGORIES (18) ☐ FIRE ☐ REACTIVE ☒ PRESSURE RELEASE ☒ ACUTE HEALTH ☒ CHRONIC HEALTH

STATE WASTE CODE (19) N/A

UNITS* (22) ☐ GAL ☐ LBS ☒ CU FT ☐ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE 726

DAYS ON SITE (20) 365

AVG DAILY AMT (24) ON SITE 400

LARGEST CONTAINER (21) 148

ANNUAL WASTE AMT (25) 0

STORAGE CONTAINER (26)

☐ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☒ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ OTHER
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	☐ Other...
☐ PLASTIC/NONMETALLIC DRUM	☐ BAG	☐ TOTE BIN	

STORAGE PRESSURE (27) ☐ AMBIENT ☒ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
<19.5	OXYGEN	☐ YES ☒ NO	7782-44-7
	NITROGEN	☐ YES ☒ NO	7727-37-9
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT) 1956

(34) WHAT IS MATERIAL USED FOR? cems calibration gas

DATE REC'D:

For Official Use Only: ☐ C ☐ R ☐ S

SJC 12/99

California Hazardous Materials Inventory Form - Chemical Description

(1) ☐ ADD ☐ DELETE ☒ REVISE

PAGE (2) _____ OF (3) _____

BUSINESS NAME (4) NCPA

CHEMICAL LOCATION(S) (5) OUTSIDE ADJACENT TO COOLING TOWER

MAP # (6) / GRID # (7) M-110/F1

CHEMICAL NAME (8) OIL OF VITROIL

TRADE SECRET (11) ☐ YES ☐ NO

COMMON NAME (9) SULFURIC ACID

*EHS (12) ☒ YES ☐ NO

*IF EHS BOX IS "YES" ALL AMOUNTS MUST BE IN LBS

CAS # (10) 7664-93-9

FIRE CODE HAZARD CLASS (13) LEAVE BLANK

TYPE (14) ☒ PURE ☐ MIXTURE ☐ WASTE

RADIOACTIVE (15) ☐ YES ☒ NO (16) _____ CURIES

PHYSICAL STATE (17) ☐ SOLID ☒ LIQUID ☐ GAS

FED HAZARD CATEGORIES (18) ☐ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☒ ACUTE HEALTH ☐ CHRONIC HEALTH

STATE WASTE CODE (19) _____

UNITS* (22) ☐ GAL ☒ LBS ☐ CU FT ☐ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE 4,200

DAYS ON SITE (20) 365

AVG DAILY AMT (24) ON SITE 1,600

LARGEST CONTAINER (21) 4200

ANNUAL WASTE AMT (25) 0

STORAGE CONTAINER (26)

☒ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☐ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ Other...
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	
☐ PLASTIC/NONMETALLIC DRUM	☐ BAG	☐ TOTE BIN	

STORAGE PRESSURE (27) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID # (DOT) 1830

(34) WHAT IS MATERIAL USED FOR? chemical injection system for cooling tower

For Official Use Only: ☐ C ☐ R ☐ S

SJC 1/2001

California Hazardous Materials Inventory Form - Chemical Description

PAGE (2) [ ] OF (3) [ ]

BUSINESS NAME (4) **NORTHERN CALIF POWER AGENCY**

CHEMICAL LOCATION(S) (5) **BOILER CHEMICAL SKID**

MAP # (6) / GRID # (7) **M-110/E4** | **N/A** | **N/A** | **N/A** | **N/A**

CHEMICAL NAME (8) **PHOSPHATE**

TRADE SECRET (11) ☐ YES ☒ NO

COMMON NAME (9) **NALCO 1742**

*EHS (12) ☐ YES ☒ NO

CAS # (10) **MIXTURE**

*IF EHS BOX IS "Y" ALL AMOUNTS MUST BE IN LBS

FIRE CODE HAZARD CATEGORIES (13) **LEAVE BLANK**

TYPE (14) ☐ PURE ☒ MIXTURE ☐ WASTE

RADIOACTIVE (15) ☐ YES ☒ NO (16) N/A CURIES

PHYSICAL STATE (17) ☐ SOLID ☒ LIQUID ☐ GAS

FED HAZARD CATEGORIES (18) ☐ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☒ ACUTE HEALTH ☐ CHRONIC HEALTH

STATE WASTE CODE (19) **N/A**

UNITS* (22) ☒ GAL ☐ LBS ☐ CU FT ☐ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE **400**

DAYS ON SITE (20) **365**

AVG DAILY AMT (24) ON SITE **200**

LARGEST CONTAINER (21) **400**

ANNUAL WASTE AMT (25) **0**

STORAGE CONTAINER (26)

☐ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☐ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ OTHER
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	☐ Other...
☐ PLASTIC/NONMETALLIC DRUM	☐ BAG	☒ TOTE BIN	

STORAGE PRESSURE (27) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
1.0-5.0	SODUM HYDROXIDE	☐ YES ☒ NO	1310-73-2
1.0-5.0	SODIUM TRIPOLYPHOSPHATE	☐ YES ☒ NO	7758-25-4
	WATER	☐ YES ☒ NO	7732-18-5
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT) N/A

(34) WHAT IS MATERIAL USED FOR? Boiler Treatment

DATE REC'D:

For Official Use Only: ☐ C ☐ R ☐ S

SJC 12/99

California Hazardous Materials Inventory Form - Chemical Description

PAGE (2) [ ] OF (3) [ ]

BUSINESS NAME (4) **NORTHERN CALIF POWER AGENCY**

CHEMICAL LOCATION(S) (5) **CT CHEM BERM**

MAP # (6) / GRID # (7) **M-110/F1** | **N/A** | **N/A** | **N/A** | **N/A**

CHEMICAL NAME (8) **PHOSPHATE 7396**

TRADE SECRET (11) ☐ YES ☒ NO

COMMON NAME (9) **TETRAPOTASSIUM PYROPHOSPHATE**

*EHS (12) ☐ YES ☒ NO

CAS # (10) **MIXTURE**

*IF EHS BOX IS "Y" ALL AMOUNTS MUST BE IN LBS

FIRE CODE HAZARD CATEGORIES (13) **LEAVE BLANK**

TYPE (14) ☐ **PURE** ☒ **MIXTURE** ☐ **WASTE**

RADIOACTIVE (15) ☐ **YES** ☒ **NO** (16) **N/A** CURIES

PHYSICAL STATE (17) ☐ **SOLID** ☒ **LIQUID** ☐ **GAS**

FED HAZARD CATEGORIES (18) ☐ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☐ ACUTE HEALTH ☐ CHRONIC HEALTH

STATE WASTE CODE (19) **N/A**

UNITS* (22) ☒ **GAL** ☐ **LBS** ☐ **CU FT** ☐ **TONS**

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE **400**

DAYS ON SITE (20) **365**

AVG DAILY AMT (24) ON SITE **200**

LARGEST CONTAINER (21) **400**

ANNUAL WASTE AMT (25) **0**

STORAGE CONTAINER (26)

☐ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☐ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ OTHER
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	☐ Other...
☐ PLASTIC/NONMETALLIC DRUM	☐ BAG	☒ TOTE BIN	

STORAGE PRESSURE (27) ☒ **AMBIENT** ☐ **ABOVE AMBIENT** ☐ **BELOW AMBIENT**

STORAGE TEMPERATURE (28) ☒ **AMBIENT** ☐ **ABOVE AMBIENT** ☐ **BELOW AMBIENT** ☐ **CRYOGENIC**

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
34	TETRA POTASSIUM PYROPHOSPHATE	☐ YES ☒ NO	7320-34-5
	WATER	☐ YES ☒ NO	7732-18-5
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT) **N/A**

(34) WHAT IS MATERIAL USED FOR? CT Water Treatment

DATE REC'D:

For Official Use Only: ☐ C ☐ R ☐ S

SJC 12/99

California Hazardous Materials Inventory Form - Chemical Description

PAGE (2) [ ] OF (3) [ ]

BUSINESS NAME (4) NORTHERN CALIF POWER AGENCY

CHEMICAL LOCATION(S) (5) WATER TREATMENT BUILDING

MAP # (6) / GRID # (7) M-110/C6 | N/A | N/A | N/A | N/A

CHEMICAL NAME (8) SODIUM BISULFITE

TRADE SECRET (11) ☐ YES ☒ NO

COMMON NAME (9) SODIUM ACID SULFITE

*EHS (12) ☐ YES ☒ NO

CAS # (10) MIXTURE

*IF EHS BOX IS "Y" ALL AMOUNTS MUST BE IN LBS

FIRE CODE HAZARD CATEGORIES (13) LEAVE BLANK

TYPE (14) ☐ PURE ☒ MIXTURE ☐ WASTE

RADIOACTIVE (15) ☐ YES ☒ NO (16) N/A CURIES

PHYSICAL STATE (17) ☐ SOLID ☒ LIQUID ☐ GAS

FED HAZARD CATEGORIES (18) ☐ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☐ ACUTE HEALTH ☐ CHRONIC HEALTH

STATE WASTE CODE (19) N/A

UNITS* (22) ☒ GAL ☐ LBS ☐ CU FT ☐ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE 500

DAYS ON SITE (20) 365

AVG DAILY AMT (24) ON SITE 250

LARGEST CONTAINER (21) 500

ANNUAL WASTE AMT (25) 0

STORAGE CONTAINER (26)

☐ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☐ CYLINDER	☐ RAIL CAR
☒ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ OTHER
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	☐ Other...
☐ PLASTIC/NONMETALLIC DRUM	☐ BAG	☐ TOTE BIN	

STORAGE PRESSURE (27) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
15	SODIUM BISULFITE	☐ YES ☒ NO	7631-90-5
	WATER	☐ YES ☒ NO	7732-18-5
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT) 2693

(34) WHAT IS MATERIAL USED FOR? Water Treatment

DATE REC'D:

For Official Use Only: ☐ C ☐ R ☐ S

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EMAIL CHEMICAL DESCRIPTION RECORD

INSTRUCTIONS

CALIFORNIA HAZARDOUS MATERIALS INVENTORY FORM - CHEMICAL DESCRIPTION

☐ Delete This Record ACCT#: 8195

BUSINESS NAME (4) NORTHERN CALIF POWER AGENCY

CHEMICAL LOCATIONS (5) WATER TREATMENT BUILDING

MAP (6) / GRID (7) M-110/C6 | N/A | N/A | N/A | N/A

CHEMICAL NAME (8) SODIUM HYPOCHLORITE

TRADE SECRET (11) NO

COMMON NAME (9) BLEACH

*EHS (12) NO

CAS NUMBER (10) MIXTURE

*IF EHS BOX IS "YES" ALL AMOUNTS MUST BE IN LBS

FIRE CODE (13) HAZARD CLASS LEAVE BLANK

TYPE (14) ○ PURE ◉ MIXTURE ○ WASTE

RADIOACTIVE (15) NO

(16) 0 CURIES

PHYSICAL STATE (17) ○ SOLID ◉ LIQUID ○ GAS

FIRE HAZARD CATEGORIES (18) ☐ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☑ ACUTE HEALTH ☐ CHRONIC HEALTH ☐ N/A

STATE WASTE (19) CODE N/A

*UNITS (22) ◉ GAL ○ CU FT ○ LBS ○ TONS

MAX DAILY AMT(23) ON SITE 540

DAYS ON SITE (20) 365

*IF EHS, AMOUNTS MUST BE IN LBS

AVG DAILY AMT(24) ON SITE 300

LARGEST (21) CONTAINER 540

ANNUAL WASTE AMT(25) 0

STORAGE (26) CONTAINER

☐ ABOVE GROUND TANK ☐ UNDER GROUND TANK ☑ TANK INSIDE BUILDING ☐ STEEL DRUM

☐ PLASTIC/NONMETALLIC DRUM ☐ CAN ☐ CARBOY ☐ SILO

☐ FIBER DRUM ☐ BAG ☐ BOX ☐ CYLINDER

☐ GLASS BOTTLE ☐ PLASTIC BOTTLE ☐ TOTE BIN ☐ TANK WAGON

☐ RAIL CAR ☐ OTHER

STORAGE (27) PRESSURE ◉ AMBIENT ○ ABOVE AMBIENT ○ BELOW AMBIENT

STORAGE (28) TEMPERATURE ◉ AMBIENT ○ ABOVE AMBIENT ○ BELOW AMBIENT ○ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
12.5%	SODIUM HYPOCHLORITE	NO	7681-52-9
1%	SODIUM HYDROXIDE	NO	1310-73-2
0-10%	SODIUM CHLORIDE	NO	7647-14-5
	WATER	NO	7732-18-5

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT) 1791

WHAT IS MATERIAL USED FOR? (34) RAW WATER TREATMENT

Submit Changes

No Changes Necessary

California Hazardous Materials Inventory Form - Chemical Description (01/08/2009 - 01:37:57 Pm)

BUSINESS NAME (4): NORTHERN CALIF POWER AGENCY

CHEMICAL LOCATION(S) (5): WATER TREATMENT BUILDING

MAP # (6) / GRID # (7): M-110/C6 | N/A | N/A | N/A | N/A

CHEMICAL NAME (8): PERMACLEAN(R) PC-98

TRADE SECRET (11): ☐ YES ☒ NO

COMMON NAME (9): REVERSE OSMOSIS CLEANER

*EHS (12): ☐ YES ☒ NO

CAS # (10): MIXTURE

*IF EHS BOX IS "Y" ALL AMOUNTS MUST BE IN LBS

FIRE CODE HAZARD CATEGORIES (13): LEAVE BLANK

TYPE (14): ☐ PURE ☒ MIXTURE ☐ WASTE

RADIOACTIVE (15): ☐ YES ☒ NO (16): N/A CURIES

PHYSICAL STATE (17): ☐ SOLID ☒ LIQUID ☐ GAS

FED HAZARD CATEGORIES (18): ☐ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☐ ACUTE HEALTH ☐ CHRONIC HEALTH ☒

STATE WASTE CODE (19): N/A

UNITS* (22): ☒ GAL ☐ LBS ☐ CU FT ☐ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE: 110

DAYS ON SITE (20): 365

AVG DAILY AMT (24) ON SITE: 55

LARGEST CONTAINER (21): 55

ANNUAL WASTE AMT (25): 0

STORAGE CONTAINER (26):

☐ ABOVE GROUND TANK	☐ CARBOY	☐ GLASS BOTTLE	☐ Other...
☐ UNDER GROUND TANK	☐ SILO	☐ PLASTIC BOTTLE	
☐ TANK INSIDE BUILDING	☐ FIBER DRUM	☐ TOTE BIN	
☐ STEEL DRUM	☐ BAG	☐ TANK WAGON	
☒ PLASTIC/NONMETALLIC DRUM	☐ BOX	☐ RAIL CAR	
☐ CAN	☐ CYLINDER	☐ OTHER	

STORAGE PRESSURE (27): ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28): ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
1.0 - 5.0	TETRASODIUM EDTA	☐ YES ☒ NO	64-02-8
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT): N/A

(34) WHAT IS MATERIAL USED FOR? RO MEMBRANE CLEANING

DATE REC'D: 1/8/09

For Official Use Only: ☐ C ☐ R ☐ S

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California Hazardous Materials Inventory Form - Chemical Description (01/08/2009 - 01:03:07 Pm)

BUSINESS NAME (4)	NORTHERN CALIF POWER AGENCY				
CHEMICAL LOCATION(S) (5)	WATER TREATMENT BUILDING				
MAP # (6) / GRID # (7)	M-110/C6	N/A	N/A	N/A	N/A

CHEMICAL NAME (8): NALCO PC-11

TRADE SECRET (11): ☐ YES ☒ NO

COMMON NAME (9): BIOCIDE

*EHS (12): ☐ YES ☒ NO

CAS # (10): MIXTURE

*IF EHS BOX IS "Y" ALL AMOUNTS MUST BE IN LBS

FIRE CODE HAZARD CATEGORIES (13): LEAVE BLANK

TYPE (14): ☐ PURE ☒ MIXTURE ☐ WASTE

RADIOACTIVE (15): ☐ YES ☒ NO (16): N/A CURIES

PHYSICAL STATE (17): ☐ SOLID ☒ LIQUID ☐ GAS

FED HAZARD CATEGORIES (18): ☐ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☒ ACUTE HEALTH ☒ CHRONIC HEALTH ☐

STATE WASTE CODE (19): N/A

UNITS* (22): ☒ GAL ☐ LBS ☐ CU FT ☐ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE: 110

DAYS ON SITE (20): 365

AVG DAILY AMT (24) ON SITE: 55

LARGEST CONTAINER (21): 55

ANNUAL WASTE AMT (25): 0

STORAGE CONTAINER (26):

☐ ABOVE GROUND TANK	☐ CARBOY	☐ GLASS BOTTLE	☐ Other...
☐ UNDER GROUND TANK	☐ SILO	☐ PLASTIC BOTTLE	
☐ TANK INSIDE BUILDING	☐ FIBER DRUM	☐ TOTE BIN	
☐ STEEL DRUM	☐ BAG	☐ TANK WAGON	
☒ PLASTIC/NONMETALLIC DRUM	☐ BOX	☐ RAIL CAR	
☐ CAN	☐ CYLINDER	☐ OTHER	

STORAGE PRESSURE (27): ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28): ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
1.0 - 5.0	DIBROMOACETONITRILE	☐ YES ☒ NO	3252-43-5
10.0 - 30.0	2,2-DIBROMO-3-NITRILOPROPIONAMIDE	☐ YES ☒ NO	10222-01-2
10.0 - 30.0	POLYETHYLENE GLYCOL	☐ YES ☒ NO	25322-68-3
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT): UN 2922

(34) WHAT IS MATERIAL USED FOR? WATER TREATMENT

DATE REC'D: 1/8/09

For Official Use Only: ☐ C ☐ R ☐ S

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California Hazardous Materials Inventory Form - Chemical Description (01/08/2009 - 01:37:45 Pm)

BUSINESS NAME (4): NORTHERN CALIF POWER AGENCY

CHEMICAL LOCATION(S) (5): WATER TREATMENT BUILDING

MAP # (6) / GRID # (7): M-110/C6 | N/A | N/A | N/A | N/A

CHEMICAL NAME (8): PERMACLEAN PC-56

TRADE SECRET (11): ☐ YES ☒ NO

COMMON NAME (9): BIOCIDE

*EHS (12): ☐ YES ☒ NO

CAS # (10): MIXTURE

*IF EHS BOX IS "Y" ALL AMOUNTS MUST BE IN LBS

FIRE CODE HAZARD CATEGORIES (13): LEAVE BLANK

TYPE (14): ☐ PURE ☒ MIXTURE ☐ WASTE

RADIOACTIVE (15): ☐ YES ☒ NO (16) N/A CURIES

PHYSICAL STATE (17): ☐ SOLID ☒ LIQUID ☐ GAS

FED HAZARD CATEGORIES (18): ☐ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☒ ACUTE HEALTH ☒ CHRONIC HEALTH ☐

STATE WASTE CODE (19): N/A

UNITS* (22): ☒ GAL ☐ LBS ☐ CU FT ☐ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE: 110

DAYS ON SITE (20): 365

AVG DAILY AMT (24) ON SITE: 55

LARGEST CONTAINER (21): 55

ANNUAL WASTE AMT (25): 0

STORAGE CONTAINER (26):

☐ ABOVE GROUND TANK	☐ CARBOY	☐ GLASS BOTTLE	☐ Other...
☐ UNDER GROUND TANK	☐ SILO	☐ PLASTIC BOTTLE	
☐ TANK INSIDE BUILDING	☐ FIBER DRUM	☐ TOTE BIN	
☐ STEEL DRUM	☐ BAG	☐ TANK WAGON	
☒ PLASTIC/NONMETALLIC DRUM	☐ BOX	☐ RAIL CAR	
☐ CAN	☐ CYLINDER	☐ OTHER	

STORAGE PRESSURE (27): ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28): ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
1 - 5	5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE	☐ YES ☒ NO	26172-55-4
0.1 - 1	2-METHYL-4-ISOTHIAZOLIN-3-ONE	☐ YES ☒ NO	2682-20-4
1 - 5	MAGNESIUM NITRATE	☐ YES ☒ NO	10377-60-3
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT) UN 3265

(34) WHAT IS MATERIAL USED FOR? WATER TREATMENT

DATE REC'D: 1/8/09

For Official Use Only: ☐ C ☐ R ☐ S

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California Hazardous Materials Inventory Form - Chemical Description

(1) ☐ ADD ☐ DELETE ☒ REVISE

PAGE (2) 1 OF (3) 1

BUSINESS NAME (4) NCPA

CHEMICAL LOCATION(S) (5) 230 KV SWITCH YARD

MAP # (6) / GRID # (7) M-110/K8

CHEMICAL NAME (8) SULFER HEXAFLUORIDE

TRADE SECRET (11) ☐ YES ☒ NO

COMMON NAME (9) SF6

*EHS (12) ☐ YES ☒ NO

*IF EHS BOX IS "YES" ALL AMOUNTS MUST BE IN LBS

CAS # (10) 2551-62-4

FIRE CODE HAZARD CLASS (13) LEAVE BLANK

TYPE (14) ☒ PURE ☐ MIXTURE ☐ WASTE

RADIOACTIVE (15) ☐ YES ☒ NO (16) CURIES

PHYSICAL STATE (17) ☐ SOLID ☐ LIQUID ☒ GAS

FED HAZARD CATEGORIES (18) ☐ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☒ ACUTE HEALTH ☐ CHRONIC HEALTH

STATE WASTE CODE (19) 2

UNITS* (22) ☐ GAL ☒ LBS ☐ CU FT ☐ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE 600

DAYS ON SITE (20) 365

AVG DAILY AMT (24) ON SITE 600

LARGEST CONTAINER (21) 60

ANNUAL WASTE AMT (25) 0

STORAGE CONTAINER (26)

☒ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☒ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ Other...
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	
☐ PLASTIC/NONMETALLIC DRUM	☐ BAG	☐ TOTE BIN	

STORAGE PRESSURE (27) ☐ AMBIENT ☒ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
100	SULFER HEXAFLOURIDE	☐ YES ☒ NO	2551-62-4
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID # (DOT) 1080

(34) WHAT IS MATERIAL USED FOR? 230 KV CIRCUIT BREAKERS

For Official Use Only: ☐ C ☐ R ☐ S

SJC 1/2001

California Hazardous Materials Inventory Form - Chemical Description

PAGE (2) [ ] OF (3) [ ]

BUSINESS NAME (4) NORTHERN CALIF POWER AGENCY

CHEMICAL LOCATION(S) (5) WATER TREATMENT BUILDING

MAP # (6) / GRID # (7) M-110/C6 | N/A | N/A | NA/ | NA/

CHEMICAL NAME (8) VIXCO 3967 GLUT/AMINE

TRADE SECRET (11) ☐ YES ☒ NO

COMMON NAME (9) N/A

*EHS (12) ☐ YES ☒ NO

*IF EHS BOX IS "Y" ALL AMOUNTS MUST BE IN LBS

CAS # (10) MIXTURE

FIRE CODE HAZARD CATEGORIES (13) LEAVE BLANK

TYPE (14) ☐ PURE ☒ MIXTURE ☐ WASTE

RADIOACTIVE (15) ☐ YES ☒ NO (16) 0 CURIES

PHYSICAL STATE (17) ☐ SOLID ☒ LIQUID ☐ GAS

FED HAZARD CATEGORIES (18) ☐ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☒ ACUTE HEALTH ☒ CHRONIC HEALTH

STATE WASTE CODE (19) N/A

UNITS* (22) ☒ GAL ☐ LBS ☐ CU FT ☐ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE 55

DAYS ON SITE (20) 365

AVG DAILY AMT (24) ON SITE 35

LARGEST CONTAINER (21) 88

ANNUAL WASTE AMT (25) 0

STORAGE CONTAINER (26)

☐ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☐ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ OTHER
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	☐ Other...
☒ PLASTIC/NONMETALLIC DRUM	☐ BAG	☐ TOTE BIN	

STORAGE PRESSURE (27) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
14	GLUTARALDEHYDE	☐ YES ☒ NO	111-30-8
2.5	N-ALKYLDIMETHYL BENZYL AMMONIUM CHLORIDE	☐ YES ☒ NO	139-08-2
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT) N/A

(34) WHAT IS MATERIAL USED FOR? INJECTION WELL TREATMENT

DATE REC'D:

For Official Use Only: ☐ C ☐ R ☐ S

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California Hazardous Materials Inventory Form - Chemical Description

PAGE (2) [ ] OF (3) [ ]

BUSINESS NAME (4) **NORTHERN CALIF POWER AGENCY**

CHEMICAL LOCATION(S) (5) **WATER TREATMENT BUILDING**

MAP # (6) / GRID # (7) **M-110/C6** | **N/A** | **N/A** | **N/A** | **N/A**

CHEMICAL NAME (8) **VIXO 3980 BIOCIDE**

TRADE SECRET (11) ☐ YES ☒ NO

COMMON NAME (9) **N/A**

*EHS (12) ☐ YES ☒ NO

CAS # (10) **MIXTURE**

*IF EHS BOX IS "Y" ALL AMOUNTS MUST BE IN LBS

FIRE CODE HAZARD CATEGORIES (13) **LEAVE BLANK**

TYPE (14) ☐ **PURE** ☒ **MIXTURE** ☐ **WASTE**

RADIOACTIVE (15) ☐ **YES** ☒ **NO**

(16) **N/A** CURIES

PHYSICAL STATE (17) ☐ **SOLID** ☒ **LIQUID** ☐ **GAS**

FED HAZARD CATEGORIES (18) ☐ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☒ ACUTE HEALTH ☒ CHRONIC HEALTH

STATE WASTE CODE (19) **N/A**

UNITS* (22) ☒ **GAL** ☐ **LBS** ☐ **CU FT** ☐ **TONS**

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE **55**

DAYS ON SITE (20) **365**

AVG DAILY AMT (24) ON SITE **35**

LARGEST CONTAINER (21) **55**

ANNUAL WASTE AMT (25) **0**

STORAGE CONTAINER (26)

☐ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☐ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ OTHER
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	☐ Other...
☒ PLASTIC/NONMETALLIC DRUM	☐ BAG	☐ TOTE BIN	

STORAGE PRESSURE (27) ☒ **AMBIENT** ☐ **ABOVE AMBIENT** ☐ **BELOW AMBIENT**

STORAGE TEMPERATURE (28) ☒ **AMBIENT** ☐ **ABOVE AMBIENT** ☐ **BELOW AMBIENT** ☐ **CRYOGENIC**

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
1.15	5-CHLORO - 2-METHYL - 4 ISOTHIZOLIN 3 ONE	☐ YES ☒ NO	26172-55-4
.35	2 - METHYL - 4 - ISOTHIAZOLIN - 3-ONE	☐ YES ☒ NO	2682-20-4
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT) **3265**

(34) WHAT IS MATERIAL USED FOR? Injection Well Treatment

DATE REC'D:

For Official Use Only: ☐ C ☐ R ☐ S

SJC 12/99

EMAIL CHEMICAL DESCRIPTION RECORD

INSTRUCTIONS

CALIFORNIA HAZARDOUS MATERIALS INVENTORY FORM - CHEMICAL DESCRIPTION

☐ Delete This Record ACCT#: 8195

BUSINESS NAME (4) NORTHERN CALIF POWER AGENCY

CHEMICAL LOCATIONS (5) MAINTENANCE SHOP/WEST SIDE OF WATER TREATMENT

MAP (6) / GRID (7) M-110/F6 | M110/C6 | N/A | N/A | N/A

CHEMICAL NAME (8) WASTE OIL

TRADE SECRET (11) NO

COMMON NAME (9) WASTE OIL

*EHS (12) NO

CAS NUMBER (10) N/A

*IF EHS BOX IS "YES" ALL AMOUNTS MUST BE IN LBS

FIRE CODE (13) HAZARD CLASS LEAVE BLANK

TYPE (14) ○ PURE ○ MIXTURE ◉ WASTE

RADIOACTIVE (15) NO (16) 0 CURIES

PHYSICAL STATE (17) ○ SOLID ◉ LIQUID ○ GAS

FIRE HAZARD CATEGORIES (18) ☑ FIRE ☐ REACTIVE ☐ PRESSURE RELEASE ☑ ACUTE HEALTH ☑ CHRONIC HEALTH ☐ N/A

STATE WASTE (19) CODE 221

*UNITS (22) ◉ GAL ○ CU FT ○ LBS ○ TONS

MAX DAILY AMT(23) ON SITE 275

DAYS ON SITE (20) 365

*IF EHS, AMOUNTS MUST BE IN LBS

AVG DAILY AMT(24) ON SITE 20

LARGEST (21) CONTAINER 55

ANNUAL WASTE AMT(25) 150

STORAGE (26) CONTAINER

☐ ABOVE GROUND TANK ☐ UNDER GROUND TANK ☐ TANK INSIDE BUILDING ☐ STEEL DRUM

☑ PLASTIC/NONMETALLIC DRUM ☐ CAN ☐ CARBOY ☐ SILO

☐ FIBER DRUM ☐ BAG ☐ BOX ☐ CYLINDER

☐ GLASS BOTTLE ☐ PLASTIC BOTTLE ☐ TOTE BIN ☐ TANK WAGON

☐ RAIL CAR ☐ OTHER

STORAGE (27) PRESSURE ◉ AMBIENT ○ ABOVE AMBIENT ○ BELOW AMBIENT

STORAGE (28) TEMPERATURE ◉ AMBIENT ○ ABOVE AMBIENT ○ BELOW AMBIENT ○ CRYOGENIC

(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID# (DOT) 1270

WHAT IS MATERIAL USED FOR? (34) WASTE OIL FROM VARIOUS POWER PLANT COMPONENTS (EQUIPMENT

Submit Changes

No Changes Necessary

EMERGENCY NOTIFICATION TELEPHONE NUMBERS
(POST FOR EASY REFERENCE BY EMPLOYEES)

FEDERAL, STATE, AND LOCAL EMERGENCY RESPONSE CONTACT NUMBERS

Organization		Telephone
Emergency Response Agencies (Fire, Law, and Medical)*		**9-1-1**
San Joaquin County Office of Emergency Services*	**(Business)**	**(209) 468-3962**
	(After Hours)	**(209) 468-4400**
State Warning Center*		**(800) 852-7550**
National Response Center		(800) 424-8802
Chemtrec Emergency Response Information Service		(800) 424-9300
San Joaquin County Environmental Health Division		(209) 468-3420
Central Valley Water Quality Control Board		(916) 255-3000
	Fax:	(916) 255-3015
San Joaquin Valley Air District		(800) 281-7003
alifornia Poison Control System		(800) 876-4766

*** Releases or threatened releases of hazardous materials must be reported to these agencies.**

USEFUL EMERGENCY NUMBERS FOR YOUR BUSINESS

Agency/Name	Telephone
Local Publicly Owned Treatment Works (POTW) that handles your discharges	_____
_____	_____
_____	_____
_____	_____
_____	_____

Emergency Response
Haz. MAT.

CCL # 808572
EPA I.D. #CAD044003556
Hazardous Waste Haulers Lic. #0518

Tuesday, February 08, 2005

Randall Blank
Northern California Power Agency
12745 N. Thornton Road
Lodi, CA, 95242

SUBJECT: **Emergency Response and Site Cleanup Services** for Northern California Power Agency **(Contract #L** 022305)

Inclusions:

1. Provide qualified technicians and equipment for emergency response and site cleanup services.
2. Supply absorbent, boom, and other site remedial materials as necessary to carry out preventative measures.
3. Profile, manifest and provide the customer with copies of disposal documentation for removal and disposal of hazardous materials or contaminated soils.

Stipulations:

1. Customer will provide RES with all current analytical data or (MSDS) Material Safety Data Sheet(s) regarding any materials handled during response or cleanup procedures.
2. An authorized person representing the customer will be present to sign manifesting documents for transportation and disposal of petroleum products or contaminated soils produced during the cleanup procedures.
3. The above inclusions pertain to all wastestreams with the exception of:

   EXPLOSIVES, RADIOACTIVE, INFECTIOUS, AND COMPRESSED GAS CYLINDERS.
4. We will make every effort to respond in two hours or less, but we can not guarantee response time due to changing conditions, such as weather or traffic.

pd. Check #150.00

Cost Summary

(See RES' Emergency Response Program Price List)

Emergency Response Services **Total Time and Materials**

We propose with this to furnish material and labor-complete in accordance with the above specifications, for the sum of:

Time and materials as provided for by written pricing sheet.

Payment made as follows:

Net Fifteen (15)days from date of invoice

We guarantee that all material was as specified, all work to be completed on a substantial workman like manner according to specifications submitted, per standard practices. We will execute any alteration from above specifications involving extra costs only upon written orders and alterations will become an extra charge above the estimate.

Note: * **We may withdraw this proposal if not accepted within thirty (30) days.**
* **One time fee of $150.00 for R.E.S. Emergency Response Agreement.**

Authorized Signature:

Kyle Ramos
President

Authorized Signature:

Lisa D. Brooks
Sales Representative

Acceptance of the above prices, specifications, and conditions are satisfactory, and accepted. We authorize R.E.S. to do the work as specified. We will make payment as outlined above.

Date of Acceptance: 2/23/05 Signature:

Title: O&M Supervisor

Ramos Environmental Services
1515 S. River Road
W. Sacramento, CA 95691
(916) 371-5747

******* Facsimile Transmission Cover Sheet *******

Date : 03/14/2005

Pages : 3

To : Randall Blank
Northern California Power Agency

Fax Phone : 209-333-6374

From : Lisa D. Brooks @ Ramos Environmental Services
(916) 371-5747, Ext. 231

Subject : ER Contract

Hi, Randall..

Please find the your copy of the ER contract signed by both parties attached hereto.

Let me know if there is anything I can do for you.

Thanks, Lisa

misc. INFO

Ramos Environmental Services
1515 S. River Road
W. Sacramento, CA 95691
(916) 371-5747

******* Facsimile Transmission Cover Sheet *******

Date : 02/18/2005

Pages : 3

To : Randall Blank
Northern California Power Agency

Fax Phone : 209-333-6374

From : Lisa D. Brooks @ Ramos Environmental Services
(916) 371-5747, Ext. 231

Subject : Waste Stream Quote

CCL # 808572
EPA I.D. #CAD044003556
Hazardous Waste Haulers Lic. #0518

Friday; February 18, 2005

Randall Blank
Ops. & Maint. Supv.
Northern California Power Agency
12745 N. Thornton Road
Lodi, CA, 95242

RE: Hazardous Waste Removal Quote

Dear Randall:

Thank you for allowing me to quote your hazardous waste.

Ramos Environmental Services is pleased to present the following price quote for the services listed below. The following prices reflect the costs associated with the transportation and dispossal of hazardous waste and are contingent upon the approval and acceptance of your waste at the permitted disposal site. This quotation is based upon the information provided by the generator. Any appreciable variations in the nature or quantity of the waste will be invoiced accordingly. Pricing does not include any federal or state hazardous waste taxes which the generator may be obligated to pay.

Transport and Disposal

A) Waste Oil
(Up to 300 Gallons to pump out) ..... $ 75.00 flat
(301 to 499 Gal.) + $10.00 (Chlor de-Tect Test) ..... $ .25 per gal.

B) Oil Filters (With free replacement drum)
1 x 55 Gallon Drum .....$ 65.00 per drum

C) Batteries (must be packaged separately)
5 Gallon Alkaline batteries .....$175.00 per drum
5 Gallon Nickel Cadmium batteries .....$175.00 per drum

D) Flourscent lights
4' box or 8' box (lamps must be same size and in tact) .....$100.00 per box

E) Aerosol Cans (poisonous, flammable, non-flammable must be packaged separately)
30 Gallon fiber drum .....$350.00 per drum

Includes labor, transportation, and disposal cost.

F) Supplies

Various sized drums, containers, pads, absorbents, etc. are also available. Please request prices if needed.

Ramos Environmental Services, Inc., is a full service company. We pepare all necessary documents including wastestream profile sheets, transportation manifests, land disposal restriction forms, and drum labels, at no additional cost to our customers. All technicians are in compliance with all applicable local, state and federal laws and regulations.

This quote is valid for thirty (30) days, unless otherwise stipulated, and is subject to the terms and conditions contained in Ramos' Credit Agreement.

If these terms and conditions are agreeable, please sign below and fax to my attention (Fax 916-371-9312).

Please call me at (916) 371-5747, Ext. 231, or my cell - (916) 825-9274, if you have any questions or would like to schedule the material for pickup.

Thank you again for your time. I look forward to working with you!

Respectfully,

John Molusow

Lisa D. Brooks
Account Representative

Accepted By:

Authorized Signature	Title
Company	Date
Purchase Order # (If required.)	EPA ID #

MFSC Info

San Joaquin County Office of Emergency Services
Hazardous Materials Management Plan Program

INFORMATION SHEET FOR COMMONLY USED CHEMICALS

1. Chemicals in Bold are on the list of Extremely Hazardous Substances (EHS)
2. Hazards: F = Fire; P = Pressure; R = Reactive
   A = Acute; C = Chronic; Ir = Irritant
3. If Hazard letters are in parentheses, then that hazard applies in some cases only

Name	UN/DOT#	CAS#	Hazards	Misc
Acetone	1090	67-64-1	F, R, C, A	
Acetylene	1001	74-86-2	F, P, R, A	300-400 psi
Alkaline Liquid Cleaner or Detergent	1719	N/A	(R), A	
Ammonium Hydroxide (AquaAmmonia)	2672	1336-21-6	R, A	
Anhydrous Ammonia	1005	7664-41-7	(F), P, A	EHS, 90-140 psi
Anti-Freeze (Ethylene Glycol)	1142	107-21-1	F,A, C	
Asphalt	1999	8052-42-4	(F), (A), C	
Carbon, Activated	1362	7440-44-0	(F), R, A	
Carbon Dioxide (CO2) Gas	124-38-9	124-38-9	P, A, (C)	830-2400 psi
Caustic Potash, Dry (Potassium Hydroxide)	1813	1310-58-3	R, A	
Cement, Liquid Adhesive	1133	Mixture	(F), (R), (A), C	
Cement, White or Portland	N/A	65997-15-1	(C), A	
Chlorine	1017	7782505	P, R, A	
Diesel	1993	Mixture	F, C,A	
Ethylene Oxide	1040	75-21-8	F, R, A, C, P	
Freon	1018	Refer to Label	(F), (C), A, (P)	
Gasoline	1203	8006-61-9	F, A, C	
Grease, Lube	1993	Mixture	F, (C), A	
Helium	1046	7440-59-7	P, A	
Hydrochloric Acid (Muriatic Acid)	1789	7647-01-1	R, A	
Hydrogen Peroxide	2014	7722-84-1	F, R, A	EHS if > 54%
Kerosene	1223	8008-20-6	F, A, C	

Lime, Calcium Oxide	1910	1305-78-8	R, A	
Liquid Petroleum Gas (LPG)	1075	74-98-6	F, P, A	1 gallon = 36.5 cubic ft.
Methyl Bromide	1062	74-83-9	(F), A, C	EHS
Methyl Ethyl Ketone (MEK)	1193	78-93-3	F, R, C, A	
Naphtha (Stoddard Solvent)	1256	8030-30-6	F, A	
Nitrogen, Compressed Gas	1066	7727379	P, A	1800-2600 psi
Nitrogen, Liquid	1977	7727379	P, A	
Oil (Motor, Transmission, Hydraulic)	1270	Mixture	F, A	Includes all weights
Oxygen	1072	7782447	P, R, A	1800-2600 psi
Oxygen, Liquified	1073	7782447	P, R, A	
Paint (Oil Based)	1263	Mixture	(F), A, (C)	
Perchlorethylene	1897	127-18-4	C, A	
Phosphoric Acid	1805	7664-38-2	R, A	18-205 psi
Potassium Hydroxide (solution)	1814	1310-58-3	R, A	
Propane	1978	74-98-6	F, P, A	
Sodium Hypochlorite (Bleach)	1791	7681-52-9	R, A	
Solvents	1993	Mixture	F, A	
Solvents, Naphtha Based	1256	Mixture	F, A	
Sulfur	1350	7704-34-9	F, R, A	
Sulfur Dioxide	1079	7446-09-5	P, R, A	EHS
Sulfuric Acid	1830	7664-93-9	R, A	
Thinner	1263	Mixture	F, A, C	
Waste Oil	1270	N/A	F, A, C	
Waste Antifreeze	1142	N/A	F, A, C	

Information and assistance is available from San Joaquin County OES by calling (209) 468-3969.

Main Menu

MISC
HMMP website Info.

San Joaquin County Office of Emergency Services
Hazardous Materials Management Plan Program

Guidelines for Reporting Spills and Releases

The law requires businesses to immediately report a spill, or threatened spill, of hazardous materials. Failure to comply with the following reporting requirements can lead to serious criminal or civil actions.

"A person shall provide an immediate verbal report of any release or threatened release of a hazardous material to the local Administering Agency and the State Warning Center as soon as 1) the person has knowledge of the release or threatened release, 2) notification can be provided without impeding immediate control of the release, and 3) notification can be provided without impeding immediate emergency medical measures."

In San Joaquin County, you must notify local public safety agencies by calling 9-1-1 and the Office of Emergency Services, the program Administering Agency, by calling (209) 468-3962 during business hours. For spills that occur after hours or on weekends, contact the Sheriff's Department at 468-4400 and request that the OES Duty Officer call your business representative to receive the report. The State of California Warning Center must also be notified by calling (800) 852-7550. According to regulations this report will "include, at a minimum, 1) the exact location of the release or threatened release, 2) the name of the person reporting the release or threatened release, 3) the hazardous materials involved, 4) an estimate of the quantity involved, and 5) the potential hazards, if known, presented by the hazardous material involved." Our office recommends that you carefully consider the circumstances of a release in order to determine whether it needs to be reported. If in doubt, it is always better to report the spill. **Some chemicals, including those classified as "Extremely Hazardous Materials", must always be reported to the National Response Center if the amount released meets or exceeds the "Reportable Quantity" established by the Federal Government.**

Main Menu

COUNTY OF SAN JOAQUIN
OFFICE OF EMERGENCY SERVICES
ROOM 610, COURTHOUSE
222 EAST WEBER AVENUE
STOCKTON, CALIFORNIA 95202
TELEPHONE (209) 468-3962
HAZARDOUS MATERIALS DIVISION
(209) 468-3969
E-mail: sjcoes@co.san-joaquin.ca.us

HAZARDOUS MATERIALS MANAGEMENT PLAN/INVENTORY CERTIFICATION STATEMENT

For

NORTHERN CALIF POWER AGENCY
01/18/2007

The above named business certifies that the Business Owner/Operator Identification Page, Hazardous Materials Management Plan, Chemical Description Page(s), and Facility Map(s) submitted pursuant to Chapter 6.95 of the California Health and Safety Code are accurate and correct. The above named business further certifies that all hazardous materials handled in quantities of 55 gallons, 500 pounds, or 200 cubic feet or greater, unless otherwise exempted by San Joaquin County, are included in the submitted inventory. This business acknowledges making this certification by checking the box below labeled "Annual Certification" and submitting this statement to the Office of Emergency Services. **The owner and operators of this business understand that failure to have accurate information on file with the Office of Emergency Services may make my company liable in an emergency.**

Your Certification has been recorded.
Please print this page for your records.

Thank you.

NOTE: Be sure that the business e-mail address on file with our office is accurate.

Main Menu Logoff

This is the list of Chemical Records currently on file for NORTHERN CALIF POWER AGENCY. Please choose the Chemical Record you would like to update from the left column.

Main Menu Email All Chemical Description Records Add New Chemcial

Current Found Count 20 1 thru 20

Chemcial Name	Common Name	Storage Location
AMMONIA, ANHYDROUS	AMMONIA, ANHYDROUS	OUTSIDE ADJACENT TO COOLING TOWER
BATTERY, WET (ACID FILLED)	LEAD ACID BATTERY	BATTERY ROOM
CO CALIBRATION GAS	NON-FLAMMABLE GAS MIXTURE	CEMS BUILDING AND WAREHOUSE
ELIMIN-OX OXYGEN SCAVENGER	CARBOHYDRAZIDE	BOILER CHEM BERM
EXXON DIESEL 1	PETROLEUM DIESEL FUEL	INSIDE FIRE PUMP HOUSE
LUBRICATING OILS	LUBRICATING OIL	SEA VAN/TURBINE /GENERATOR LUBE OIL TANKS
MIXTURE	PETROLEUM HYDROCARBON, INDUSTRIAL OIL	OUTSIDE NEAR ELECTRICAL EQUIPMENT ROOM
NALCO 352	AMINE	BOILER CHEMICAL SKID
NOX CALIBRATION GAS	NON-FLAMMABLE GAS MIXTURE	CEMS BUILDING AND WAREHOUSE
O2 GAS MIXTURE	NON-FLAMMABLE GAS MIXTURE	CEMS BUILDING AND WAREHOUSE
OIL OF VITROIL	SULFURIC ACID	OUTSIDE ADJACENT TO COOLING TOWER
PHOSPHATE	NALCO 1742	BOILER CHEMICAL SKID
PHOSPHATE 7396	TETRAPOTASSIUM PYROPHOSPHATE	CT CHEM BERM
SODIUM BISULFITE	SODIUM ACID SULFITE	WATER TREATMENT BUILDING
SODIUM HYPOCHLORITE	BLEACH	WATER TREATMENT BUILDING
STABREX ST70	BIOCIDE	COOLING WATER TREATMENT AREA
SULFER HEXAFLUORIDE	SF6	230 KV SWITCH YARD
VISCO 3967 GLUT/AMINE	N/A	WATER TREATMENT BUILDING
VISCO 3980 BIOCIDE	N/A	WATER TREATMENT BUILDING
WASTE OIL	WASTE OIL	MAINTENANCE SHOP

Current Found Count 20 1 thru 20

California Hazardous Materials Inventory Form - Chemical Description

(1) ☐ ADD ☐ DELETE ☒ REVISE

PAGE (2) [ ] OF (3) [ ]

BUSINESS NAME (4) NCPA

CHEMICAL LOCATION(S) (5) OUTSIDE ADJACENT TO COOLING TOWER

MAP # (6) / GRID # (7) M-110/E3

CHEMICAL NAME (8) AMMONIA,, ANHYDROUS

TRADE SECRET (11) ☐ YES ☒ NO

COMMON NAME (9)

*EHS (12) ☒ YES ☐ NO

*IF EHS BOX IS "YES" ALL AMOUNTS MUST BE IN LBS

CAS # (10) 7664-41-7

FIRE CODE HAZARD CLASS (13)

TYPE (14) ☒ PURE ☐ MIXTURE ☐ WASTE

RADIOACTIVE (15) ☐ YES ☒ NO (16) CURIES

PHYSICAL STATE (17) ☐ SOLID ☒ LIQUID ☐ GAS

FED HAZARD CATEGORIES (18) ☒ FIRE ☐ REACTIVE ☒ PRESSURE RELEASE ☒ ACUTE HEALTH ☐ CHRONIC HEALTH

STATE WASTE CODE (19)

UNITS* (22) ☐ GAL ☐ LBS ☐ CU FT ☒ TONS

*If EHS, amounts must be in lbs

MAX DAILY AMT (23) ON SITE: 20

AVG DAILY AMT (24) ON SITE: 15

DAYS ON SITE (20): 365

LARGEST CONTAINER (21): 20

ANNUAL WASTE AMT (25): 0

STORAGE CONTAINER (26)

☒ ABOVE GROUND TANK	☐ CAN	☐ BOX	☐ TANK WAGON
☐ UNDER GROUND TANK	☐ CARBOY	☐ CYLINDER	☐ RAIL CAR
☐ TANK INSIDE BUILDING	☐ SILO	☐ GLASS BOTTLE	☐ Other...
☐ STEEL DRUM	☐ FIBER DRUM	☐ PLASTIC BOTTLE	
☐ PLASTIC/NONMETALLIC DRUM	☐ BAG	☐ TOTE BIN	

STORAGE PRESSURE (27) ☐ AMBIENT ☒ ABOVE AMBIENT ☐ BELOW AMBIENT

STORAGE TEMPERATURE (28) ☒ AMBIENT ☐ ABOVE AMBIENT ☐ BELOW AMBIENT ☐ CRYOGENIC

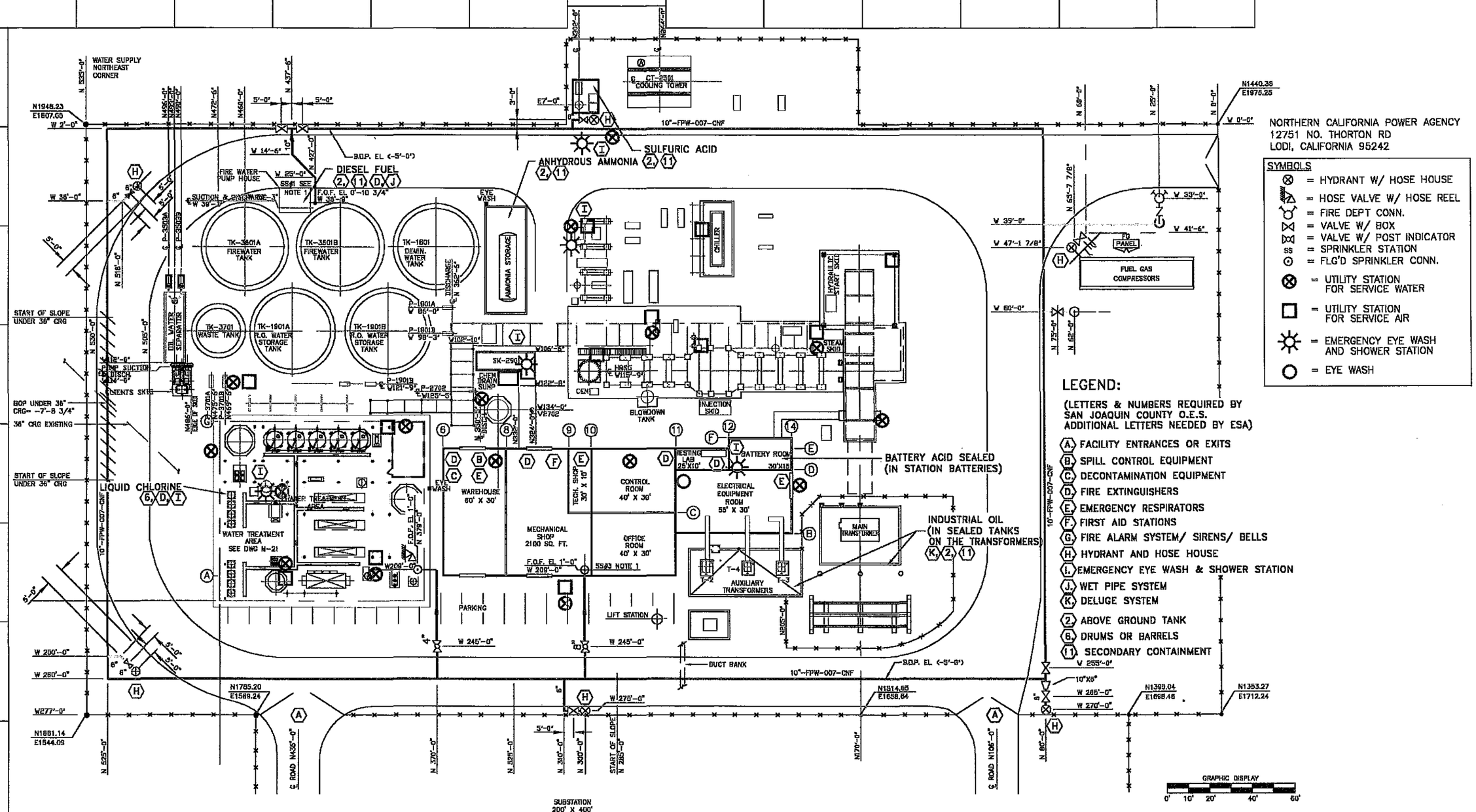
(29) %WT	(30) HAZARDOUS COMPONENT	(31) EHS	(32) CAS#
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	
		☐ YES ☐ NO	

ADDITIONAL LOCALLY COLLECTED INFORMATION: (33) UNITED NATIONS ID # (DOT) 1005

(34) WHAT IS MATERIAL USED FOR? SCP process for NOx emission control

For Official Use Only: ☐ C ☐ R ☐ S

SJC 1/2001



NORTHERN CALIFORNIA POWER AGENCY
12751 NO. THORTON RD
LODI, CALIFORNIA 95242

SYMBOLS

- ⊗ = HYDRANT W/ HOSE HOUSE
- = HOSE VALVE W/ HOSE REEL
- = FIRE DEPT CONN.
- = VALVE W/ BOX
- = VALVE W/ POST INDICATOR
- SS = SPRINKLER STATION
- ⊙ = FLG'D SPRINKLER CONN.
- ⊗ = UTILITY STATION FOR SERVICE WATER
- □ = UTILITY STATION FOR SERVICE AIR
- = EMERGENCY EYE WASH AND SHOWER STATION
- ○ = EYE WASH

LEGEND:

(LETTERS & NUMBERS REQUIRED BY SAN JOAQUIN COUNTY O.E.S. ADDITIONAL LETTERS NEEDED BY ESA)

- (A) FACILITY ENTRANCES OR EXITS
- (B) SPILL CONTROL EQUIPMENT
- (C) DECONTAMINATION EQUIPMENT
- (D) FIRE EXTINGUISHERS
- (E) EMERGENCY RESPIRATORS
- (F) FIRST AID STATIONS
- (G) FIRE ALARM SYSTEM/ SIRENS/ BELLS
- (H) HYDRANT AND HOSE HOUSE
- (I) EMERGENCY EYE WASH & SHOWER STATION
- (J) WET PIPE SYSTEM
- (K) DELUGE SYSTEM
- (2) ABOVE GROUND TANK
- (6) DRUMS OR BARRELS
- (11) SECONDARY CONTAINMENT

NO.	DATE	BY	REVISION
AB2	11/01	JML	NEW MAP COORDINATION FOR HMMP
AB1	11/95	TRI	FOR HMMP REPORT

ACAD FILE: CT2-HMMP | SIZE: B
DR.BY: TRI | REDR.BY: LWC
CLASS: ESA | APPD: MAA
DATE: 08/19/95 | DATE:
D.B.M.S.: | UPDATE: 01/02/97

NORTHERN CALIFORNIA POWER AGENCY
COMBUSTION TURBINE PROJECT NO.2
SITE MAP FOR
HAZARDOUS MATERIALS
HMMP

DWG. NO: M-110
SCALE: AS NOTED
SH. NO: 1
REV. NO: AB2

Visual Resources (71–74)

Background

Cooling Tower Operating Data

Staff plans to perform a plume modeling analysis for the cooling tower. Staff requires cooling tower operating information for specific ambient and operating cases, and other cooling tower design data, to complete this analysis.

Data Request

71. Please summarize for the cooling tower 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 (below), 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	7 cells (1 by 7)					
Cell Height*	13.9 meters (45.8 feet)					
Cell Diameter	4.3 meters (14 feet)					
Tower Housing Length*	102.6 meters (336.7 feet)					
Tower Housing Width*	13 meters (42.7 feet)					
Ambient Temperature*	32.6°F		61.2°F		94.0°F	
Ambient Relative Humidity						
Duct Firing	Yes	No	Yes	No	Yes	No
Number of Cells in Operation						
Heat Rejection (MW/hr)*		163.5	191.6	159.1	189.9	157.3
Exhaust Temperature (°F)						
Exhaust Flow Rate (lb/hr)						
*Ambient temperatures and an estimate of the heat rejection are based on three of the ambient cases presented in Figure 2.1-4B in the AFC. The available cooling tower dimensions data are from Tables 5.13-3 and 5.1B-4 in the AFC.						

Additional combinations of temperature and relative humidity or curves showing heat rejection vs. ambient condition and solar condition, if provided by the applicant, will be used to more accurately represent the cooling tower exhaust conditions.

Response: A cooling tower has not been purchased for the project at this time. However, a theoretical model has been created by the cooling tower manufacturer (SPX) who has provided the information in Table DR71-1. New data is provided in bold text.

TABLE DR71-1
Cooling Tower Parameters

Parameter	Cooling Tower Exhausts					
Number of Cells	7 cells (1 by 7)					
Cell Height*	13.9 meters (45.8 feet)					
Cell Diameter	4.3 meters (14 feet)					
Tower Housing Length*	102.6 meters (336.7 feet)					
Tower Housing Width*	13 meters (42.7 feet)					
Ambient Temperature*	32.6°F		61.2°F		94.0°F	
Ambient Relative Humidity	**74%**		**66.8%**		**27.5%**	
Duct Firing	Yes	No	Yes	No	Yes	No
Heat Load MMBtu/hr	**n/a**	**558**	**654**	**543**	**648**	**537**
Number of Cells in Operation	**n/a**	**7**	**7**	**7**	**7**	**7**
Heat Rejection (MW/hr)*	n/a	163.5	191.6	159.1	189.9	157.3
Exhaust Temperature (°F)	n/a	58.8	76.7	74.0	86.4	83.8
Exhaust Flow Rate (lb/hr)	n/a	40,820,000	39,748,000	39,853,000	39,017,000	39,101,000
Water Temperature In (°F)	**n/a**	**68.3**	**87.6**	**82.8**	**96.5**	**92.1**
Water Temperature Out (°F)	**n/a**	**49.7**	**65.8**	**64.7**	**74.9**	**74.2**
Water Flow	**n/a**	**30,000,000**	**30,000,000**	**30,000,000**	**30,000,000**	**30,000,000**

*Ambient temperatures and an estimate of the heat rejection are based on three of the ambient cases presented in Figure 2.1-4B in the AFC. The available cooling tower dimensions data are from Tables 5.13-3 and 5.1B-4 in the AFC.

Data Request

72. 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 Condition of Certification confirmation of design limit.

Response: The information provided in Table DR71-1 includes design safety margins typically included by the original equipment manufacturer.

Data Request

73. Please provide the cooling tower manufacturer and model number information and a fogging frequency curve from the cooling tower vendor, if available, that corresponds to the altitude of the project site.

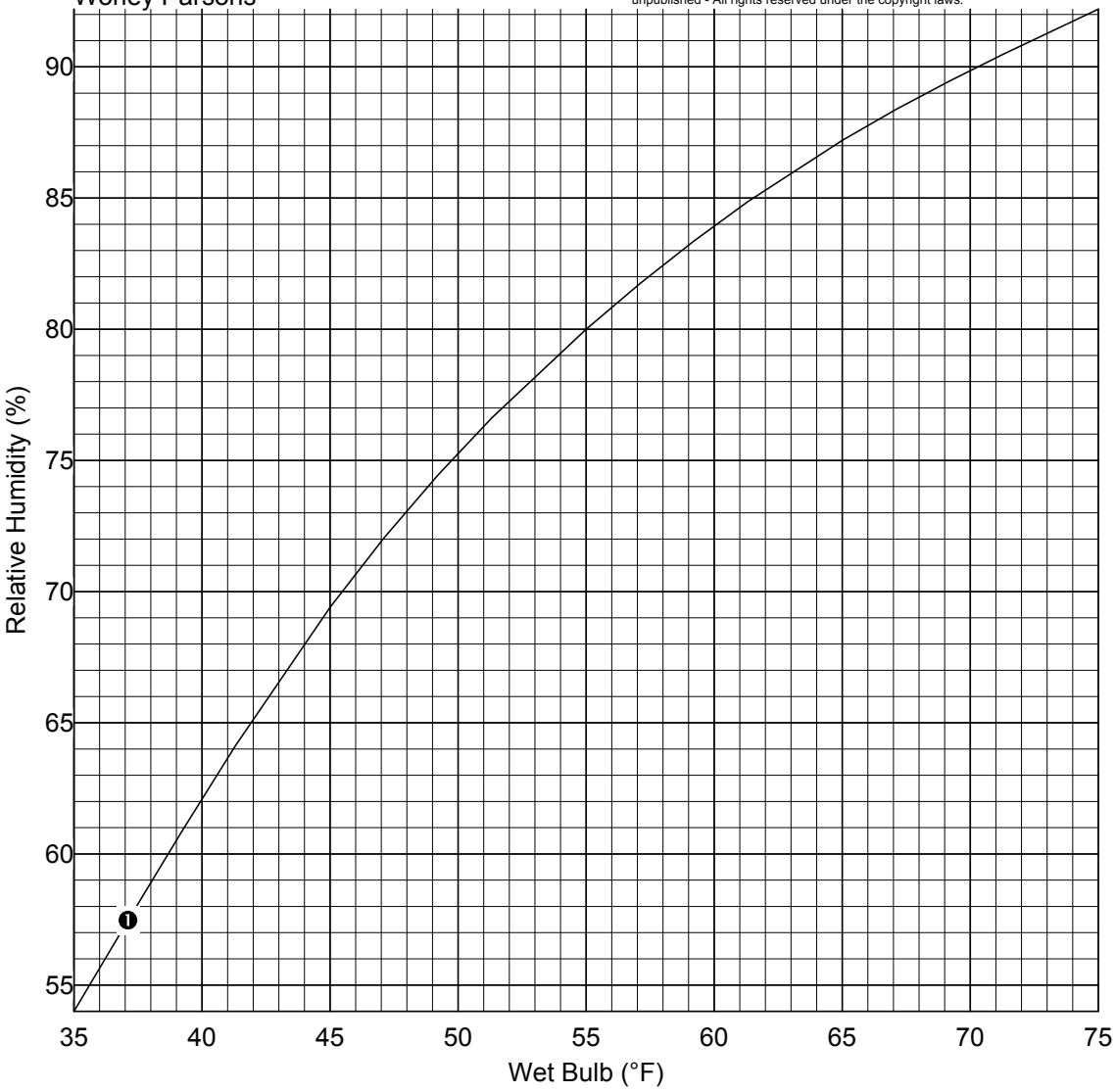
Response: A fogging frequency curve including the cooling tower manufacturer and model number information is provided as Figure DR73-1.

Data Request

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

Response: The cooling tower fan motors will have two speeds; they will not have variable speed/flow controllers.

Estimated Fogging Frequency Curve for
Lodi
Worley Parsons



SPX Cooling Technologies
TRACS Version 18-SEP-08

Model	F478-6.6-07
Number of Cells	7
Motor Output	250HP
Motor RPM	1800
Fan	336HP7-9
Fan RPM (Full Speed)	137

Design Conditions:

Flow Rate	60000GPM
Hot Water	94.00°F
Cold Water	74.00°F
Wet-Bulb	68.90°F

Curve Conditions:

Fan Pitch	Constant
Flow Rate (100% Design Flow)	60000GPM

Tangency 100.0%

FOGGING FREQUENCY CURVE: The curve shown to the left is referred to as a 'Fogging Freqency Curve'. The Fogging Freqency Curve separates entering cooling tower conditions that produce fog at the discharge (Top-Left region of chart) from those that do not produce fog (Bottom-Right region of chart)

❶ 20 °F Range

Time: 10:01:55 Date: 02-13-2009 Drawn By: CJH

FIGURE DR73-1
LEC FOGGING FREQUENCY CURVE
LODI ENERGY CENTER
LODI, CALIFORNIA

CH2MHILL

Workshop Queries (1-2)

Background

During the CEC Informational Hearing and Site Visit on January 15, 2009, Hearing Officer Ken Celli communicated two questions for the Applicant regarding the project. Although these questions have not been formally submitted as a Data Request, the Applicant has provided a response below as Workshop Queries (WSQ) 1 and 2.

Ammonia Truck Trips

WSQ-1 Since the LEC will use the existing ammonia tank at the STIG plant, and will therefore result in an increase in ammonia deliveries, would increased ammonia storage result in fewer ammonia deliveries to the site? If storage cannot be increased is there any mitigation proposed to address the additional truck trips?

Response: The LEC facility will tie into the existing anhydrous ammonia (99% NH_3) in an existing, single, stationary, aboveground storage tank (AST) currently in use at the STIG plant. A new ammonia tank will not be built for the LEC facility. The capacity of the tank is 12,000 gallons; however, the tank is only filled to 85% of its capacity, or 10,200 gallons.

Currently, the existing anhydrous ammonia tank is refilled once a year for the STIG facility. With the addition of the LEC facility, deliveries will increase to two times per month, with a maximum of 24 deliveries per year. Thus, approximately two times per month (or a maximum of 24 deliveries per year), one 6,500-gallon tanker truck will deliver anhydrous ammonia to the site.

The limiting factor for ammonia deliveries to the LEC site is not the number of storage tanks on site, but the size of the tanker truck that delivers the anhydrous ammonia. Typical deliveries of ammonia to the STIG plant are in a 6,500-gallon tanker truck. During operation, regardless of the number of tanks on site, 24 deliveries would still be needed per year for the LEC to operate as described in the AFC. Two tanks on site would not reduce the amount of deliveries because the tanks could only be filled 6,500 gallons at a time. The only way to decrease ammonia deliveries would be to decrease the amount of hours the plant would operate, thereby decreasing the amount of ammonia needed.

As detailed in AFC Sections 5.5 and 5.12, transportation of hazardous materials, including anhydrous ammonia, will comply with all Caltrans, EPA, DTSC, CHP, and California State Fire Marshal regulations. Anhydrous ammonia will be delivered and transported in accordance with Vehicle Code Section 32100.5, which regulates the transportation of hazardous materials that pose an inhalation hazard. In addition, ammonia will only be transported along approved transportation routes.

A transportation risk analysis was also prepared for this project to determine the risk of delivering ammonia to the LEC (Appendix 5.5A of the AFC). The risk of an incident occurring during a calendar year that would result in 10 or more fatalities is 0.017/million

miles x 73.9 miles, or 1.26 in one million. The risk of an accident occurring in any year that would result in 33 or more fatalities is 0.0027/million miles x 73.9 miles, or 0.20 in one million. The CEC uses a significance threshold of 1 in 100,000 (or 10 in 1,000,000) for a risk of 10 fatalities and a threshold of 1 in 1,000,000 for a risk of 100 fatalities (CEC, 2001). Both of the project's risk estimates (1.26 and 0.20 in one million) are well below the CEC thresholds. Therefore, the risk of exposure to anhydrous ammonia during transport to the LEC site is not significant.

Transportation impacts related to hazardous materials associated with the project operations will not be significant because deliveries of hazardous materials will be limited. Delivery of these materials to the LEC facility will occur over prearranged routes that avoid schools, hospitals, and other sensitive receptors, and will be in compliance with all LORS governing the safe transportation of hazardous materials. Because the transport of hazardous wastes will be conducted in accordance with the relevant transportation regulations, no significant impact is expected. Thus, even with increased truck trips, no mitigation is required for the LEC facility.

Underground Injection Well

WSQ-2 Since the LEC is adjacent to a wastewater treatment plant, why will the facility use an underground injection well, and is a ZLD an option? Due to the close proximity of the Delta and waterways, would an underground injection well impact these waters?

Response: LEC is unable to send process water back to the City of Lodi's White Slough Water Pollution Control Facility (WPCF) because of the high level of nitrates in the water, which exceed the limit that the WPCF can accept. A ZLD system, while in place at other project sites, would require a larger footprint for the LEC. Because the LEC site is landlocked with WPCF treatment ponds to the north and east, the existing STIG facility to the west, and the San Joaquin County Vector ponds to the south, additional acreage is not available. Therefore, an underground injection well (UIW) for disposal of process water must be used at the LEC site. The STIG plant has an existing permitted Class I UIW that is currently in use and will be used as a backup for the new UIW to be installed for the LEC project.

UIWs inject wastes into deep, isolated rock formations that are thousands of feet below the lowermost underground source of drinking water (USDW). Regulated by the EPA's Underground Injection Control (UIC) program, Class I injection wells provide a safe means to remove wastes from the surface environment by isolating them deep below the land surface, away from drinking water resources (EPA, 2008[4]). Owners and operators of Class I wells must meet specific requirements to obtain a permit from EPA. These requirements address the siting, construction, operation, monitoring and testing, reporting and record keeping, and closure of Class I wells. Wastewater from the LEC will be discharged to a new onsite Class I UIW. This well will be permitted through the EPA's UIC program, which strictly regulates the conditions on which a permit for Class I injection wells can be issued.

[4] Environmental Protection Agency (EPA). 2008. Underground Injection Control Program. http://www.epa.gov/safewater/uic/wells_class1.html#what_is

The primary concern of the UIC program is the potential for injected fluid or poor quality native formation fluids to move from the injection interval due to inadequate confinement or the presence of natural or manmade conduits. Examples of natural conduits include transmissible faults or fractures that penetrate the confining zone. Man-made conduits at this depth are generally wells that may not be properly constructed and/or plugged to prevent movement of fluids from deeper zones to shallower zones.

As described in the UIC permit package, there are two aquifers in the LEC project area. The upper aquifer is perched on top of an impervious zone and is found at depths of 2 to 14 feet, and the lower aquifer begins at a depth of about 50 feet. The UIW will inject into the Domengine Formation at depths of between 4,234 and 4,507 feet. Injection zones typically range from 1,700 to more than 10,000 feet in depth (EPA, 2008). The injection zone is separated from USDWs by an impermeable "cap" rock called the confining layer, along with additional layers of permeable and impermeable rock and sediment that separate the injection layer from the USDW (EPA, 2008). At the LEC UIW site, the presence of the extensive confining unit will prevent the formation fluids from moving between zones.

Based on the calculations summarized in the UIW permit, the injection front is expected to travel less than 1,800 feet from the injection well. These calculations assume 24 hour per day, 365 days per year of injection for 30 years at 425 gallons per minute. It is not expected that operation at full capacity will occur at all times, which will result in lower rates than the proposed permitted values, resulting in significantly less pressure than calculated based on the assumptions above. Even in the worst case scenario described above, migration of the injection front would not affect the Delta, surrounding water bodies, or any USDW because the waste will be injected deep enough to ensure no migration to the Delta or surrounding water bodies occurs.

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 2/2/09)

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

CALIFORNIA ENERGY COMMISSION
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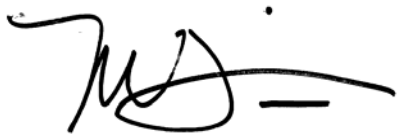
DECLARATION OF SERVICE

I, Mary Finn, declare that on February 17, 2009, I deposited copies of the attached Data Response Set 2 in the United States mail at Sacramento, CA 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.



Mary Finn

Attachments