DOCKETED	
Docket Number:	08-AFC-10C
Project Title:	Lodi Energy Center Project
TN #:	231120
Document Title:	Lodi Energy Center - 2018 Annual Compliance Report - Part 2
Description:	2018 Annual Compliance Report (Part 2) for the Lodi Energy Center.
Filer:	Mary Dyas
Organization:	NCPA
Submitter Role:	Applicant
Submission Date:	12/11/2019 8:32:09 AM
Docketed Date:	12/11/2019

APPENDIX C: MOST RECENT ANNUAL COMPLIANCE CERTIFICATION

San Joaquin Valley Air Pollution Control District

TITLE V PAPER COMPLIANCE REPORT REVIEW

Facility: NORTHERN CALIFORNIA POWER Facility ID#: N-2697

____ Report of Required Monitoring X Annual Compliance Certification

Reporting Period: 01/01/2016 through 12/31/2016

Date Report Due: 1/30/2017 Date Report Received: 1/30/2017

The following areas were researched as part of the review process:

X Breakdown Reports

X Deviation Reports

X CEMS Data

X Confirmed PTO's & ATC's in PAS

X Variance Status Review

X Federally Enforceable Conditions (Y)

X Latest Inspection & Test Results

The review has revealed the following:

____ **Discrepancies were found.** X **The information appears to be correct and complete.**

Review Comments:

Appears to be complete
Report appears to be accurate and oomplete. R. Giannone

Did any deviations, notice of violations, variances, or other events that constitute non-compliance occur during the reporting period, or carry over from a previous reporting period?

X Yes ____ No

Reviewed By:

Dottie Forbes 02/09/2017 2:53:04 PM
Initial Review Date

Rhonda Mansur 02/13/2017 11:46:38 AM
Secondary Review Date

Ron Giannone 02/14/2017 9:22:14 AM
Final Review Date

A PUBLIC AGENCY
NCPA
NORTHERN CALIFORNIA POWER AGENCY

January 27, 2017

PO Box 1478
12745 N. Thornton Road
Lodi, CA 95241
(209) 333-6370
www.ncpa.com

US EPA Region IX, Air-3
75 Hawthorne Street
San Francisco, CA 94105

Mr. Martin Keast
Compliance Title V Reporting
San Joaquin Valley Air Pollution Control District
1990 East Gettysburg Avenue
Fresno, CA 93726

Re: Northern California Power Agency
Lodi STIG#2 Plant/Lodi Energy Center
Annual Compliance Certification

Dear Mr. Keast,

Enclosed you will find the Northern California Power Agency's Annual Compliance Certification for the Lodi STIG#2 Plant/Lodi Energy Center (N-2697) for the period between January 1, 2016 and December 31, 2016. Also, enclosed is the required Certification Form. Two deviations were reported for the LEC gas turbine. Please see attachment A for more information.

The report addresses each permit separately for the reporting period.

Please contact me at (209) 210-5009 if you have any questions regarding the Annual Compliance Certification.

Sincerely,

Vinnie Venethongkham
Compliance Manager

Attachments

San Joaquin Valley
Unified Air Pollution Control District

Certification of Truth and Accuracy

Company Name: Northern California Power Agency	Facility ID: N - 2697

I declare, under penalty of perjury under the laws of the state of California that based on information and belief formed after reasonable inquiry, the statements and information provided in the document are true, accurate, and complete:

Signature of Responsible Official

January 27, 2017
Date

Vinnie Venethongkham
Name of Responsible Official (please print)

Compliance Manager
Title of Responsible Official (please print)

ATTACHMENT A: Deviations during the Reporting Period

Item	Issued By	Permit Unit	Type	Description
1	San Joaquin Valley Air Pollution Control District (SJVAPCD)	N-2697-5-3	CEMS Equipment Breakdown	10/20/16: Notification to SJVAPCD of failed annual source test/RATA. Excess emissions occurred during the annual source testing/rata on 10/20/16. Third Party Tester revealed our CEMS stack was severely stratified resulting in lower emissions than actually measured. Relying on testers CEMS, measured NOx ppm @ 15% O2 and NOx lb/hr were as followed: 1408-1454 recorded 2.36 ppm @ 15% O2, resulting in excess NOx ppm @ 15% of 0.36 1505-1549 recorded 2.30 ppm @ 15% O2, resulting in excess NOx ppm @ 15% of 0.30 1408-1454 recorded 16.31 lb/hr, resulting in excess NOx lb/hr of 0.77 1505-1549 recorded 15.86 lb/hr, resulting in excess NOx lb/hr of 0.32 After corrective actions were implemented, the Unit was retested on 10/31/16. All monitors passed this test. See attached Breakdown/ Deviation Report for more detail.
2	San Joaquin Valley Air Pollution Control District (SJVAPCD)	N-2697-5-3	CEMS Equipment Breakdown	1/27/17: Notification to SJVAPCD of failed CEMS polling system.

San Joaquin Valley
Unified Air Pollution Control District

Title V – COMPLIANCE CERTIFICATION FORMS – LODI STIG#2 PLANT/LODI ENERGY CENTER

In numerical order list all permitted units that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

Company Name: **Northern California Power Agency**	Facility ID: N-2697
Reporting Period: January 1, 2016 thru December 31, 2016	**Page 1 of 14 Pages**

COLUMN 1 Permit Unit Number	**COLUMN 2** Permit Condition No. Specify each Permit Condition Number Sequentially	**COLUMN 3** Compliance Status During Period: "CONTINUOUS" OR "NOT IN COMPLIANCE"	**COLUMN 4** Method for Determining Compliance Status	**COLUMN 5** Additional Information: Identify each deviation, each possible exception to Compliance and each excursion or exceedance as defined in 40CFR, Part 64.
Facility-Wide Requirements				
N-2697-0-4	1	Continuous	Reviewed Operator Logs and Breakdown Reports.	District notified of incidents occurring on January 27 and October 20, 2016. Please review the attached reports for more information.
N-2697-0-4	2	Continuous	Reviewed Breakdown Reports.	Breakdown Reports submitted for incidents occurring on January 27 and October 20, 2016 as required.
N-2697-0-4	3	Continuous	Reviewed Annual Emission Statement.	N/A
N-2697-0-4	4	Continuous	Reviewed with operations staff.	No facility modifications were performed during this reporting period.
N-2697-0-4	5	Continuous	Reviewed with operations staff.	N/A
N-2697-0-4	6	N/A	N/A	Ownership has not changed.
N-2697-0-4	7	Continuous	N/A	No facility modifications were performed during this reporting period.
N-2697-0-4	8	Continuous	Reviewed records.	N/A
N-2697-0-4	9	Continuous	Reviewed records.	N/A
N-2697-0-4	10	Continuous	Reviewed Reports of Required Monitoring.	N/A
N-2697-0-4	11	Intermittent	Reviewed Deviation Reports, Source Test Plan and Report, CEMS/DAS records, Operators Log, Quarterly CEMS Reports, Reports of Required Monitoring, and Annual Compliance Certification.	Deviation Reports were submitted within 10 days.
N-2697-0-4	12	N/A	N/A	N/A
N-2697-0-4	13	N/A	N/A	N/A
N-2697-0-4	14	N/A	N/A	N/A
N-2697-0-4	15	N/A	N/A	N/A
N-2697-0-4	16	Continuous	Reviewed District correspondence.	No requests were made during this reporting period.

San Joaquin Valley
Unified Air Pollution Control District

Title V – COMPLIANCE CERTIFICATION FORMS – LODI STIG#2 PLANT/LODI ENERGY CENTER

In numerical order list all permitted units that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

Company Name: **Northern California Power Agency**	Facility ID: N-2697
Reporting Period: January 1, 2016 thru December 31, 2016	**Page 2 of 14 Pages**

COLUMN 1 Permit Unit Number	**COLUMN 2** Permit Condition No. Specify each Permit Condition Number Sequentially	**COLUMN 3** Compliance Status During Period: "CONTINUOUS" OR "NOT IN COMPLIANCE"	**COLUMN 4** Method for Determining Compliance Status	**COLUMN 5** Additional Information: Identify each deviation, each possible exception to Compliance and each excursion or exceedance as defined in 40CFR, Part 64.
N-2697-0-4	17	Continuous	Reviewed District invoices.	N/A
N-2697-0-4	18	Continuous	Access granted as required.	N/A
N-2697-0-4	19	Continuous	Access granted as required.	N/A
N-2697-0-4	20	Continuous	Access granted as required.	N/A
N-2697-0-4	21	Continuous	Access granted as required.	N/A
N-2697-0-4	22	Continuous	Routine operating procedures. Visible emissions test performed by District staff during annual inspection.	N/A
N-2697-0-4	23	Continuous	Routine maintenance procedures.	N/A
N-2697-0-4	24	Continuous	Routine maintenance procedures.	N/A
N-2697-0-4	25	Continuous	Routine compliance procedures.	N/A
N-2697-0-4	26	Continuous	Reviewed Deviation Reports, Source Test Plan and Report, Quarterly CEMS Reports, Reports of Required Monitoring, Annual Compliance Certification, and Annual Emissions Statement.	N/A
N-2697-0-4	27	N/A	N/A	No service performed on appliances at this site during this reporting period.
N-2697-0-4	28	N/A	N/A	No refrigerant service performed on motor vehicles at this site during this reporting period.
N-2697-0-4	29	N/A	N/A	No construction, demolition, or excavation performed on-site during this reporting period.
N-2697-0-4	30	N/A	N/A	No bulk material that emits dust stored on-site during this reporting period.
N-2697-0-4	31	Continuous	Routine maintenance procedures.	N/A
N-2697-0-4	32	N/A	N/A	No disturbed surface areas in excess of 1000 square feet.
N-2697-0-4	33	N/A	N/A	No paved roads over 3 miles in length nor any unpaved road over ½ mile in length on this site.

Title V – COMPLIANCE CERTIFICATION FORMS – LODI STIG#2 PLANT/LODI ENERGY CENTER

In numerical order list all permitted units that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

Company Name: **Northern California Power Agency**	Facility ID: N-2697
Reporting Period: January 1, 2016 thru December 31, 2016	**Page 3 of 14 Pages**

COLUMN 1 Permit Unit Number	**COLUMN 2** Permit Condition No. Specify each Permit Condition Number Sequentially	**COLUMN 3** Compliance Status During Period: "CONTINUOUS" OR "NOT IN COMPLIANCE"	**COLUMN 4** Method for Determining Compliance Status	**COLUMN 5** Additional Information: Identify each deviation, each possible exception to Compliance and each excursion or exceedance as defined in 40CFR, Part 64.
N-2697-0-4	34	N/A	N/A	No unpaved areas of the facility anticipate more than 75 vehicle trips per day.
N-2697-0-4	35	N/A	N/A	No demolition or renovation performed during this reporting period.
N-2697-0-4	36	Continuous	Reviewed Annual Compliance Certification.	N/A
N-2697-0-4	37	Continuous	Reviewed Title V Permit Renewal Application	Title V Renewal Application submitted on November 26, 2013. Notice of Final Action – Title V Permit Renewal & Approval granted on June 20, 2014.
N-2697-0-4	38	N/A	N/A	N/A
N-2697-0-4	39	N/A	N/A	N/A
N-2697-0-4	40	N/A	N/A	N/A
N-2697-0-4	41	Continuous	Routine operating procedures.	No nuisance complaints received during the reporting period.
N-2697-0-4	42	Continuous	N/A	N/A
STIG #2 Gas Turbine Requirements				
N-2697-1-7	1	Continuous	Routine operating procedures.	N/A
N-2697-1-7	2	Continuous	Reviewed Daily Calibration Reports, Quarterly Audit Reports, RATA Report, CEMS Downtime Reports, and CEMS QA Log.	N/A
N-2697-1-7	3	Continuous	Routine operating and maintenance procedures.	N/A
N-2697-1-7	4	Continuous	Confirmed during construction.	Inspected annually by air district inspector.
N-2697-1-7	5	Continuous	Confirmed during construction.	N/A
N-2697-1-7	6	Continuous	Reviewed District correspondence. Access granted as required.	N/A
N-2697-1-7	7	Continuous	Confirmed annually by air district inspector.	Inspected annually by air district inspector.
N-2697-1-7	8	Continuous	Confirmed during construction.	N/A

San Joaquin Valley
Unified Air Pollution Control District

Title V – COMPLIANCE CERTIFICATION FORMS – LODI STIG#2 PLANT/LODI ENERGY CENTER

In numerical order list all permitted units that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

Company Name: **Northern California Power Agency**	Facility ID: N-2697
Reporting Period: January 1, 2016 thru December 31, 2016	**Page 4 of 14 Pages**

COLUMN 1 Permit Unit Number	**COLUMN 2** Permit Condition No. Specify each Permit Condition Number Sequentially	**COLUMN 3** Compliance Status During Period: "CONTINUOUS" OR "NOT IN COMPLIANCE"	**COLUMN 4** Method for Determining Compliance Status	**COLUMN 5** Additional Information: Identify each deviation, each possible exception to Compliance and each excursion or exceedance as defined in 40CFR, Part 64.
N-2697-1-7	9	Continuous	Confirmed during construction.	N/A
N-2697-1-7	10	Continuous	Confirmed during construction.	N/A
N-2697-1-7	11	Continuous	Review source test report.	N/A
N-2697-1-7	12	Continuous	Confirmed during construction.	N/A
N-2697-1-7	13	Continuous	Confirmed during construction.	N/A
N-2697-1-7	14	Continuous	Confirmed during construction.	N/A
N-2697-1-7	15	Continuous	Reviewed CEMS Downtime Reports.	N/A
N-2697-1-7	16	Continuous	Reviewed Daily Calibration Reports, Quarterly Audit Report, RATA Report, CEMS Downtime Reports, and CEMS QA Log.	N/A
N-2697-1-7	17	Continuous	Reviewed Daily Calibration Reports, Quarterly Audit Report, RATA Report, CEMS Downtime Reports, and CEMS QA Log.	N/A
N-2697-1-7	18	Continuous	Reviewed Daily Calibration Reports, Quarterly Audit Report, RATA Report, CEMS Downtime Reports, and CEMS QA Log.	N/A
N-2697-1-7	19	Continuous	Reviewed CEMS Excess Emissions Reports. Reviewed District correspondence.	No excess NOx emissions during the reporting period.
N-2697-1-7	20	Continuous	Reviewed CEMS Downtime Reports and CEMS QA Log. Reviewed District correspondence.	N/A
N-2697-1-7	21	Continuous	Access granted as required.	N/A
N-2697-1-7	22	N/A	N/A	N/A
N-2697-1-7	23	Continuous	Reviewed DAHS Daily Emissions Reports.	N/A
N-2697-1-7	24	Continuous	Reviewed Operator Log.	N/A
N-2697-1-7	25	Continuous	Reviewed Quarterly CEMS Reports.	N/A
N-2697-1-7	26	Continuous	Reviewed DAHS Daily Operations Reports.	N/A
N-2697-1-7	27	Continuous	Reviewed DAHS Daily Emissions Reports.	N/A

Title V – COMPLIANCE CERTIFICATION FORMS – LODI STIG#2 PLANT/LODI ENERGY CENTER

In numerical order list all permitted units that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

Company Name: **Northern California Power Agency**	Facility ID: N-2697
Reporting Period: January 1, 2016 thru December 31, 2016	**Page 5 of 14 Pages**

COLUMN 1 Permit Unit Number	**COLUMN 2** Permit Condition No. Specify each Permit Condition Number Sequentially	**COLUMN 3** Compliance Status During Period: "CONTINUOUS" OR "NOT IN COMPLIANCE"	**COLUMN 4** Method for Determining Compliance Status	**COLUMN 5** Additional Information: Identify each deviation, each possible exception to Compliance and each excursion or exceedance as defined in 40CFR, Part 64.
N-2697-1-7	28	Continuous	Reviewed DAHS Daily Emissions Reports.	N/A
N-2697-1-7	29	Continuous	Reviewed Daily Calibration Reports.	N/A
N-2697-1-7	30	Continuous	Reviewed Source Test Report.	N/A
N-2697-1-7	31	Continuous	Reviewed DAHS Daily Emissions Reports and DAHS Excess Emissions Report.	N/A
N-2697-1-7	32	Continuous	Reviewed DAHS Daily Emissions Reports and DAHS Excess Emissions Report.	N/A
N-2697-1-7	33	Continuous	Reviewed Source Test Report.	N/A
N-2697-1-7	34	Continuous	Reviewed DAHS Daily Emissions Reports and DAHS Excess Emissions Report.	N/A
N-2697-1-7	35	Continuous	Reviewed DAHS Daily Emissions Reports and DAHS Excess Emissions Report.	N/A
N-2697-1-7	36	Continuous	Reviewed DAHS Daily Emissions Reports and DAHS Excess Emissions Report.	N/A
N-2697-1-7	37	Continuous	Reviewed DAHS Daily Emissions Reports and DAHS Excess Emissions Report.	N/A
N-2697-1-7	38	Continuous	Reviewed Source Test Report.	N/A
N-2697-1-7	39	Continuous	Routine operating procedures. Visible emissions test performed by District staff during annual inspection.	N/A
N-2697-1-7	40	Continuous	Routine operating procedures. Visible emissions test performed by District staff during annual inspection.	N/A
N-2697-1-7	41	Continuous	Reviewed Source Test Report.	N/A
N-2697-1-7	42	Continuous	Reviewed Source Test Report.	N/A
N-2697-1-7	43	Continuous	Confirmed during construction.	N/A
N-2697-1-7	44	Continuous	Reviewed Source Test Protocol.	N/A
N-2697-1-7	45	Continuous	Reviewed Source Test Report.	N/A

San Joaquin Valley
Unified Air Pollution Control District

Title V – COMPLIANCE CERTIFICATION FORMS – LODI STIG#2 PLANT/LODI ENERGY CENTER

In numerical order list all permitted units that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

Company Name: Northern California Power Agency	Facility ID: N-2697
Reporting Period: January 1, 2016 thru December 31, 2016	Page 6 of 14 Pages

COLUMN 1 Permit Unit Number	COLUMN 2 Permit Condition No. Specify each Permit Condition Number Sequentially	COLUMN 3 Compliance Status During Period: "CONTINUOUS" OR "NOT IN COMPLIANCE"	COLUMN 4 Method for Determining Compliance Status	COLUMN 5 Additional Information: Identify each deviation, each possible exception to Compliance and each excursion or exceedance as defined in 40CFR, Part 64.
N-2697-1-7	46	Continuous	Reviewed gas purchase contract.	N/A
N-2697-1-7	47	Continuous	Reviewed Quarterly CEMS Reports.	N/A
N-2697-1-7	48	Continuous	Reviewed DAHS Daily Operations Reports.	N/A
N-2697-1-7	49	Continuous	Reviewed compliance with Conditions #46-58, which constitute the Acid Rain Permit.	N/A
N-2697-1-7	50	Continuous	Reviewed Daily Acid Rain Reports, Daily Calibration Reports, Quarterly Audit Reports, and RATA Report.	N/A
N-2697-1-7	51	N/A	N/A	N/A
N-2697-1-7	52	Continuous	Reviewed Quarterly EDRs and SO2 allowances.	N/A
N-2697-1-7	53	N/A	N/A	N/A
N-2697-1-7	54	Continuous	Reviewed SO2 allowance transactions.	N/A
N-2697-1-7	55	Continuous	Reviewed SO2 allowance transactions.	N/A
N-2697-1-7	56	N/A	N/A	N/A
N-2697-1-7	57	N/A	N/A	N/A
N-2697-1-7	58	N/A	N/A	No excess emissions during this reporting period.
N-2697-1-7	59	N/A	N/A	No excess emissions during this reporting period.
N-2697-1-7	60	Continuous	Reviewed records.	N/A
N-2697-1-7	61	Continuous	Reviewed records.	N/A
N-2697-1-7	62	Continuous	Reviewed Quarterly EDRs.	N/A
N-2697-1-7	63	Continuous	Reviewed records.	N/A
N-2697-1-7	64	N/A	N/A	N/A
N-2697-1-7	65	N/A	N/A	N/A

Title V – COMPLIANCE CERTIFICATION FORMS – LODI STIG#2 PLANT/LODI ENERGY CENTER

In numerical order list all permitted units that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

Company Name: **Northern California Power Agency**	Facility ID: N-2697
Reporting Period: January 1, 2016 thru December 31, 2016	**Page 7 of 14 Pages**

COLUMN 1 Permit Unit Number	**COLUMN 2** Permit Condition No. Specify each Permit Condition Number Sequentially	**COLUMN 3** Compliance Status During Period: "CONTINUOUS" OR "NOT IN COMPLIANCE"	**COLUMN 4** Method for Determining Compliance Status	**COLUMN 5** Additional Information: Identify each deviation, each possible exception to Compliance and each excursion or exceedance as defined in 40CFR, Part 64.
N-2697-1-7	66	N/A	N/A	N/A
Emergency Fire Pump Requirements				
N-2697-4-4	1	Continuous	Routine operating procedures.	N/A
N-2697-4-4	2	Continuous	Routine operating procedures.	N/A
N-2697-4-4	3	Continuous	Routine operating procedures.	N/A
N-2697-4-4	4	Continuous	Confirmed during construction.	N/A
N-2697-4-4	5	Continuous	Reviewed Engine Log.	N/A
N-2697-4-4	6	Continuous	Reviewed Engine Log.	N/A
N-2697-4-4	7	Continuous	Reviewed fuel records.	N/A
N-2697-4-4	8	N/A	N/A	N/A
N-2697-4-4	9	Continuous	Reviewed Maintenance Log.	N/A
N-2697-4-4	10	Continuous	Reviewed Maintenance Log.	N/A
N-2697-4-4	11	Continuous	Reviewed Maintenance Log.	N/A
N-2697-4-4	12	Continuous	Reviewed Maintenance Log.	N/A
N-2697-4-4	13	Continuous	Reviewed Maintenance Log.	N/A
N-2697-4-4	14	Continuous	Reviewed Engine Log.	N/A
N-2697-4-4	15	Continuous	Reviewed Maintenance Log.	N/A
N-2697-4-4	16	Continuous	N/A	N/A
LEC Gas Turbine Requirements				
N-2697-5-3	1	Continuous	Reviewed Operator Logs and Breakdown Reports.	District notified of incidents occurring on January 27 and October 20, 2016. Please review the attached reports for more information.

San Joaquin Valley
Unified Air Pollution Control District

Title V – COMPLIANCE CERTIFICATION FORMS – LODI STIG#2 PLANT/LODI ENERGY CENTER

In numerical order list all permitted units that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

Company Name: **Northern California Power Agency**	Facility ID: N-2697
Reporting Period: January 1, 2016 thru December 31, 2016	**Page 8 of 14 Pages**

COLUMN 1 Permit Unit Number	**COLUMN 2** Permit Condition No. Specify each Permit Condition Number Sequentially	**COLUMN 3** Compliance Status During Period: "CONTINUOUS" OR "NOT IN COMPLIANCE"	**COLUMN 4** Method for Determining Compliance Status	**COLUMN 5** Additional Information: Identify each deviation, each possible exception to Compliance and each excursion or exceedance as defined in 40CFR, Part 64.
N-2697-5-3	2	Continuous	Reviewed Breakdown Reports.	Breakdown Reports submitted for incidents occurring on January 27 and October 20, 2016 as required.
N-2697-5-3	3	Continuous	Reviewed source test report.	N/A
N-2697-5-3	4	Continuous	Access granted as required.	N/A
N-2697-5-3	5	Continuous	Confirmed during commissioning.	N/A
N-2697-5-3	6	Continuous	Reviewed DAHS startup report.	N/A
N-2697-5-3	7	Continuous	Confirmed during commissioning. Routine operating procedure.	N/A
N-2697-5-3	8	Continuous	Confirmed during commissioning.	N/A
N-2697-5-3	9	Continuous	Confirmed during commissioning.	N/A
N-2697-5-3	10	Continuous	Confirmed during commissioning.	N/A
N-2697-5-3	11	Continuous	Confirmed during source testing.	N/A
N-2697-5-3	12	Continuous	Reviewed DAHS emissions report.	N/A
N-2697-5-3	13	Continuous	Reviewed DAHS Daily SU/SD Reports and DAHS Hourly Emissions Reports.	N/A
N-2697-5-3	14	Continuous	Reviewed DAHS Daily SU/SD Reports and DAHS Hourly Emissions Reports.	N/A
N-2697-5-3	15	Continuous	Reviewed DAHS reports.	N/A
N-2697-5-3	16	Continuous	Reviewed DAHS Daily SU/SD Reports, CEMS Downtime Report.	N/A
N-2697-5-3	17	Continuous	Reviewed DAHS Daily SU/SD Reports and DAHS Hourly Emissions Reports.	One deviation of the NOx ppmvd and NOx lb/hr limits occurred on 10/20/16. Please review the breakdown/deviation report for more information.
N-2697-5-3	18	Continuous	Reviewed DAHS reports.	N/A
N-2697-5-3	19	Continuous	Reviewed DAHS Daily Emission Reports and DAHS Excess Emissions Reports.	N/A

Title V – COMPLIANCE CERTIFICATION FORMS – LODI STIG#2 PLANT/LODI ENERGY CENTER

In numerical order list all permitted units that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

Company Name: **Northern California Power Agency**	Facility ID: N-2697
Reporting Period: January 1, 2016 thru December 31, 2016	**Page 9 of 14 Pages**

COLUMN 1 Permit Unit Number	**COLUMN 2** Permit Condition No. Specify each Permit Condition Number Sequentially	**COLUMN 3** Compliance Status During Period: "CONTINUOUS" OR "NOT IN COMPLIANCE"	**COLUMN 4** Method for Determining Compliance Status	**COLUMN 5** Additional Information: Identify each deviation, each possible exception to Compliance and each excursion or exceedance as defined in 40CFR, Part 64.
N-2697-5-3	20	Continuous	Reviewed DAHS Daily Emission Reports and DAHS Excess Emissions Reports.	N/A
N-2697-5-3	21	Continuous	Reviewed DAHS Daily Emission Reports and DAHS Excess Emissions Reports.	N/A
N-2697-5-3	22	Continuous	N/A	N/A
N-2697-5-3	23	Continuous	Reviewed DAHS Quarterly Emissions Reports.	N/A
N-2697-5-3	24	Continuous	Reviewed DAHS Quarterly Emissions Reports.	N/A
N-2697-5-3	25	Continuous	Reviewed DAHS Quarterly Emissions Reports.	N/A
N-2697-5-3	26	Continuous	Reviewed DAHS Quarterly Emissions Reports.	N/A
N-2697-5-3	27	Continuous	Reviewed DAHS Quarterly Emissions Reports.	N/A
N-2697-5-3	28	Continuous	Reviewed DAHS Quarterly Emissions Reports.	N/A
N-2697-5-3	29	Continuous	Reviewed DAHS Quarterly Emissions Reports.	N/A
N-2697-5-3	30	Continuous	Confirmed during commissioning.	N/A
N-2697-5-3	31	Continuous	Confirmed during commissioning.	N/A
N-2697-5-3	32	Continuous	Reviewed Source Test Report.	N/A
N-2697-5-3	33	Continuous	Reviewed Source Test Report.	N/A
N-2697-5-3	34	Continuous	Reviewed Source Test Report.	Next startup source test due in 2019.
N-2697-5-3	35	Continuous	Reviewed Source Test Report.	N/A
N-2697-5-3	36	Continuous	Reviewed PG&E Gas Purchased Contract	As part of the annual source test, the natural gas supply is sampled and tested to verify sulfur content.
N-2697-5-3	37	Continuous	Reviewed Source Test Report.	N/A
N-2697-5-3	38	Continuous	Reviewed Source Test Report.	N/A

San Joaquin Valley
Unified Air Pollution Control District

Title V – COMPLIANCE CERTIFICATION FORMS – LODI STIG#2 PLANT/LODI ENERGY CENTER

In numerical order list all permitted units that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

Company Name: **Northern California Power Agency**	Facility ID: N-2697
Reporting Period: January 1, 2016 thru December 31, 2016	**Page 10 of 14 Pages**

COLUMN 1 Permit Unit Number	**COLUMN 2** Permit Condition No. Specify each Permit Condition Number Sequentially	**COLUMN 3** Compliance Status During Period: "CONTINUOUS" OR "NOT IN COMPLIANCE"	**COLUMN 4** Method for Determining Compliance Status	**COLUMN 5** Additional Information: Identify each deviation, each possible exception to Compliance and each excursion or exceedance as defined in 40CFR, Part 64.
N-2697-5-3	39	Continuous	Reviewed Source Test Report.	N/A
N-2697-5-3	40	Continuous	Confirmed during commissioning.	A fuel flow meter meeting the requirements of Appendix D to Part 75 is used to measure fuel flow rate.
N-2697-5-3	41	Continuous	Confirmed during commissioning.	N/A
N-2697-5-3	42	Continuous	Confirmed during commissioning.	N/A
N-2697-5-3	43	Continuous	Confirmed during commissioning & pre-operational source testing reports.	N/A
N-2697-5-3	44	Continuous	Reviewed DAHS Daily Emission Reports.	N/A
N-2697-5-3	45	Continuous	Reviewed DAHS CGA/Linearity reports.	Quarterly CGA/Linearity reports are submitted to the Air District.
N-2697-5-3	46	Continuous	Reviewed Source Test Report.	N/A
N-2697-5-3	47	Continuous	Reviewed DAHS CGA/Linearity reports.	Quarterly CGA/Linearity reports are submitted to the Air District.
N-2697-5-3	48	Continuous	As Needed.	N/A
N-2697-5-3	49	Continuous	CEMS will alarm if District's polling equipment becomes unavailable for any reason. Facility will fix polling equipment issues as required.	On 1/27/16 the CEMS polling system halted between 02:15-02:50. The system was rebooted and started working normally 15 minutes later. Please see the attached report for more information.
N-2697-5-3	50	Continuous	Reviewed Operator Log, Source Test Report, Daily Calibration Reports, Quarterly Audit Reports, RATA Report, CEMS Downtime Reports, and CEMS QA Log.	N/A
N-2697-5-3	51	Continuous	Confirmed during commissioning.	N/A
N-2697-5-3	52	Continuous	Reviewed DAHS Downtime Reports.	N/A

Title V – COMPLIANCE CERTIFICATION FORMS – LODI STIG#2 PLANT/LODI ENERGY CENTER

In numerical order list all permitted units that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

Company Name: Northern California Power Agency	Facility ID: N-2697
Reporting Period: January 1, 2016 thru December 31, 2016	Page 11 of 14 Pages

COLUMN 1 Permit Unit Number	**COLUMN 2** Permit Condition No. Specify each Permit Condition Number Sequentially	**COLUMN 3** Compliance Status During Period: "CONTINUOUS" OR "NOT IN COMPLIANCE"	**COLUMN 4** Method for Determining Compliance Status	**COLUMN 5** Additional Information: Identify each deviation, each possible exception to Compliance and each excursion or exceedance as defined in 40CFR, Part 64.
N-2697-5-3	53	Continuous	Reviewed Operator Log, Source Test Report, Daily Calibration Reports, Quarterly Audit Reports, RATA Report, CEMS Downtime Reports, and CEMS QA Log.	N/A
N-2697-5-3	54	Continuous	Reviewed Daily Calibration Reports, Quarterly Audit Report, RATA Report, CEMS Downtime Reports, and CEMS QA Log.	N/A
N-2697-5-3	55	Continuous	Reviewed Operator Log, Source Test Report, Daily Calibration Reports, Quarterly Audit Reports, RATA Report, CEMS Downtime Reports, and CEMS QA Log.	N/A
N-2697-5-3	56	Continuous	Reviewed records.	N/A
N-2697-5-3	57	Continuous	Reviewed Quarterly CEMS Reports.	N/A
N-2697-5-3	58	Continuous	Reviewed NOx Correlation.	NOx correlation submitted on November 22, 2013.
N-2697-5-3	59	Continuous	Confirmed during commission.	N/A
N-2697-5-3	60	Continuous	Reviewed DAHS records.	N/A
N-2697-5-3	61	Continuous	Reviewed records.	N/A
N-2697-5-3	62	Continuous	Reviewed records.	N/A
N-2697-5-3	63	Continuous	Reviewed records.	N/A
N-2697-5-3	64	Continuous	Reviewed SO2 allowance transactions.	N/A
N-2697-5-3	65	Continuous	Reviewed SO2 allowance transactions.	N/A
N-2697-5-3	66	N/A	N/A	N/A
N-2697-5-3	67	N/A	N/A	N/A
N-2697-5-3	68	N/A	N/A	N/A
N-2697-5-3	69	N/A	N/A	N/A
N-2697-5-3	70	Continuous	Reviewed records.	N/A

Title V – COMPLIANCE CERTIFICATION FORMS – LODI STIG#2 PLANT/LODI ENERGY CENTER

In numerical order list all permitted units that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

Company Name: **Northern California Power Agency**	Facility ID: N-2697
Reporting Period: January 1, 2016 thru December 31, 2016	**Page 12 of 14 Pages**

COLUMN 1 Permit Unit Number	**COLUMN 2** Permit Condition No. Specify each Permit Condition Number Sequentially	**COLUMN 3** Compliance Status During Period: "CONTINUOUS" OR "NOT IN COMPLIANCE"	**COLUMN 4** Method for Determining Compliance Status	**COLUMN 5** Additional Information: Identify each deviation, each possible exception to Compliance and each excursion or exceedance as defined in 40CFR, Part 64.
N-2697-5-3	71	Continuous	Reviewed records.	N/A
N-2697-5-3	72	N/A	Reviewed Quarterly EDRs.	N/A
Cooling Tower Requirements				
N-2697-6-1	1	Continuous	Reviewed Operator Logs and Breakdown Reports.	No breakdowns during reporting period.
N-2697-6-1	2	Continuous	Reviewed Operator Logs and Breakdown Reports.	No breakdowns during reporting period.
N-2697-6-1	3	Continuous	Routine operating procedures. Visible emissions test performed by District staff during annual inspection.	N/A
N-2697-6-1	4	Continuous	Reviewed laboratory analytical results.	N/A
N-2697-6-1	5	Continuous	Routine operating procedures.	N/A
N-2697-6-1	6	Continuous	Reviewed PM10 emission calculations.	N/A
N-2697-6-1	7	Continuous	Reviewed PM10 emission calculations.	N/A
N-2697-6-1	8	Continuous	Review laboratory analytical results.	N/A
Auxiliary Boiler Requirements				
N-2697-7-1	1	Continuous	Routine operating and maintenance procedures.	N/A
N-2697-7-1	2	Continuous	Routine operating procedures.	N/A
N-2697-7-1	3	Continuous	Confirmed PG&E Gas PUC-regulated natural gas.	N/A
N-2697-7-1	4	Continuous	Confirmed during construction.	N/A
N-2697-7-1	5	Continuous	Reviewed Operator Logs and Breakdown Reports.	No breakdowns during reporting period.
N-2697-7-1	6	Continuous	Reviewed Breakdown Reports.	No breakdowns during reporting period.
N-2697-7-1	7	Continuous	Review monthly monitoring data and Source Test Report.	N/A
N-2697-7-1	8	Continuous	Review monthly monitoring data and Source Test Report.	N/A

Title V – COMPLIANCE CERTIFICATION FORMS – LODI STIG#2 PLANT/LODI ENERGY CENTER

In numerical order list all permitted units that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

Company Name: **Northern California Power Agency**	Facility ID: N-2697
Reporting Period: January 1, 2016 thru December 31, 2016	**Page 13 of 14 Pages**

COLUMN 1 Permit Unit Number	**COLUMN 2** Permit Condition No. Specify each Permit Condition Number Sequentially	**COLUMN 3** Compliance Status During Period: "CONTINUOUS" OR "NOT IN COMPLIANCE"	**COLUMN 4** Method for Determining Compliance Status	**COLUMN 5** Additional Information: Identify each deviation, each possible exception to Compliance and each excursion or exceedance as defined in 40CFR, Part 64.
N-2697-7-1	9	Continuous	Routine operating procedures.	N/A
N-2697-7-1	10	Continuous	Routine operating procedures.	N/A
N-2697-7-1	11	Continuous	Routine operating procedures.	N/A
N-2697-7-1	12	Continuous	Review monthly emission calculations.	N/A
N-2697-7-1	13	Continuous	Review monthly emission calculations.	N/A
N-2697-7-1	14	Continuous	Review monthly emission calculations.	N/A
N-2697-7-1	15	Continuous	Review monthly emission calculations.	N/A
N-2697-7-1	16	Continuous	Review monthly emission calculations.	N/A
N-2697-7-1	17	Continuous	Review monthly emission calculations for auxiliary boiler and DAHS Monthly Emission Reports for gas turbine.	N/A
N-2697-7-1	18	Continuous	Routine operating procedures.	N/A
N-2697-7-1	19	Continuous	Review Source Test Report.	N/A
N-2697-7-1	20	Continuous	Review Source Test Protocol.	N/A
N-2697-7-1	21	Continuous	Review Source Test Plan and Source Test Report.	N/A
N-2697-7-1	22	Continuous	Review Source Test Report.	N/A
N-2697-7-1	23	Continuous	Review Source Test Report.	N/A
N-2697-7-1	24	Continuous	Review Source Test Report.	N/A
N-2697-7-1	25	Continuous	Review Source Test Report.	N/A
N-2697-7-1	26	Continuous	Review Source Test Report.	N/A
N-2697-7-1	27	Continuous	Review Annual Source Test/RATA Report for LEC gas turbine.	N/A
N-2697-7-1	28	Continuous	Review Annual Source Test/RATA Report for LEC gas turbine.	N/A

San Joaquin Valley
Unified Air Pollution Control District

Title V = COMPLIANCE CERTIFICATION FORMS – LODI STIG#2 PLANT/LODI ENERGY CENTER

In numerical order list all permitted units that are subject to one or more applicable requirements. List all requirements for a permit, each in a separate box, before moving on to the next permit number. Refer to the attached instructions for more information.

Company Name: **Northern California Power Agency**	Facility ID: N-2697
Reporting Period: January 1, 2016 thru December 31, 2016	**Page 14 of 14 Pages**

COLUMN 1 Permit Unit Number	**COLUMN 2** Permit Condition No. Specify each Permit Condition Number Sequentially	**COLUMN 3** Compliance Status During Period: "CONTINUOUS" OR "NOT IN COMPLIANCE"	**COLUMN 4** Method for Determining Compliance Status	**COLUMN 5** Additional Information: Identify each deviation, each possible exception to Compliance and each excursion or exceedance as defined in 40CFR, Part 64.
N-2697-7-1	29	Continuous	Review monthly monitoring data.	N/A
N-2697-7-1	30	N/A	N/A	No excess emissions were measured during the reporting period.
N-2697-7-1	31	Continuous	Routine compliance procedures.	N/A
N-2697-7-1	32	Continuous	Review monitoring records.	N/A
N-2697-7-1	33	Continuous	Review fuel use records.	N/A
N-2697-7-1	34	Continuous	Review records.	N/A
N-2697-7-1	35	Continuous	Review records.	N/A

October 28, 2016

Rhonda Mansur
Air Quality Inspector II
Northern Region Compliance Office
San Joaquin Valley Unified Air Pollution Control District
4800 Enterprise Way
Modesto, CA 95356

Re: Northern California Power Agency, Lodi Energy Center, Permit No. N-2697-5-3
Deviation Report for October 20, 2016 Breakdown of Heat Recovery Steam Generator (HRSG)

Dear Ms. Mansur:

On October 21, 2016, I informed Jessica Mohatt, Air Quality District Inspector, by email that Unit N-2697-5-3 failed its annual source test and RATA, which occurred the previous day between the hours of 1400 through 2200. The failed source test resulted in exceedances of the NO_x, ppm dry @ 15% O_2 and NO_x lb/hr (as NO_2) limits of Condition 17 of the Permit. No other emission limits were exceeded. Excess NO_x emissions during the breakdown are summarized in Table 1.

Table 1
Excess NO_x Emissions During Source Testing
October 20, 2016

Compliance Run 1 / 1408 – 1454	
Measured NO_x ppm @ 15% O_2	2.36
Permitted NO_x ppm @ 15% O_2	2.00
Excess NO_x ppm @ 15% O_2	0.36
Measured NO_x, lb/hr as NO_2	16.31
Permitted NO_x, lb/hr as NO_2	15.54
Excess NO_x lb/hr as NO_2	0.77
Compliance Run 2 / 1505 – 1549	
Measured NO_x ppm @ 15% O_2	2.30
Permitted NO_x ppm @ 15% O_2	2.00
Excess NO_x ppm @ 15% O_2	0.30
Measured NO_x, lb/hr as NO_2	15.86
Permitted NO_x, lb/hr as NO_2	15.54
Excess NO_x lb/hr as NO_2	0.32

The source tester performed stratification determination using a four-point traverse from four ports on the stack to assure acquisition of representative samples, for a total of 16 traverse points. The stratification test indicated the stack was severely stratified at approximately 30% with NO_x ppm readings in the ranges of 1.979 - 3.489 ppm. The allowable limit of each traverse point is 10% of the mean. This stratification problem caused the Unit to fail the compliance stack test on both Runs 1 and 2. Per District Rule 1081, "If two (2) of three (3) runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit."

After completing the first two runs and the emissions data showed that the Unit exceeded the NO_x emissions limit, the test runs were completed to document the failure. Once the 2nd test run was completed, indicating a failed emissions test, corrective actions were made to the emissions control system to increase ammonia injection to reduce stack NO_x emissions. No other adjustments were made to process or to control equipment, and the source test was not discontinued due to the emissions failure of the first two runs. The Unit operated in emissions compliance from Runs 3 through 10, and no other emissions limits were exceeded.

After allowing the Heat Recovery Steam Generator (HRSG) to cool down for safe entry, NCPA inspected the HRSG on Saturday October 22 at 0826 - 0935. The inspection revealed several areas of the HRSG to be heavily fouled with insulation and ammonia salt deposits that restricted flue gas flow, creating the severe stack stratification mentioned above.

We have determined that the NO_x exceedance was the result of several factors that were beyond the control of NCPA, including fouled HRSG Evaporators 1, Evaporator 2, and CO catalyst as a result of failed floor casings that ripped loose and allowed insulation to be sucked into the flue gas stream. This failure occurred in late 2015 and was corrected at that time. The accessible insulations that were liberated were removed from the tube bundles and the CO catalyst at that time and also during several outages since then as well. The last cleaning of insulation occurred during the May 2016 outage. The problem is the liberated insulation fibers attaches deeply into the finned-tube bundles and is difficult to remove. It has worked its way from the HRSG inlet, to the reheaters and superheaters sections and now has appeared at Evaporators 1, 2 and blinding various sections of the CO catalyst, where it is currently reachable for removal.

Additionally, the tube sections downstream of the SCR catalyst were fouled with ammonium salt deposits. These included both Preheaters 1 and 2. These salt deposits were observed during the 2015 inspection, but weren't enough to warrant removal. Indicators such as gas turbine back pressure, plant heat rate, steam production, and stack temperature all indicated we can continue to monitor and plan an outage to clean these salt deposits. Comparing the inspection of the outage in May 2016 to October 22, 2016 inspection, there were exponential increases in salt deposits.

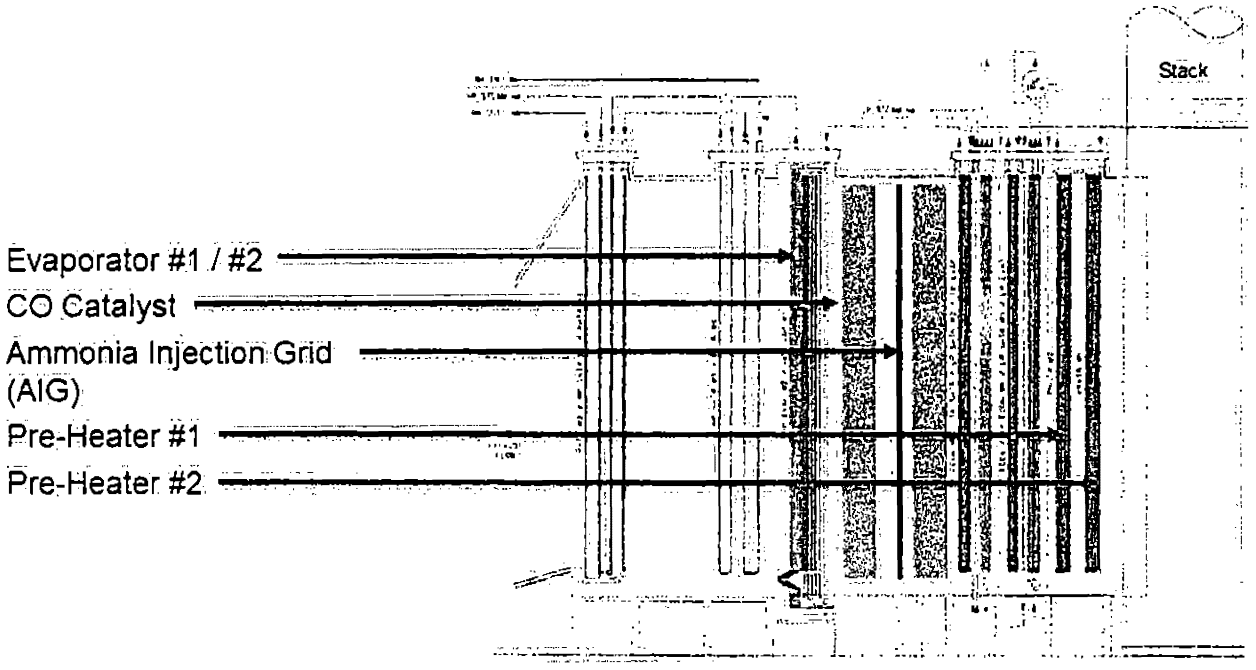
Flowing gases in the HRSG are generally well-mixed prior to exiting the stack, but stratification occurred due to insulation liberation and ammonium salt buildup as described above, which disrupted normal flue gas flow patterns. These events qualify as breakdowns under Rule 1100 because they were unforeseeable failures or malfunctions of equipment related to air pollution

control equipment, which caused a violation of an emissions limitation, and the failures or malfunctions:

- Were not the result of neglect or disregard for any air pollution control law, rule or regulation;
- Were not intentional or the result of negligence;
- Were not the result of improper maintenance;
- Did not constitute a nuisance; and
- Were not recurrent breakdowns of the same equipment.

The breakdown and the actions taken to correct the occurrences and prevent their recurrence are described in more detail below.

- HRSG gas-side cleaning by CO_2 pellet blasting of the following sections: Evaporator #1, Evaporator #2, CO catalyst, Ammonia Injection Grid (AIG), Preheaters 1 and 2.



- AIG tuning. The inspection revealed heavy salt deposits on the easternmost tube bundles, downstream of the SCR catalyst. The AIG grid will be checked for uneven flow distribution (balancing) and adjustments will be made as needed. If the ammonia is not properly distributed throughout the exhaust gas, some parts will be over treated resulting in higher ammonia slip. Conversely, under treating parts will result in poor NO_x reduction.

- Evaluate the need to replace the stack probe with a multi-point grid probe. Designers of the CEMS system specified a single-point stack probe for emissions monitoring. In this instance didn't work well because of stratification across the large circular cross section

of the exhaust stack. NCPA, at this time, is exploring the replacement of the single-point probe to a multi-point grid probe, which will give a move accurate indication of emissions.

- Evaluate stratification monitoring of the stack via a portable NOx analyzer.

A deviation/breakdown form is attached. If you have any questions, please do not hesitate to call.

Sincerely,

Vinnie Venethongkham
LEC Compliance Manager

Attachments:
Title V - Deviation Reporting Form / Breakdown Report
Photos of Before / After CO_2 Pellet Cleaning
2016 LEC Gaseous Emissions Compliance Spreadsheet
2016 LEC RATA Spreadsheet
Emails

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING

TITLE V - DEVIATION REPORTING FORM / BREAKDOWN REPORT

Company Name: NORTHERN CALIFORNIA POWER AGENCY Facility ID: N-2697-5-3

Reporting Period: October 20, 2016 -through- October 20, 2016

CERTIFICATION:

I declare, under penalty of perjury under the laws of the state of California, that, based on information and belief formed after reasonable inquiry, all information provided in this reporting package is true, accurate, and addresses all deviations during the reporting period:

Signature of Responsible Official	Date: 10/31/2016
VINNIE VENETHONGKHAM	(209) 210-5009
Name of Responsible Official (please print)	Telephone
COMPLIANCE MANAGER	vinnie.venethongkham@ncpa.com
Title of Responsible Official (please print)	Email

Use this two-sided form to report deviations from permit requirements for which breakdown relief was also requested. Return completed form to the Compliance Division at your Regional District office within 10 days after the deviation condition was discovered.

DEVIATION / BREAKDOWN INFORMATION

1. Permit unit and condition number(s):
N-2697-5-3, Condition 17

2. Equipment involved:
HRSG CO Catalyst, Ammonia Injection Grid, and various Tube Bundles

3. Location of property:
12745 N. THORNTON ROAD, LODI, CA 95242

4. Description of permit condition:
"Except during startup, shutdown and combustor tuning periods, emissions from the gas turbine system shall not exceed any of the following limits: NOx (as N02)- 15.54 lb/hr and 2.0 ppmvd@ 15% 02; CO- 9.46 lb/hr and 2.0 ppmvd @ 15% 02; ... NOx (as N02) emission limits are based on 1-hour rolling average period."

5. Date, time and duration of deviation:
Date: 10/20/2016
Time: 1408 - 1549
Duration: 1 hour 57 minutes

6. Description of deviation: (include excess and visible emissions if applicable):

The Lodi Energy Center Permit No. N-2697-5-3 failed its annual source test and RATA on October 20, 2016 between the hours of 1408 - 1549. The failed source test resulted in exceedances of the NOx, ppm dry @ 15% O2 and NOx lb/hr (as NO2) limits of Condition 17 of the Permit. No other emission limits were exceeded.

7. Date and time when deviation was discovered:

Date: 10/20/2016, Time: 1549 at the end of the compliance run #2. Cause of deviation was discovered on 10/22/2016 at 1035 after HRSG inspection. Please see the cover letter for more detailed explanation.

8. Time corrective action commenced and time corrective action successful:

Corrective action commences on 10/20/2016 at 1550.

9. Probable cause of deviation:

The source tester performed stratification determination of the stack and found the stack to be severely stratified at approximately 30% with NOx readings in the ranges of 1.979 - 3.489 ppm. After inspection of the HRSG on October 22 at 1035, the probable cause of the deviation was determined to be insulation and ammonium salt fouling of multiple areas within the HRSG, including the CO catalyst and numerous finned tube bundles. This fouling restricted flue gas flow and caused the stratification issues and subsequent emissions deviations.

10. Measures taken to correct this occurrence and prevent its recurrence:

1. HRSG gas-side cleaning by CO2 pellet blasting of the following sections: Evaporator #1, Evaporator #2, CO catalyst, Ammonia Injection Grid (AIG), Preheaters 1 and 2.
2. AIG tuning. The inspection revealed heavy deposits on the eastemmost tube bundles, downstream of the SCR catalyst. The AIG grid will be checked for uneven flow distribution (balancing) and adjustments will be made as needed.
3. Evaluate the replacement of the stack probe with a multi-point grid probe. Designers of the CEMS system specified a single-point stack probe for emissions monitoring.
4. Evaluate stratification monitoring of the stack via a portable NOx analyzer until replacement to a multi-point grid probe can be completed.

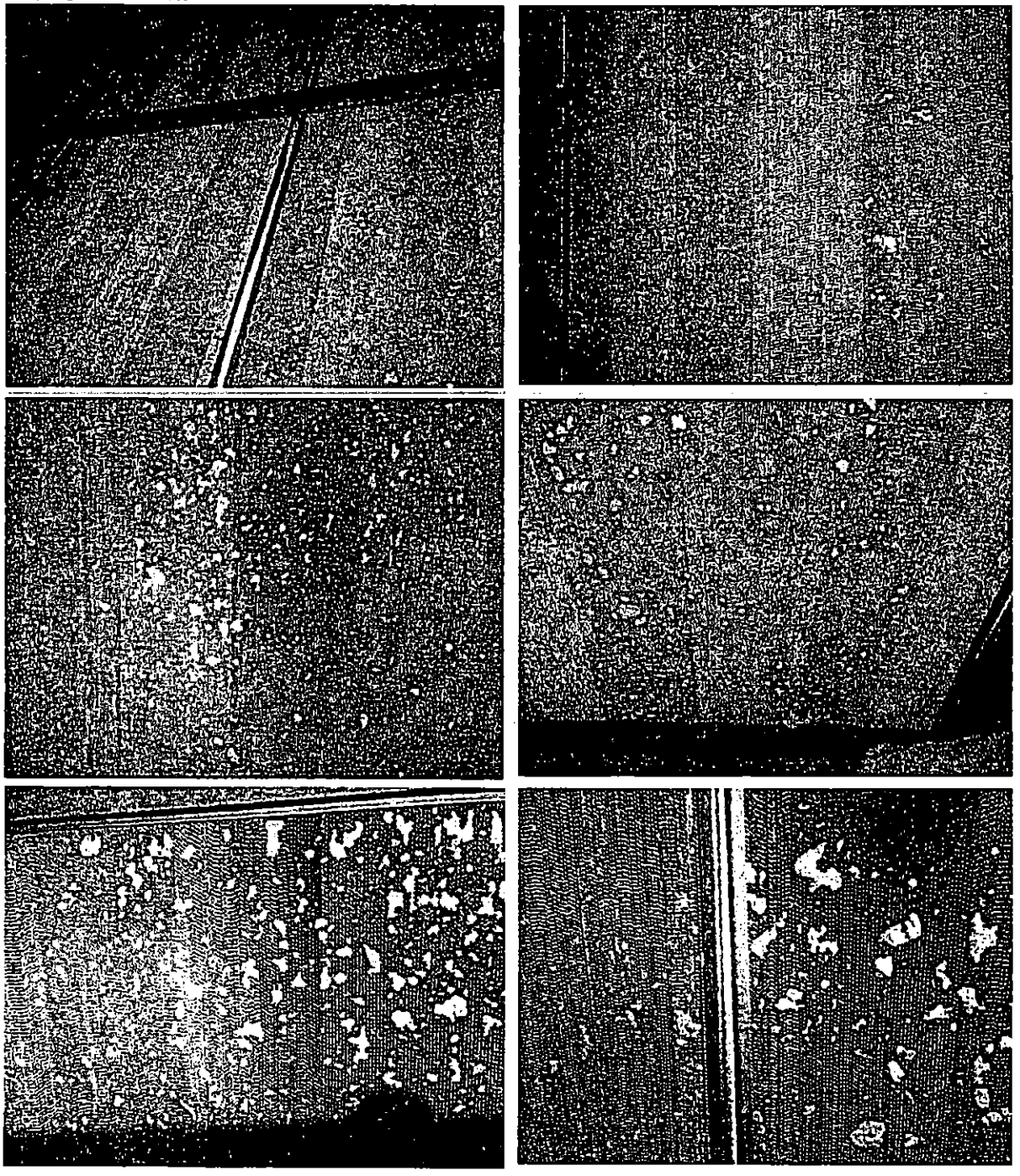
- Attach photographs of defective equipment.
- Provide any additional information necessary to establish that this occurrence was the result of an unavoidable failure or malfunction – Rule 1100 assigns the burden of proof to the source operator seeking exemption from legal action. An exception cannot be granted for an occurrence that was the result of negligence.

Initial Notification:

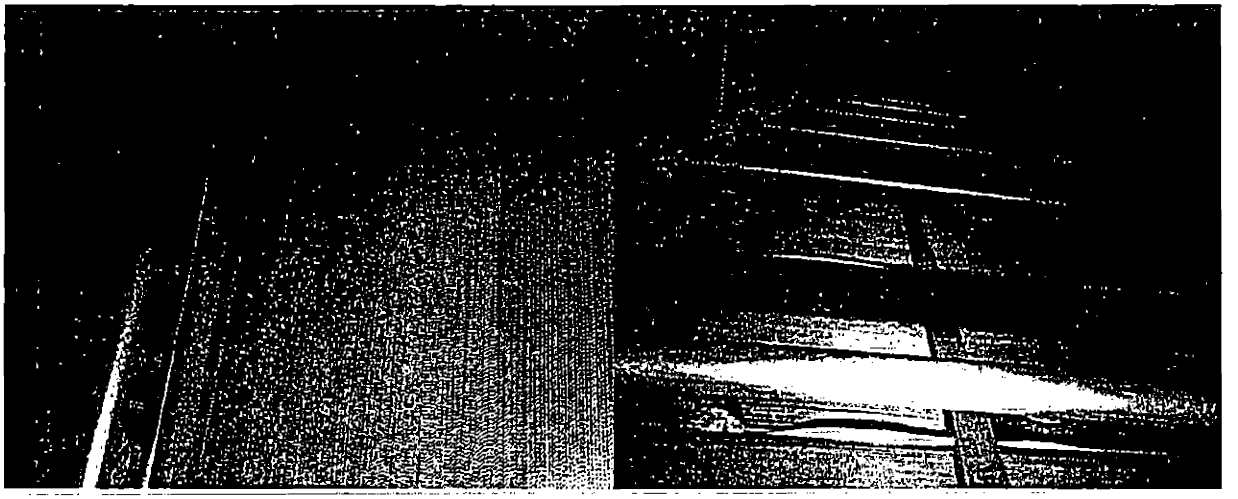
Reported by: Vinnie Venethongkham Date: 10/21/2016

Reported to: Jessica Mohatt Time: 10/21/16 at 1041

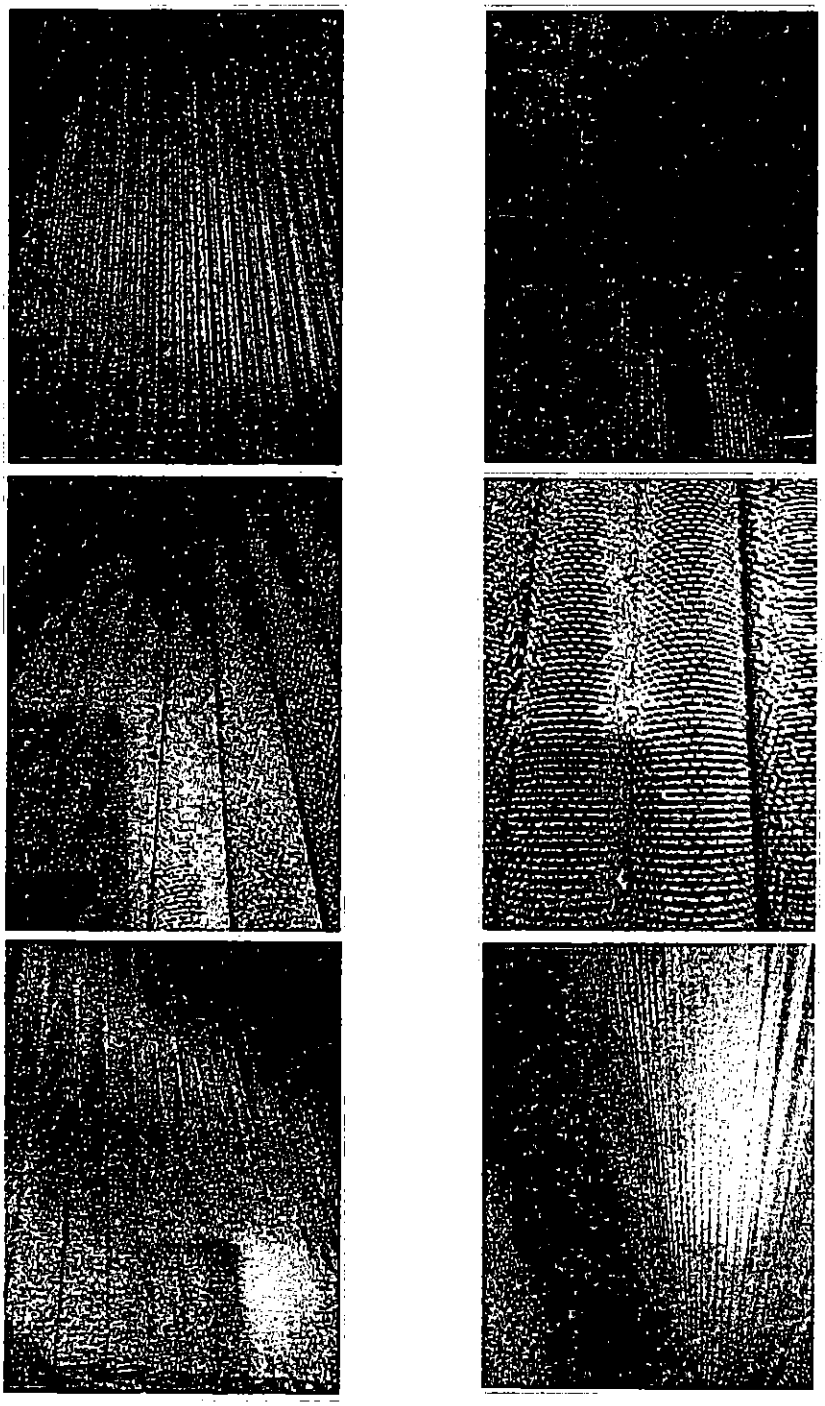
Insulation from Liner Failure adhering to CO Catalyst (INLET)
Photos Before Cleaning



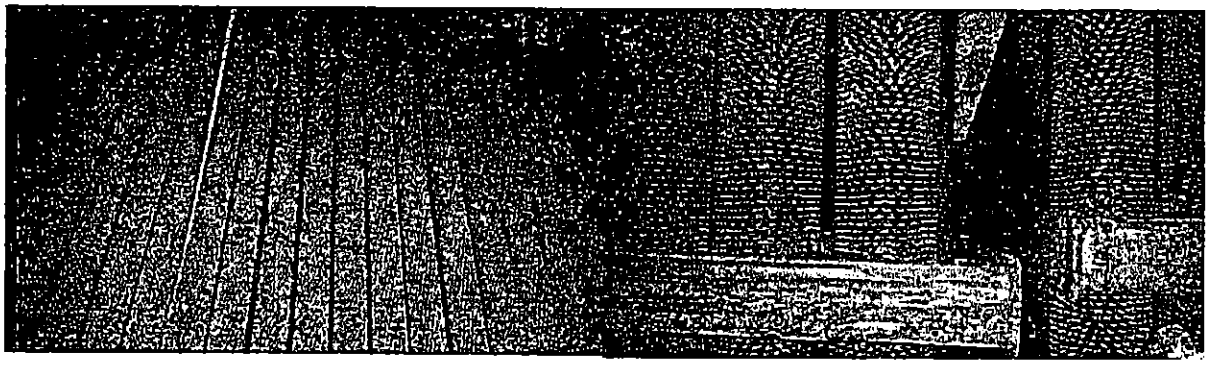
Photos of CO Catalyst After Cleaning

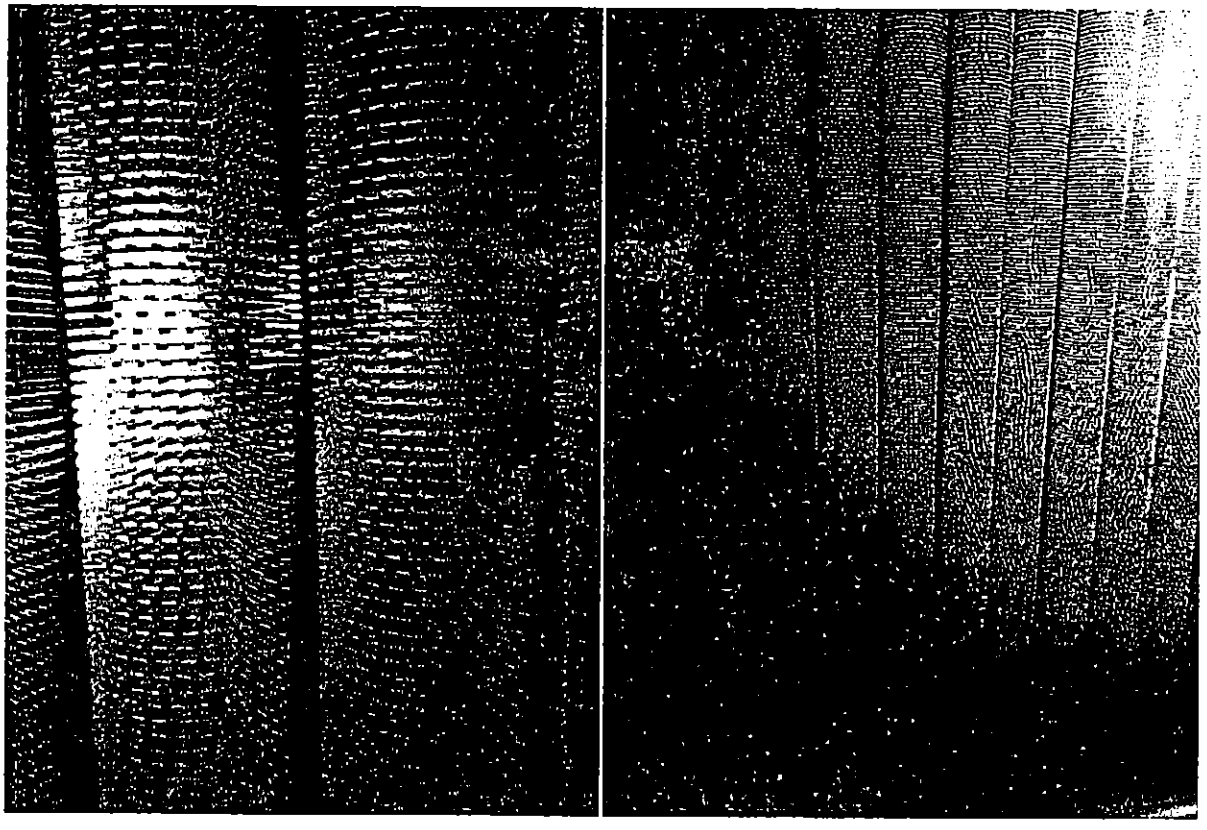


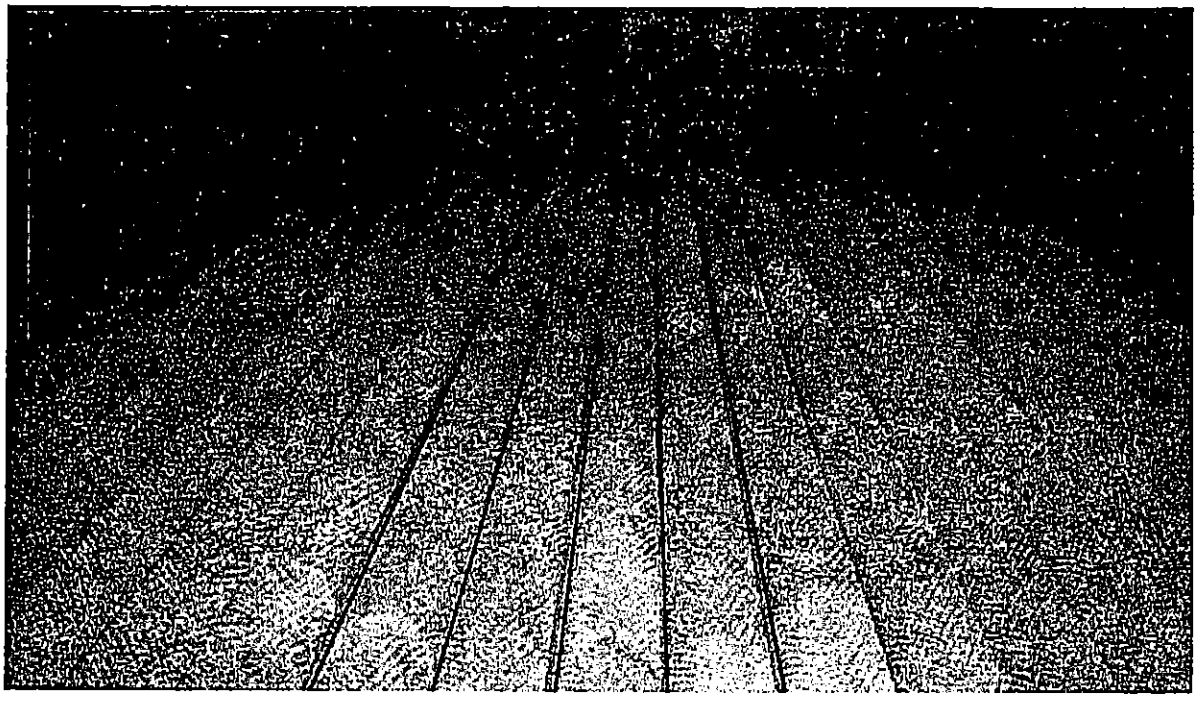
Ammonia Salt Deposits on Preheaters 1 & 2 Finned Tubes (Downstream of SCR Catalyst)
Photos Before Cleaning



Photos of Preheaters 1 & 2 Finned Tubes After Cleaning







GASEOUS EMISSIONS COMPLIANCE
NCPA LODI
LODI ENERGY CENTER

Test No.	Compliance Run 1 Run 1	Compliance Run 2 Run 2	Compliance Run 3 Run 3	Average
Date	10/20/16	10/20/16	10/20/16	--
Start Time	1408-1454	1505-1549	1702-1747	--
Unit load, MW	181.0	180.0	180.0	**180.3**
Unit fuel flow @ 60 °F, scfh	1,840,390	1,833,180	1,835,140	**1,836,237**
O2, % volume dry	13.88	13.88	13.69	**13.82**
CO2, % volume dry	4.01	4.02	4.11	**4.05**
Stack flow rate - based on fuel, dscfm	799,016	795,886	775,741	**790,214**
CO, ppm volume dry	0.19	0.19	0.19	**0.19**
CO, ppm dry @ 15% O2	0.16	0.16	0.16	**0.16**
CO, lb/hr	0.686	0.684	0.666	**0.679**
CO, lb/day (24 hours)	16.47	16.41	15.99	**16.29**
CO, lb/MMBtu	0.0004	0.0004	0.0004	**0.0004**
NOX, ppm volume dry	2.81	2.74	1.54	**2.36**
NOX, ppm dry @ 15% O2	2.36	2.30	1.26	**1.97**
NOX, lb/hr as NO2	16.309	15.857	8.701	**13.623**
NOX, lb/day (24 hours) as NO2	391.42	380.58	208.84	**326.95**
NOX, lb/MMBtu as NO2	0.0087	0.0085	0.0046	**0.0073**

RELATIVE ACCURACY TEST AUDIT DETERMINATION
NCPA LODI
LODI ENERGY CENTER

Test No.	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Run 7	Run 8	Run 9	Run 10	Average
Date	**10/20/16**	**10/20/16**	**10/20/16**	**10/20/16**	**10/20/16**	**10/20/16**	**10/20/16**	**10/20/16**	**10/20/16**	**10/20/16**	**Runs 1-10**
Start Time	**1408-1454**	**1505-1549**	**1702-1747**	**1756-1842**	**1851-1921**	**1931-2001**	**2009-2039**	**2009-2039**	**2046-2116**	**2124-2154**	--
Reference temperature, °F	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	**60.00**
Barometric pressure, in. Hg	30.14	30.14	30.14	30.14	30.14	30.14	30.14	30.14	30.14	30.14	**30.14**
Unit load, MW	181	180	180	181	183	185	186	186	187	187	**184**
Unit fuel flow @ 60 °F, scfh	1,840,390	1,833,180	1,835,140	1,841,580	1,857,680	1,873,780	1,877,040	1,880,370	1,887,020	1,888,590	**1,861,477**
"F_d" factor @ 68 °F, dscf/MMBtu	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	8,710	**8,710**
"F_d" factor @ T_{ref} °F, dscf/MMBtu	8,578	8,578	8,578	8,578	8,578	8,578	8,578	8,578	8,578	8,578	**8,578**
HHV @ 60 °F, btu/scf	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	1,020	**1,020**
Stack flow rate - based on fuel, dscfm	799,016	795,886	775,741	860,847	812,308	824,078	811,460	808,314	823,956	835,413	814,702
O_2, % volume dry	13.88	13.88	13.69	14.38	13.93	13.97	13.85	13.81	13.92	14.01	**13.93**
CO_2, % volume dry	4.01	4.02	4.11	3.68	3.95	3.97	4.00	3.96	4.04	4.01	**3.97**
CO, ppm volume dry	*0.194*	*0.194*	*0.194*	*0.194*	*0.194*	*0.194*	*0.194*	*0.194*	*0.194*	*0.194*	**0.194**
CO, ppm dry @ 15% O_2	*0.163*	*0.163*	*0.159*	*0.176*	*0.164*	*0.165*	*0.162*	*0.161*	*0.164*	*0.166*	**0.164**
CO, lb/hr	*0.686*	*0.684*	*0.666*	*0.740*	*0.698*	*0.708*	*0.697*	*0.694*	*0.708*	*0.718*	**0.700**
CO, lb/day (24 hours)	*16.475*	*16.410*	*15.995*	*17.750*	*16.749*	*16.992*	*16.731*	*16.667*	*16.989*	*17.225*	**16.798**
CO, lb/MMBtu	*0.0004*	*0.0004*	*0.0004*	*0.0004*	*0.0004*	*0.0004*	*0.0004*	*0.0004*	*0.0004*	*0.0004*	**0.000**
NO_X, ppm volume dry	2.806	2.739	1.542	1.381	1.506	1.297	1.366	1.230	1.288	1.212	**1.637**
NO_X, ppm dry @ 15% O_2	2.358	2.302	1.262	1.250	1.275	1.104	1.143	1.024	1.089	1.038	**1.384**
NO_X, lb/hr as NO_2	16.309	15.857	8.701	8.648	8.899	7.775	8.063	7.232	7.720	7.365	**9.657**
NO_X, lb/day (24 hours) as NO_2	391.423	380.580	208.835	207.550	213.574	186.600	193.518	173.575	185.277	176.769	**231.770**
NO_X, lb/MMBtu as NO_2	0.009	0.008	0.005	0.005	0.005	0.004	0.004	0.004	0.004	0.004	**0.005**

From: Vinnie Venethongkham
To: "Jessica Mohatt"
Cc: Lori Sheridan; Vinnie Venethongkham
Subject: RE: NCPA RATA
Date: Thursday, October 27, 2016 10:22:00 AM
Attachments: image001.png
2016-10-27_LEC_AIG_Tuning_RATA_Retest.pdf
Importance: High

Hi Jessica,

I just wanted to keep you updated on the status of the HRSG cleaning. We will be done with this activity on Saturday 10/29. Please see the attachment for the sections we cleaned as well as a RATA retest timeline. Is the tuning event followed by the RATA acceptable to the district? This needs to be done to bring the unit into compliance.

We will be using Aeros Environmental for the retest due to the unavailability of Montrose (Avogadro) on Monday. We wanted to retest right away to have our unit available. I do have a question for you. For the testing protocol, can I use a letter and reference the first test protocol since we will be repeating all the same parameters?

Looking forward to your reply.

Thank you,
Vinnie

From: Jessica Mohatt [mailto:Jessica.Mohatt@valleyair.org]
Sent: Friday, October 21, 2016 2:37 PM
To: Vinnie Venethongkham
Cc: Lori Sheridan; Michael DeBortoli; Scott Sexton; Rafael Santana; Jeremy Lawson
Subject: RE: NCPA RATA

Vinnie,

This requirement is from our stack sampling rule and applies to the compliance portion of the testing (not the RATA). The link to the rule is below and section 6.1 says that if 2 of the 3 runs exceed the limit, the test cannot be used to demonstrate compliance.

http://www.valleyair.org/rules/currntrules/r1081.pdf

Let me know if you have any other questions. (I've been in and out of meetings, so email has been easier today)

Jessica

From: Vinnie Venethongkham [mailto:Vinnie.Venethongkham@ncpa.com]
Sent: Friday, October 21, 2016 2:23 PM

From: Vinnie Venethongkham
To: Rhonda Mansur
Cc: Rafael Santana; Scott Sexton; Michael DeBortoli; Jeremy Lawson
Subject: FW: NCPA RATA
Date: Saturday, October 22, 2016 11:31:44 AM
Attachments: IMG_1999.JPG
image001.png
IMG_2015.JPG
IMG_1335.JPG
IMG_1328.JPG
IMG_1311.JPG

Hi Rhonda,

Please accept this email as a breakdown notification for the emission exceedances we experienced during the RATA runs on 10/20/2016. Please see the email below and attachments for more information. A letter of explanation will follow within 10 days of this notification.

Thank you,
Vinnie

From: Vinnie Venethongkham
Sent: Saturday, October 22, 2016 11:24 AM
To: 'Jessica Mohatt'
Cc: Lori Sheridan; Michael DeBortoli; Scott Sexton; Rafael Santana; Jeremy Lawson
Subject: RE: NCPA RATA

Hi Jessica,

We just completed our visual inspection of the LEC HRSG and found heavy deposits (fouling). The most prevalent were at the inlet of the CO catalyst and evaporator sections, prior to exiting the stack. Please see the attached photos. The fouling of these sections contributed to the stratification issues experienced during the RATA testing. We are still mobilizing people and contractors to clean these sections, which we're estimating to take all of next week to complete. I'll keep you abreast if anything changes.

Thank you,
Vinnie

From: Jessica Mohatt [mailto:Jessica.Mohatt@valleyair.org]
Sent: Friday, October 21, 2016 2:37 PM
To: Vinnie Venethongkham
Cc: Lori Sheridan; Michael DeBortoli; Scott Sexton; Rafael Santana; Jeremy Lawson
Subject: RE: NCPA RATA

Vinnie,

This requirement is from our stack sampling rule and applies to the compliance portion of the testing (not the RATA). The link to the rule is below and section 6.1 says that if 2 of the 3 runs

From: Vinnie Venethongkham
To: "Jessica Mohatt"
Cc: Lori Sheridan; Michael DeBortoli; Scott Sexton; Rafael Santana; Jeremy Lawson
Subject: RE: NCPA RATA
Date: Saturday, October 22, 2016 11:24:02 AM
Attachments: IMG_1999.JPG
image001.png
IMG_2015.JPG
IMG_1335.JPG
IMG_1328.JPG
IMG_1311.JPG

Hi Jessica,

We just completed our visual inspection of the LEC HRSG and found heavy deposits (fouling). The most prevalent were at the inlet of the CO catalyst and evaporator sections, prior to exiting the stack. Please see the attached photos. The fouling of these sections contributed to the stratification issues experienced during the RATA testing. We are still mobilizing people and contractors to clean these sections, which we're estimating to take all of next week to complete. I'll keep you abreast if anything changes.

Thank you,
Vinnie

From: Jessica Mohatt [mailto:Jessica.Mohatt@valleyair.org]
Sent: Friday, October 21, 2016 2:37 PM
To: Vinnie Venethongkham
Cc: Lori Sheridan; Michael DeBortoli; Scott Sexton; Rafael Santana; Jeremy Lawson
Subject: RE: NCPA RATA

Vinnie,

This requirement is from our stack sampling rule and applies to the compliance portion of the testing (not the RATA). The link to the rule is below and section 6.1 says that if 2 of the 3 runs exceed the limit, the test cannot be used to demonstrate compliance.

http://www.valleyair.org/rules/currntrules/r1081.pdf

Let me know if you have any other questions. (I've been in and out of meetings, so email has been easier today)

Jessica

From: Vinnie Venethongkham [mailto:Vinnie.Venethongkham@ncpa.com]
Sent: Friday, October 21, 2016 2:23 PM
To: Jessica Mohatt
Cc: Lori Sheridan; Michael DeBortoli; Scott Sexton; Rafael Santana; Jeremy Lawson
Subject: RE: NCPA RATA

Hi Jessica,

Thank you for the quick response. We will send in a testing protocol. I do have a question on the "2 failed runs equals a failed test" requirement is from an SJV Source Test or CEMS Policy document. Would you be able to send us a copy?

Thank you,
Vinnie

From: Jessica Mohatt [mailto:Jessica.Mohatt@valleyair.org]
Sent: Friday, October 21, 2016 11:42 AM
To: Vinnie Venethongkham
Cc: Lori Sheridan; Michael DeBortoli; Scott Sexton; Rafael Santana; Jeremy Lawson
Subject: RE: NCPA RATA

Hi Vinnie,

Please send in a new protocol prior to the testing next week so that we can review the proposed testing. We waive the 15 day test plan submittal requirement for retests.

If both Runs 1 and 2 failed emissions, we would consider that a failed test run. You could use Runs 3, 4, and 5 as a passing compliance test run, but we do require that the NH3 and NOx be sampled concurrently. If you didn't happen to collect enough NH3 samples to demonstrate 3 passing runs, please be sure to include that in your retest next week.

Jessica Mohatt
Air Quality Inspector
San Joaquin Valley Air Pollution Control District
4800 Enterprise Way – Modesto, CA 95356
209.557.6416 Office 559.906.0385 Cell
209.557.6475 Fax

From: Vinnie Venethongkham [mailto:Vinnie.Venethongkham@ncpa.com]

Sent: Friday, October 21, 2016 10:41 AM
To: Jessica Mohatt
Cc: Lori Sheridan; Michael DeBortoli; Scott Sexton; Rafael Santana; Jeremy Lawson
Subject: RE: NCPA RATA

Hi Jessica,

I tried calling you a few times, but wasn't able to get ahold of you. I would like to let you know we were able to complete the RATA testing yesterday with 10 RATA runs. Unfortunately, we failed the first two runs on NOx, and passed on the subsequent 8 runs. The average of the first three runs was 1.97 ppmvdc. It appears the stack was seriously stratified, and by increasing ammonia injection after the second run we were able to reduce the stratification to be in NOx compliance. Additionally, preliminary data indicated we failed the RATA as well. The plant has been shut down since 2200 last night. We are currently mobilizing to perform an inspection of the HRSG, catalyst, and other areas of the HRSG to find the cause and take appropriate action to correct the stratification issue. We anticipate these inspection/maintenance activities to start asap and last through Monday. We would like to come online sometime next week to retest the RATA.

Please give me a call if you have any questions or require additional information.

Thanks,
Vinnie

From: Jessica Mohatt [mailto:Jessica.Mohatt@valleyair.org]
Sent: Friday, October 21, 2016 8:18 AM
To: Vinnie Venethongkham
Cc: Lori Sheridan
Subject: NCPA RATA

Hi Vinnie,

I got your voicemail from yesterday, but it sounds like you got ahold of Lori and worked it out. (I'm working part-time and was off yesterday).

I just wanted to make sure you were aware that the RATA must be completed hands-off (i.e. no adjustments should have been made between the start and end of the RATA). Please include a statement to this effect in the source test report. Also, if you completed daily calibrations this morning and did not pass you would have to restart the RATA (unless you got the full 9 runs in yesterday). (Relevant CFR excerpts are below.)

Let me know if you have any questions.

Thanks!

Jessica Mohatt

Air Quality Inspector
San Joaquin Valley Air Pollution Control District
4800 Enterprise Way – Modesto, CA 95356
209.557.6416 Office 559.906.0385 Cell
209.557.6475 Fax

40 CFR 75 Appendix B 2.3.2 (c) Once a RATA is commenced, the test must be done hands-off. No adjustment of the monitor's calibration is permitted during the RATA test period, other than the routine calibration adjustments following daily calibration error tests, as described in section 2.1.3 of this appendix. If a routine daily calibration error test is performed and passed just prior to a RATA (or during a RATA test period) and a mathematical correction factor is automatically applied by the DAHS, the correction factor shall be applied to all subsequent data recorded by the monitor, including the RATA test data. For 2-level and 3-level flow monitor audits, no linearization or reprogramming of the monitor is permitted in between load levels.

(d) For single-load (or single-level) RATAs, if a daily calibration error test is failed during a RATA test period, prior to completing the test, the RATA must be repeated. Data from the monitor are invalidated prospectively from the hour of the failed calibration error test until the hour of completion of a subsequent successful calibration error test. The subsequent RATA shall not be commenced until the monitor has successfully passed a calibration error test in accordance with section 2.1.3 of this appendix. For multiple-load (or multiple-level) flow RATAs, each load level (or operating level) is treated as a separate RATA (*i.e.*, when a calibration error test is failed prior to completing the RATA at a particular load level (or operating level), only the RATA at that load level (or operating level) must be repeated; the results of any previously-passed RATA(s) at the other load level(s) (or operating level(s)) are unaffected, unless the monitor's polynomial coefficients or K-factor(s) must be changed to correct the problem that caused the calibration failure, in which case a subsequent 3-load (or 3-level) RATA is required), except as otherwise provided in section 2.3.1.3 (c)(5) of this appendix.

San Joaquin Valley
Unified Air Pollution Control District

TITLE V - DEVIATION REPORTING FORM / BREAKDOWN REPORT

Company Name: Northern California Power Agency Facility ID 2697

Reporting Period: January 27, 2016 -through- January 27, 2016

CERTIFICATION:

I declare, under penalty of perjury under the laws of the state of California, that, based on information and belief formed after reasonable inquiry, all information provided in this reporting package is true, accurate, and addresses all deviations during the reporting period:

Signature of Responsible Official

February 4, 2016
Date

Vinnie Venethongkham
Name of Responsible Official (please print)

(209) 210-5009
Telephone

LEC Compliance Manager
Title of Responsible Official (please print)

Use this two-sided form to report deviations from permit requirements for which breakdown relief was also requested. Return completed form to the Compliance Division at your Regional District office within 10 days after the deviation condition was discovered.

DEVIATION / BREAKDOWN INFORMATION

1.	Permit unit and condition #:	Permit No. N-2697-5-3, Condition 49
2.	Equipment involved:	SIEMENS INDUSTRIAL FRAME FLEX PLANT STG6-500F NATURAL GAS TURBINE ENGINE WITH DRY LOW NOX COMBUSTORS, HRSG, SCR SYSTEM
3.	Location of property:	12745 North Thornton Road, Lodi

4. Description of permit condition:	The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 3 0 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method.
5. Date, time and duration of deviation:	1/27/16: Hours 02:15 – 02:50 (35 minutes)

6. Description of deviation: (include excess and visible emissions if applicable)

The LEC CEMS polling system which allows the District's automated polling system to collect data halted on 1/27/16 between 02:15 – 02:50. The on shift operator followed plant procedures and rebooted the DAS UDC viewer, and about 15 minutes later the polling system started working again.

7. Date and time when deviation was discovered:

Deviation discovered on 1/27/16 at 02:15.

8. Time corrective action commenced and time corrective action successful:

Corrective action commenced at 02:35 and corrective action successful at 02:50.

9. Probable cause of deviation:

We notified the CEMS/DAS manufacturer, Teledyne Monitor Lab (TML), and they suspected the polling modem locked up and halted the polling system. Please see the attached email correspondences for more information.

10. Measures taken to correct this occurrence and prevent its recurrence:

We currently have plant procedure, Standard Operating Procedure 026; to reboot the polling system should it locked up again. We are told by TML that polling systems utilizing a modem will have the tendency to lock up and halt the system.

The District is putting in place a File Transfer Protocol (FTP) system for polling data and we are working with Yousif Zardo for implementation support.

Attach photographs of defective equipment.
None.

Provide any additional information necessary to establish that this occurrence was the result of an unavoidable failure or malfunction – Rule 1100 assigns the burden of proof to the source operator seeking exemption from legal action. An exception cannot be granted for an occurrence that was the result of negligence.

None.

Initial Notification: Reported by: James Wertz Date: 1/27/2016

Reported to: Rhonda Mansur Time: 02:27 AM

Vinnie Venethongkham

From: Greg C. Terry <Greg.Terry@Teledyne.com>
Sent: Tuesday, February 02, 2016 2:48 PM
To: Vinnie Venethongkham
Subject: FW: Teledyne Monitor Labs Case Confirmation CRM:0145134

Importance: High

I'm off of the server now if you can let the control room operators know. Here is the error I found in the log file ...
01/27/16 02:09 CT1_RTU_SJV_P_Controller: ERROR: Bad modem response

It is hard to say exactly what caused this but to me it sounds like the modem locked up or may be a phone line issue or I wonder if it may be temporary outage on the Air District side.

What actually fixed the problem back on 01/27? Did you just reboot the Server? Or did the issue clear on its own?

Thanks
Greg

Greg Terry
Software Support Analyst
Teledyne Monitor Labs
35 Inverness Dr East
Englewood, CO 80112

Greg.Terry@Teledyne.com
Tel. (800) 846-6062 option 2
tech support: TMLTechSupport@Teledyne.com
http://www.teledyne-ml.com
http://RegPerfect.net

From: Teledyne Monitor Labs [mailto:EGW_CRMemrouter@Teledyne.com]
Sent: Wednesday, January 27, 2016 9:14 AM
To: Vinnie Venethongkham

Vinnie Venethongkham

From:	James Wertz
Sent:	Wednesday, January 27, 2016 2:27 AM
To:	LEC Plant Management; Rhonda Mansur; Valley Air Control
Cc:	Tom Johnson; Dennis Stimac
Subject:	Lodi Energy Center N-2697-5-0

Lodi Energy Center experienced a CEMS equipment failure at 2:15 am on January 27 2016.
A letter of explanation will follow within 10 days of this notification. No deviation of emissions occurred due to this breakdown.

Respectfully,

Jim Wertz
Shift 2 Lead Combustion Turbine Specialist
Northern California Power Agency
Combustion Turbine Projects

Vinnie Venethongkham

From: James Wertz
Sent: Tuesday, February 02, 2016 3:30 PM
To: Vinnie Venethongkham
Subject: RE: Lodi Energy Center N-2697-5-0

Data collection resumed at ~02:50 am on the aforementioned service for LEC CEMS.

Data collection resumed after I performed the a restart of the UDC viewer using SOP 026, about 15 minutes later it just started working... not sure why.

Respectfully,

Jim Wertz
Shift 2 Lead Combustion Turbine Specialist
Northern California Power Agency
Combustion Turbine Projects

From: Vinnie Venethongkham
Sent: Tuesday, February 02, 2016 3:17 PM
To: James Wertz
Subject: RE: Lodi Energy Center N-2697-5-0

Hi Jim,

What did you do to restore the halted application?

Thanks,
Vinnie

From: James Wertz
Sent: Wednesday, January 27, 2016 2:27 AM
To: LEC Plant Management; Rhonda Mansur; Valley Air Control
Cc: Tom Johnson; Dennis Stimac
Subject: Lodi Energy Center N-2697-5-0

Lodi Energy Center experienced a CEMS equipment failure at 2:15 am on January 27 2016.
A letter of explanation will follow within 10 days of this notification. No deviation of emissions occurred due to this breakdown.

Respectfully,

Jim Wertz
Shift 2 Lead Combustion Turbine Specialist
Northern California Power Agency

APPENDIX D: MOST RECENT COMPLIANCE ASSURANCE MONITORING PLAN

sierra research

Revised Compliance Assurance Monitoring (CAM) Plan for the Lodi Energy Center and CT-2 Gas Turbines

prepared for:

Northern California Power Agency

April 2014

prepared by:

Sierra Research, Inc.
1801 J Street
Sacramento, California 95811
(916) 444-6666

REVISED
COMPLIANCE ASSURANCE MONITORING (CAM) PLAN FOR THE LODI ENERGY CENTER AND CT-2 GAS TURBINES

prepared for:

Northern California Power Agency

April 2014

Sierra Research, Inc.
1801 J Street
Sacramento, CA 95811
(916) 444-6666

COMPLIANCE ASSURANCE MONITORING (CAM) PLAN FOR THE LODI ENERGY CENTER AND CT-2 GAS TURBINES

Table of Contents

List of Tables

1. BACKGROUND

1.1 Introduction

40 CFR 64 requires that a Compliance Assurance Monitoring (CAM) Plan be developed for any emissions unit and regulated pollutant where all three of the following are true:

- The emissions unit is subject to an emissions limitation or standard for the regulated pollutant;
- The emissions unit requires a control device to achieve compliance with the emissions limitation or standard; and
- The emissions unit has a pre-control potential to emit for that pollutant that exceeds the major source threshold for that pollutant.[1]

A CAM Plan is not required for emission limits and standards for which the facility's Title V permit requires a continuous compliance determination method, such as a continuous emissions monitoring system (CEMS).[2]

The Northern California Power Authority's Lodi facility includes the 294 MW, combined cycle natural gas combustion turbine at Lodi Energy Center (LEC) and the 49 MW simple-cycle steam-injected turbine (STIG) located at NCPA Combustion Turbine Plant No. 2 (CT-2). Each of these units emits the regulated pollutants of oxides of nitrogen (NOx), sulfur oxides (SOx), carbon monoxide (CO), volatile organic compounds (VOC) and respirable particulate matter (PM_{10}). The two turbines are considered to be part of the same stationary source, and the Title V permit contains emission limits and standards for all of the regulated pollutants in units of either pounds or ppm. Both turbines are equipped with selective catalytic reduction (SCR) systems and oxidation catalysts, which control emissions of NOx, CO, and VOC.

Uncontrolled emissions of NOx and VOC from the LEC gas turbine exceed the applicable San Joaquin Valley Air Pollution Control District (SJVAPCD) major source threshold of 20,000 pounds year. Uncontrolled emissions of CO from the LEC gas turbine exceed the applicable SJVAPCD major source threshold of 200,000 pounds per year.[3] The LEC gas turbine is equipped with CEMS for NOx and CO that meet the requirements of a "continuous compliance determination method." Therefore, CAM

[1] 40 CFR § 64.2 (a)
[2] 40 CFR § 64.2 (b)(vi)
[3] SJVAPCD Rule 2201 § 3.24

requirements are not triggered for these pollutants. However, since there is no VOC CEMS, the District is requiring a CAM Plan to ensure continuous compliance with the VOC standards and emission limits contained in the Title V permit.

For the CT-2 STIG turbine, uncontrolled NOx emissions exceed the SJVAPCD major source threshold of 20,000 lbs per year. Uncontrolled CO emissions do not approach the SJVAPCD major source threshold of 200,000 pounds per year. Uncontrolled VOC emissions would not exceed the SJVAPCD major source threshold of 20,000 pounds per year, based on the emission factor of 0.0021 lbs/MMBtu listed in AP-42 Table 3.1-2a. However, based on a March 31, 1995 source test of the CT- 2 STIG turbine, the controlled nonmethane volatile organic compound (NMVOC) emission rate was 1.8 lbs/hr while firing at a natural gas flow rate of 6,987 SCFM. The District definition of VOC excludes ethane as well as methane, so this emission rate overstates the actual VOC emissions from the gas turbine to some extent.[4] Assuming a natural gas HHV of 1,020 BTU/scf, the controlled VOC emission rate during the source test is less than 0.0042 lbs/MMBtu (approximately twice that of the uncontrolled AP-42 emission factor).

The level of VOC control provided by the oxidation catalyst is expected to be in the range of 30 percent, based on information provided by the catalyst manufacturers. Therefore, the VOC potential to emit for the CT-2 STIG turbine is calculated as follows:

Emission Factor (EF) = <0.0042 lb VOC/MMBtu (3/31/1995 Source Test)

STIG Heat Input = 463 MMBtu/hr (HHV- Permit Condition #22)

Controlled Emissions = [EF • Heat Input • 24hr/day • 365 day/yr]

Controlled Emissions = [0.0042 lb VOC/MMBtu • 463 MMBtu/hr • 24hr/day • 365 day/yr] = <17,035 lb/yr

Expected Oxidation Catalyst VOC Control Efficiency: 30%

Pre-Control Emissions = <17,035 lbs/year / (1.0 – 0.30) = <24,336 lb/year

Based on the above calculation, the STIG turbine's uncontrolled VOC emissions could exceed the SJVAPCD's major source threshold of 20,000 lbs/year. Similar to the LEC turbine, since there is no VOC CEMS, the District is requiring a CAM Plan to ensure continuous compliance with the VOC standards and emission limits contained in the Title V permit.

The CT-2 STIG turbine is equipped with a NOx and a CO CEMS that meet the requirements of a "continuous compliance determination method." Therefore, CAM requirements are not triggered for the STIG turbine for NOx or CO.

[4] No speciation was done for hydrocarbons other than methane, so there is no data available to allow a determination of actual VOC emissions from the CT-2 STIG turbine. To be conservative, NMVOC is assumed to be equal to VOC for the purposes of this analysis.

1.2 Emissions Units

LEC Unit Description:

294 MW (Nominal) Combined-Cycle Electric Generating Plant Consisting of Siemens Industrial "Flex Plant 30," Model STG6-5000F, Natural-Gas Fired Turbine Engine With Dry Low-NOx Combustors, and an Unfired Heat Recovery Steam Generator and Turbine, Controlled by a Selective Catalytic Reduction System with Ammonia Injection and a Oxidation Catalyst

Identification: Permit Number N-2697-5-1

Facility: Northern California Power Agency
Lodi Energy Center (Facility ID N-2697)
12751 N. Thornton Road
Lodi, CA 95241

STIG Unit Description:

General Electric LM5000 Natural Gas Fire Gas Turbine with Steam Injection, Selective Catalytic Reduction with Ammonia Injection, and an Oxidation Catalyst Serving a 49 MW Electrical Generator

Identification: Permit Number N-2697-1-4

Facility: Northern California Power Agency
Plant No. 2 (Facility ID N-2697)
12751 N. Thornton Road
Lodi, CA 95241

1.3 Applicable Regulations, Emissions Limits, and Pre-CAM Monitoring Requirements

The regulations, emission limits, and pre-CAM monitoring requirements applicable to the emission unit described above are shown in Tables 1 and 2.

Table 1 NCPA Lodi Energy Center Combined Cycle Turbine Summary of Applicable Regulations, Emission Limits, and Pre-CAM Monitoring Requirements	
Regulations:	Rules 2201, 4001, & 4703 – San Joaquin Valley Air Pollution Control District (SJVAPCD) 40 CFR 60 Subpart KKKK – Standards of Performance for Stationary Combustion Turbines Title V/ SJVAPCD Permit Conditions
Emission Concentration Limits:	NOx: 2.0 ppmvd @ 15% O_2, 1-hour rolling average (SJVAPCD permit condition #19) VOC: 1.4 ppmvd @ 15% O_2, 3-hour rolling average (SJVAPCD permit condition #19) CO: 2.0 ppmvd @ 15% O_2 , 3-hour rolling average (SJVAPCD permit condition #19) NH_3: 10.0 ppmvd @15% O_2, 24-hour rolling average (SJVAPCD permit condition #20)
Current Monitoring Requirements:	Continuous NOx, CO and O_2 monitoring using a Continuous Emissions Monitoring System (CEMS) (SJVAPCD permit condition #43) Annual compliance tests (SJVAPCD permit conditions #37 & #39): NOx – EPA Method 7E or 20, or CARB Method 100 CO – EPA Method 10 or 10B, or CARB Method 100 VOC – EPA Method 18 or 25 O_2 – EPA Method 3, 3A, or 20, or CARB Method 100 Ammonia (NH_3) slip – BAAQMD ST-1B

Table 2 NCPA CT-2 STIG Turbine Summary of Applicable Regulations, Emission Limits, and Pre-CAM Monitoring Requirements	
Regulations:	Rules 2201, 4001, & 4703 – San Joaquin Valley Air Pollution Control District (SJVAPCD) 40 CFR 60 Subpart GG – Standards of Performance for Stationary Combustion Turbines Title V/ SJVAPCD Permit Conditions
Emission Concentration and VOC Mass Emission Limits:	NOx: 3.0 ppmvd @ 15% O_2, 3-hour rolling average (SJVAPCD permit condition #27) VOC: 142.0 lbs/day and 19,992 lbs/year (SJVAPCD permit condition #33) CO: 200 ppmvd @ 15% O_2 , 3-hour rolling average (SJVAPCD permit condition #28) NH_3: 25 ppmvd @15% O_2, 24-hour rolling average (SJVAPCD permit condition #29)
Current Monitoring Requirements:	Continuous NOx, CO and O_2 monitoring using a Continuous Emissions Monitoring System (CEMS) (SJVAPCD permit condition #2) Annual compliance tests (SJVAPCD permit conditions #37 & #38): NOx – EPA Method 7E or 20 CO – EPA Method 10 or 10B O_2 – EPA Method 3, 3A, or 20 Ammonia (NH_3) slip – BAAQMD ST-1B

1.4 Emission Control Technology

Description: NOx – Selective Catalytic Reduction System (SCR)
CO/VOC –Oxidation Catalyst System

2. MONITORING APPROACH

Table 3 presents the key elements of the proposed compliance assurance monitoring (CAM) approach. As discussed previously, NOx and CO concentrations are monitored continuously at the outlet of the SCR/oxidation catalyst systems for both turbines, and therefore are exempt from CAM requirements.[5] Because neither emissions unit is equipped with a CEMS to measure VOC, additional CAM procedures are triggered.

Table 3
Monitoring Approach

I. Measurement Approach	The oxidation catalyst temperature will be used as an indicator to demonstrate oxidation catalyst effectiveness.
II. Indicator Range	Each oxidation catalyst temperature is measured by a pair of thermocouples located at the catalyst inlet. Catalyst temperatures of between 450 and 1350 °F will be indicative of normal oxidation catalyst operation. The minimum temperature is not required during periods of startup, shutdown and combustor tuning activities.
III. Performance Criteria	
A. Data Representativeness	The thermocouples located at the inlet to the oxidation catalysts are capable of accurately measuring temperature within ± 1 percent of the actual temperature.
B. Verification of Operational Status	The Distributed Control Systems (DCS) monitor the thermocouple signals to verify that the thermocouples are operational. The temperatures measured by each pair of thermocouples will be averaged to determine catalyst temperature for the purpose of determining compliance with the temperature range. As long as a signal is being received from at least one thermocouple, the temperature data will be considered valid,
C. QA/QC Practices and Criteria	Temperature trends are plotted annually to identify drift or fluctuations in readings. Thermocouples are replaced if they fail.
D. Monitoring Frequency	Oxidation catalyst inlet temperatures are continuously monitored.

[5] 40 CFR 64(b)(vi)

Table 3 Monitoring Approach	
E. Temperature Differential Alarm	Temperature differential between the two thermocouples within each pair is also monitored; if the difference is greater than 15°F, an alarm is generated. Alarms are monitored by plant operations staff. Plant operations staff will log alarms and actions taken in response.
F. Breakdown	If no signal is received from either thermocouple, an alarm is generated and the event will be considered a breakdown.
IV. Data Collection Procedures	Temperature data are recorded by the data acquisition system.

3. JUSTIFICATION

3.1 Need for CAM Plan

Because the uncontrolled VOC mass emissions from the LEC combined cycle turbine and the CT-2 STIG turbine would exceed the federal major source thresholds within the SJVAPCD (10 tons per year of VOC), each turbine triggers the CAM requirements for VOC pursuant to 40 CFR Part 64. The gas turbines are exempt from Part 64 CAM requirement for CO and NOx on the basis that these pollutants are continuously monitored using a CEMS.

Each turbine's oxidation catalyst system controls CO and, to some extent, VOC emissions. When installed, each turbine was subject to emission limits but not to continuous monitoring requirements pertaining to VOC. Therefore, the CAM approach summarized in Table 3 was developed to ensure that the oxidation catalysts operate within the temperature range in which they are effective.

3.2 Rationale for Selection of Performance Indicator

As shown in the CAM approach summarized in Table 3, the facility will monitor the oxidation catalyst temperatures as performance indicators that the oxidation catalysts are operating within the temperature range in which they are effective. The proposed catalyst temperature monitoring approach to demonstrating catalyst effectiveness is consistent with the approach taken by U.S. EPA in 40 CFR 63 Subparts YYYY (Stationary Combustion Turbine NESHAP) and ZZZZ (Reciprocating IC Engine NESHAP). In both regulations, EPA requires owner/operators to continuously monitor oxidation catalyst inlet temperature and to maintain the temperature within recommended operating temperature ranges to demonstrate catalyst effectiveness for controlling emissions.

3.3 Rationale for Selection of Indicator Ranges

The range of oxidation catalyst temperatures indicative of proper catalyst function is based on manufacturer engineering data. Oxidation catalyst performance at normal operating temperature ranges will be verified during periodic VOC performance testing of the gas turbines.

CITY OF LODI

WHITE SLOUGH WATER POLLUTION
CONTROL FACILITY
12751 NORTH THORNTON ROAD
LODI, CALIFORNIA 95242
(209) 333-6749
EMAIL: pwdept@lodi.gov
www.lodi.gov

February 13, 2018

Northern California Power Agency **LEC Plant**
Attention: Ms. Brooklyn Saylor
P.O. Box 1478
Lodi, CA 95241

SUBJECT: Approval of 2018-2020 Zero Discharge Permit

Enclosed please find a copy of the approved Zero Discharge Permit. This Zero Discharge Permit has been required by the USEPA after an inspection to evaluate compliance with Waste Discharge Requirements Order RS-2007-0113 (NPDES No. CA0079243). This permit will be valid through February 27, 2020. Please make note of special conditions in Part 2-Reporting on page two.

Your firm will need to apply for renewal on or before December, 28 2019.

Thank you for your cooperation. If you have any questions, please contact Mrs. Sandra Macomb at (209) 333-6749.

Sincerely,

Karen D. Honer
Wastewater Plant Superintendent

KDH/sm
Enclosure

CITY OF LODI
ZERO DISCHARGE PERMIT

NUMBER 565

In accordance with the provisions of the City of Lodi Municipal Code, Chapter 13.12,

Name: Northern California Power Agency **LEC Plant**

Location: 12745 North Thornton Road
Lodi, CA 95242

has been issued a Zero Discharge Permit and is prohibited from discharging any non-domestic wastewater from the above identified facility through any outfall connected to the City of Lodi White Slough Water Pollution Control Facility in accordance with the conditions set forth in this permit. Compliance with this permit does not relieve the Permittee of its obligation to comply with any or all applicable regulations, standards, or requirements under local, State and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

This permit shall not be assigned, transferred or sold to a new owner, new user, different premises or new or changed operation without prior written approval of the Public Works Director.

This permit shall become effective on February 28, 2018,

and shall expire at midnight on February 27, 2020.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application must be filed 60 days before the expiration date for reissuance of this permit in accordance with the requirements of City of Lodi Municipal Code, Chapter 13.12.

Renewal must be applied for on or before December 28, 2019.

Charles E. Swimley
Public Works Director

Issued this 13th day of February, 2018

PART 1 – SPECIFIC PROHIBITIONS

The Permittee shall not discharge non-domestic wastewater from the LEC Plant into the City of Lodi White Slough Water Pollution Control Facility.

PART 2 - REPORTING

The Permittee shall submit a Zero Discharge Compliance Certification (Attachment A) annually. The reporting period is from January 1 to December 31. The report due date is January 31.

All wastewater user reports must be signed by an authorized representative of the user and contain the following certification statement:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

All monitoring reports shall be sent to the Wastewater Plant Superintendent at 1331 S. Ham Lane, Lodi, CA 95242.

All records must remain available for a period of at least three years per 40 CFR 403.12(0).

PART 3 – UNATHORIZED DISCHARGE

1. The permittee shall notify the White Slough Water Pollution Control Facilities (WSWPCF) personnel immediately upon the occurrence of an accidental discharge of substances prohibited by City of Lodi Municipal Code, Chapter 13.12. During the hours of 6:00 a.m. to 10:00 p.m. WSWPCF personnel should be notified by telephone at 333-6749. At all other times the City of Lodi's after hours answering service should be notified by telephone at 368-5735 to contact the on call city personnel. The notification shall include the location of discharge, date and time thereof, type of waste, including approximate concentration and volume, and corrective actions taken. Within ten days following an accidental discharge, the permittee shall submit to the City of Lodi a detailed written report. The report shall specify the following:

a. Description and cause of the upset, slug or accidental discharge and the impact on the permittee's compliance status. The description should also include location of discharge, type, concentration and volume of waste.

b. Duration of noncompliance, including exact dates and times of noncompliance, and if the noncompliance continues, the time by which compliance is reasonably expected to occur.

c. All measures taken or to be taken to reduce, eliminate, and prevent recurrence of such an upset, slug, accidental discharge, or other conditions of noncompliance.

d. All accidental discharge reports shall be submitted to the City of Lodi, Public Works Director, 221 W. Pine Street, Lodi, CA 95240.

PART 4 - REOPENER CLAUSE

This permit may be reopened and modified to incorporate any new or revised requirements developed by the City of Lodi as are necessary to ensure POTW compliance with any new federal, state, or local regulations promulgated.

PART 5 - APPLICABLE PENALTIES

Penalties which may be assessed by the City for discharge or permit violations include: Notice of violation, Cease and Desist Order, Discharge Permit suspension or revocation, Compensation to the City for damages to POTW, Criminal penalties, civil penalties not to exceed six thousand dollars for each day in which such violation occurs, and termination of service.

PART 6 - STANDARD CONDITIONS

See attached sections of City of Lodi Municipal Code Chapter 13.12

NORTHERN CALIF POWER AGENCY (CERSID: 10183585)

Facility Information **Submitted Nov 22, 2017**

Submitted on 11/22/2017 11:15:09 AM by *Brooklyn Saylor* of NORTHERN CALIFORNIA POWER AGENCY (ROSEVILLE, CA)

- Business Activities
- Business Owner/Operator Identification

Hazardous Materials Inventory **Submitted Nov 22, 2017**

Submitted on 11/22/2017 11:15:09 AM by *Brooklyn Saylor* of NORTHERN CALIFORNIA POWER AGENCY (ROSEVILLE, CA)

- Hazardous Material Inventory (47)
- Site Map (Official Use Only)
  - *Annotated Site Map (Official Use Only)* (Adobe PDF, 197KB)

Guidance Messages

- **Warning:**
  1. Hazardous Material Inventory - This inventory contains 4 trade secret material(s). Trade secret information must meet the criteria specified in California Civil Code 3426.1(d) and Government Code 6254.7

Emergency Response and Training Plans **Submitted Nov 22, 2017**

Submitted on 11/22/2017 11:15:09 AM by *Brooklyn Saylor* of NORTHERN CALIFORNIA POWER AGENCY (ROSEVILLE, CA)

- Emergency Response/Contingency Plan
  - *Emergency Response/Contingency Plan* (Adobe PDF, 8191KB)
- Employee Training Plan
  - *Employee Training Plan* (Adobe PDF, 5129KB)

Aboveground Petroleum Storage Act **Submitted Nov 22, 2017**

Submitted on 11/22/2017 11:15:09 AM by *Brooklyn Saylor* of NORTHERN CALIFORNIA POWER AGENCY (ROSEVILLE, CA)

- Aboveground Petroleum Storage Act Documentation
  - Stored At Facility *NORTHERN CALIF POWER AGENCY* CERSID (10183585)

Site Identification

NORTHERN CALIF POWER AGENCY
12745 N THORNTON RD
LODI, CA 95242
County
San Joaquin

CERS ID
10183585
EPA ID Number
CAR000004333

Submittal Status

Submitted on 11/22/2017 by *Brooklyn Saylor* of NORTHERN CALIFORNIA POWER AGENCY (ROSEVILLE, CA)

Hazardous Materials

Does your facility have on site (for any purpose) at any one time, hazardous materials at or above 55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for compressed gases (include liquids in ASTs and USTs); or is regulated under more restrictive inventory local reporting requirements (shown below if present); or the applicable Federal threshold quantity for an extremely hazardous substance specified in 40 CFR Part 355, Appendix A or B; or handle radiological materials in quantities for which an emergency plan is required pursuant to 10 CFR Parts 30, 40 or 70?	Yes

Underground Storage Tank(s) (UST)

Does your facility own or operate underground storage tanks?	No

Hazardous Waste

Is your facility a Hazardous Waste Generator?	Yes
Does your facility treat hazardous waste on-site?	No
Is your facility's treatment subject to financial assurance requirements (for Permit by Rule and Conditional Authorization)?	No
Does your facility consolidate hazardous waste generated at a remote site?	No
Does your facility need to report the closure/removal of a tank that was classified as hazardous waste and cleaned on-site?	No
Does your facility generate in any single calendar month 1,000 kilograms (kg) (2,200 pounds) or more of federal RCRA hazardous waste, or generate in any single calendar month, or accumulate at any time, 1 kg (2.2 pounds) of RCRA acute hazardous waste; or generate or accumulate at any time more than 100 kg (220 pounds) of spill cleanup materials contaminated with RCRA acute hazardous waste.	No
Is your facility a Household Hazardous Waste (HHW) Collection site?	No

Excluded and/or Exempted Materials

Does your facility recycle more than 100 kg/month of excluded or exempted recyclable materials (per HSC 25143.2)?	No
Does your facility own or operate ASTs above these thresholds? Store greater than 1,320 gallons of petroleum products (new or used) in aboveground tanks or containers.	Yes
Does your facility have Regulated Substances stored onsite in quantities greater than the threshold quantities established by the California Accidental Release prevention Program (CalARP)?	Yes

Additional Information

No additional comments provided.

Facility/Site

NORTHERN CALIF POWER AGENCY
12745 N THORNTON RD
LODI, CA 95242

CERS ID
10183585

Submittal Status

Submitted on 11/22/2017 by *Brooklyn Saylor* of NORTHERN CALIFORNIA POWER AGENCY (ROSEVILLE, CA)

Identification

NORTHERN CALIFORNIA POWER AGENCY

Operator Phone	Business Phone	Business Fax
(209) 333-6373	(209) 333-6373	(209) 333-5215

Beginning Date	Ending Date	
Dun & Bradstreet	**SIC Code**	**Primary NAICS**
082900564	4911	

Facility/Site Mailing Address

P.O. BOX 1478
LODI , CA 95241

Primary Emergency Contact

MICHAEL DEBORTOLI
Title
PLANT MANAGER

Business Phone	24-Hour Phone	Pager Number
(209) 210-5000	(209) 333-6373	

Owner

NORTHERN CALIFORNIA POWER AGENCY
(209) 333-6373
651 COMMERCE DRIVE
ROSEVILLE, CA 95678

Secondary Emergency Contact

SCOTT SEXTON
Title
O&M SUPERVISOR

Business Phone	24-Hour Phone	Pager Number
(209) 210-5010	(209) 333-6373	

Billing Contact

NORTHERN CALIFORNIA POWER AGENCY
(916) 781-4255 ACCTSPAYABLE@NCPA.COM
651 COMMERCE DRIVE
ROSEVILLE, CA 95678

Environmental Contact

BROOKLYN SAYLOR
(209) 210-5009 BROOKLYN.SAYLOR@NCPA.COM
P.O. BOX 1478
LODI, CA 95242

Name of Signer	Signer Title	Document Preparer
BROOKLYN SAYLOR	COMPLIANCE MANAGER	BROOKLYN SAYLOR

Additional Information

Locally-collected Fields

Some or all of the following fields may be required by your local regulator(s).

Property Owner

Phone

Mailing Address

,

Assessor Parcel Number (APN)

Number of Employees

Facility ID

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **230 KV SWITCH YARD**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases Other Health Hazard	**SULFUR HEXAFLUORIDE** CAS No 2551-62-4	**Pounds** State Gas Type Pure	**1200** Storage Container Aboveground Tank, Cylinder Days on Site: 365	**100**	1200 Pressue > Ambient Temperature Ambient	Waste Code	- Pressure Release - Acute Health - Chronic health	SULFER HEXAFLOURIDE	100 %		2551-62-4

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **HAZMAT BUILIDING**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	Used lubricating oils CAS No 70514-12-4	**Gallons** State Liquid Type Waste	**100** Storage Container Plastic/Non-metalic Drum	**55**	50 Pressue Ambient Temperature Ambient	Waste Code					
	Hydraulic Oil CAS No Grid: B-8	**Gallons** State Liquid Type Mixture	**500** Storage Container Plastic/Non-metalic Drum Days on Site: 365	**55**	110 Pressue Ambient Temperature Ambient	Waste Code	- Fire	HIGHLY REFINED MINERAL OIL(C15 -C50)	99 %		MIXTURE
	ZOK 27 CAS No Grid: B-8	**Gallons** State Liquid Type Mixture	**55** Storage Container Plastic/Non-metalic Drum Days on Site: 365	**55**	55 Pressue Ambient Temperature Ambient	Waste Code		ISOTRIDECYLALCOHOL, ETHOXYLATED 3-BUTOXYPROPAN-2-OL OLEOYL SARCOSINIC ACID	30 % 5 % 5 %		9043-30-5 5131-66-8 110-25-8

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**NORTHERN CALIFORNIA POWER AGENCY**	Chemical Location	CERS ID **10183585**
Facility Name	**NORTHERN CALIF POWER AGENCY**	**INSIDE STIG FIRE PUMP HOUSE**	Facility ID
	12745 N THORNTON RD, LODI 95242		Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class II, Irritant	**PETROLEUM DIESEL FUEL** CAS No 8008-20-6	**Gallons** State Liquid Type Pure	**250** Storage Container Aboveground Tank, Tank Inside Building Days on Site: 365	**300**	200 Pressue Ambient Temperature Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **LEC AUXILIARY BOILER**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	OXYGEN SCAVENGER	**Gallons**	**75**	**75**	50			SODIUM BISULFITE	30 %		7631-90-5
	CAS No	State: Liquid	Storage Container: Tote Bin		Pressue: Ambient	Waste Code		POTASSIUM BISULFITE	5 %		7773-03-7
	Grid: C7	Type: Mixture	Days on Site: 365		Temperature: Ambient			COBALT SULFATE	0 %		10124-43-3
	INTERNAL BOILER TREATMENT	**Gallons**	**105**	**105**	50			SODIUM HYDROXIDE	5 %		1310-73-2
	CAS No	State: Liquid	Storage Container: Tote Bin		Pressue: Ambient	Waste Code					
	Grid: C7	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**NORTHERN CALIFORNIA POWER AGENCY**	Chemical Location	CERS ID **10183585**
Facility Name	**NORTHERN CALIF POWER AGENCY**	**LEC AUXILIARY BOILER/O2 DOSING SKID**	Facility ID
	12745 N THORNTON RD, LODI 95242		Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Toxic	**Aqua Ammonia 19%** CAS No 1336-21-6 Grid: D6.5, E6	**Gallons** State Liquid Type Pure	**125** Storage Container Plastic/Non-metalic Drum, Other Days on Site: 365	**125**	75 Pressue Ambient Temperature Ambient	Waste Code 122	- Fire - Reactive - Pressure Release - Acute Health - Chronic health	AMMONIA WATER	19 % 81 %		7664-41-7 7732-18-5

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **LEC COOLING TOWER**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Water Reactive, Class 2, Toxic, Oxidizing, Class 1	**Sulfuric Acid** CAS No 7664-93-9 ✔EHS	**Pounds** State: Liquid Type: Pure	**78285** Storage Container: Aboveground Tank Days on Site: 365	**92100**	73680 Pressue Temperature	Waste Code	- Reactive - Acute Health				
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Oxidizing, Class 2, Other Health Hazard	**Sodium Hypochlorite** CAS No 7681-52-9	**Gallons** State: Liquid Type: Pure	**6000** Storage Container: Aboveground Tank Days on Site: 365	**12000**	2700 Pressue Temperature	Waste Code	- Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **LEC CT GSU TRANSFORMER (SITE NORTHEAST)**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class III-B	**Mineral Oil** CAS No 8012-95-1	**Pounds** State Liquid Type Pure	**98300** Storage Container Aboveground Tank Days on Site: 365	**98300**	98300 Pressue > Ambient Temperature > Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **LEC DEMINERALIZED WATER TANK**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**HYDRATED LIME** CAS No 1305-62-0	**Pounds** State Solid Type Mixture	**50000** Storage Container Silo Days on Site: 365	**124950**	40000 Pressue Ambient Temperature Ambient	Waste Code		CALCIUM HYDROXIDE	90 %		1305-62-0
								MAGNESIUM HYDROXIDE	3 %		1309-42-8
								MAGNESIUM OXIDE	3 %		1309-48-4
								CALCIUM CARBONATE	2 %		1317-65-3
								SILICON DIOXIDE	2 %		14808-60-7
DOT: 9 - Misc. Hazardous Materials Irritant, Water Reactive, Class 1	**Magnesium Oxide** CAS No 1309-48-4	**Pounds** State Solid Type Pure	**70000** Storage Container Silo Days on Site: 365	**176800**	50000 Pressue Ambient Temperature Ambient	Waste Code	- Reactive - Acute Health				
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**Calcium Hydroxide** CAS No 1305-62-0	**Pounds** State Solid Type Pure	**50000** Storage Container Silo Days on Site: 365	**124950**	40000 Pressue Ambient Temperature Ambient	Waste Code		Calcium Hydroxide	90 %		
								Magnesium Hydroxide	3 %		
								Magnesium Oxide	3 %		
								Calcium Carbonate	2 %		
								Silicon Dioxide	2 %		

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY** | Chemical Location | CERS ID **10183585**

Facility Name **NORTHERN CALIF POWER AGENCY** | **LEC HRSG** | Facility ID

12745 N THORNTON RD, LODI 95242 | Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases Oxidizing, Class 2	**Oxygen** CAS No 7782-44-7 Grid: E-6	**Cu. Feet** State Gas Type Pure	**1392** Storage Container Cylinder Days on Site: 365	**232**	464 Pressue Ambient Temperature Ambient	Waste Code	- Fire - Pressure Release	Oxygen	100 %		7782-44-7
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Toxic	**Ammonium Hydroxide** CAS No 1336-21-6	**Gallons** State Liquid Type Pure	**750** Storage Container Aboveground Tank Days on Site: 365	**750**	375 Pressue Temperature	Waste Code 122	- Fire - Reactive - Pressure Release - Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**NORTHERN CALIFORNIA POWER AGENCY**	Chemical Location	CERS ID **10183585**
Facility Name	**NORTHERN CALIF POWER AGENCY**	**LEC ST GSU TRANSFORMER (SITE SOUTHEAST)**	Facility ID
	12745 N THORNTON RD, LODI 95242		Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class III-B	**Mineral Oil** CAS No 8012-95-1	**Pounds** State Liquid Type Pure	**81571** Storage Container Aboveground Tank Days on Site: 365	**81571**	81571 Pressue > Ambient Temperature > Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **LEC WATER TREATMENT BUILDING**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	POLYMER CAS No Grid: F7	**Gallons** State: Liquid Type: Mixture	**400** Storage Container: Tote Bin Days on Site: 365	**400**	100 Pressue: Ambient Temperature: Ambient	Waste Code					
	REVERSE OSMOSIS CLEANER PC-77 CAS No	**Gallons** State: Liquid Type: Mixture	**110** Storage Container: Plastic/Non-metalic Drum Days on Site: 365	**110**	55 Pressue Temperature	Waste Code					
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Irritant	**Sodium Bisulfite 15% - 40%** CAS No 7631-90-5	**Gallons** State: Liquid Type: Pure	**200** Storage Container: Tote Bin Days on Site: 365	**200**	100 Pressue: Ambient Temperature: Ambient	Waste Code	- Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **NORTH LEC COOLING TOWER**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	CORROSION INHIBITOR	**Gallons**	**400**	**400**	100			PHOSPHORIC ACID	60 %		7664-38-2
	CAS No	State: Liquid	Storage Container: Tote Bin		Pressue	Waste Code					
	Grid: F7	Type: Mixture	Days on Site: 365		Temperature						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **OUTSIDE ADJACENT TO COOLING TOWER**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases Corrosive, Flammable Gas, Irritant	**AMMONIA, ANHYDROUS** CAS No 7664-41-7 ✓EHS	**Pounds** State: Liquid Type: Pure	**54624** Storage Container: Aboveground Tank Days on Site: 365	**60000**	30000 Pressue: > Ambient Temperature: Ambient	Waste Code: 141	- Fire - Pressure Release - Acute Health				
	MAGNESIUM SULFATE, AQUEOUS SOLUTION CAS No 7487-18-5 Grid: F8	**Gallons** State: Liquid Type: Mixture	**5000** Storage Container: Aboveground Tank Days on Site: 365	**6000**	1500 Pressue: Ambient Temperature: Ambient	Waste Code:		MAGNESIUM SULFATE WATER	30 % 70 %		7487-18-5 7732-18-5

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**NORTHERN CALIFORNIA POWER AGENCY**	Chemical Location	CERS ID **10183585**
Facility Name	**NORTHERN CALIF POWER AGENCY**	**STI/LEC WATER TREATMENT BUILDING & STIG HRSG**	Facility ID
	12745 N THORNTON RD, LODI 95242	**CHEMICAL SKID**	Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**Sodium Hydroxide 15%** CAS No 1310-73-2	**Gallons** State Liquid Type Mixture	**300** Storage Container Plastic/Non-metalic Drum Days on Site: 365	**55**	100 Pressue Temperature	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **STIG & LEC WATER TREATMENT**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Sensitizer, Toxic	**BIOCIDE PC-56** CAS No 55965-84-9	**Gallons** State Liquid Type Pure	**275** Storage Container Plastic/Non-metalic Drum Days on Site: 365	**110**	110 Pressue Ambient Temperature Ambient	Waste Code	- Acute Health - Chronic health	5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE 2-METHYL-4-ISOTHIAZOLIN-3-ONE MAGNESIUM NITRATE	1 % 1 %		26172-55-4 2682-20-4

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **STIG BOILER CHEM BERM**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 6.1 - Toxic Substances	**CARBOHYDRAZIDE**	**Gallons**	**75**	**75**	40			CARBOYHYDRAZIDE			497-18-7
								WATER			7732-18-5
Highly Toxic	CAS No 2231-57-4	State Liquid	Storage Container Tote Bin		Pressue Ambient	Waste Code					
		Type Pure	Days on Site: 365		Temperature Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **STIG BOILER CHEMICAL SKID**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Flammable Liquid, Class I-B	**AMINE** CAS No 2516-34-9	**Gallons** State Liquid Type Pure	**105** Storage Container Tote Bin Days on Site: 365	**105**	50 Pressue Ambient Temperature Ambient	Waste Code	- Acute Health	MORPITOLINE WATER	40 % 		110-91-8 7732-18-5
	NALCO 1742 CAS No	**Gallons** State Liquid Type	**120** Storage Container Tote Bin Days on Site: 365	**120**	70 Pressue Ambient Temperature Ambient	Waste Code	- Acute Health	SODUM HYDROXIDE SODIUM TRIPOLYPHOSPHATE WATER	1 % 		1310-73-2 7758-29-4
	PH STABILIZER CAS No Grid: D7	**Gallons** State Liquid Type Mixture	**50** Storage Container Tote Bin Days on Site: 365	**50**	25 Pressue Ambient Temperature Ambient	Waste Code		SODIUM HYDROXIDE POTASSIUM HYDROXIDE	60 % 30 %		1310-73-2 1310-58-2

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org.	**NORTHERN CALIFORNIA POWER AGENCY**	Chemical Location	CERS ID **10183585**
Facility Name	**NORTHERN CALIF POWER AGENCY**	**STIG GSU TRANSFORMER (OUTSIDE ADMIN BUILDING)**	Facility ID
	12745 N THORNTON RD, LODI 95242		Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class III-B	**MINERAL OIL** CAS No 8012-95-1	**Gallons** State Liquid Type Pure	**13850** Storage Container Aboveground Tank Days on Site: 365	**13500**	13500 Pressue > Ambient Temperature > Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **STIG OUTSIDE ADJACENT TO COOLING TOWER**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Water Reactive, Class 2	**Electrolyte/sulfuric Acid** CAS No 7664-93-9 ✔EHS	**Pounds** State: Liquid Type: Pure	**1372** Storage Container: Aboveground Tank, Plastic/Non-metalic Drum Days on Site: 365	**1372**	1372 Pressue: Ambient Temperature: Ambient	Waste Code: 791	- Reactive - Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **STIG TURBINE / GENERATOR LUBE OIL TANKS**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	LUBRICATING OIL	**Gallons**	**1380**	**500**	1000						
	CAS No: 64742-25-2	State: Liquid	Storage Container: Aboveground Tank		Pressue: Ambient	Waste Code					
		Type	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **STIG WATER TREATMENT BUILDING**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	BLEACH CAS No 68515-07-1	**Gallons** State Liquid Type Storage Container Tank Inside Building Days on Site: 365	**540**	**1000**	300 Pressue Ambient Temperature Ambient	Waste Code	- Acute Health	SODIUM HYPOCHLORITE SODIUM HYDROXIDE SODIUM CHLORIDE WATER	12 % 1 % 1 % 86 %		7681-52-9 1310-73-2
	GLUTARALDEHYDE CAS No 111-30-8	**Gallons** State Liquid Type Mixture Storage Container Plastic/Non-metalic Drum Days on Site: 365	**150**	**300**	150 Pressue Ambient Temperature Ambient	Waste Code	- Acute Health - Chronic health	GLUTARALDEHYDE METHANOL	50 % 1 %		111-30-8 67-56-1
	REVERSE OSMOSIS CLEANER CAS No	**Gallons** State Liquid Type Storage Container Plastic/Non-metalic Drum Days on Site: 365	**110**	**55**	55 Pressue Ambient Temperature Ambient	Waste Code		TETRASODIUM EDTA	1 %		64-02-8
	ANTIFOAM CAS No Grid: C8	**Gallons** State Liquid Type Mixture Storage Container Plastic/Non-metalic Drum Days on Site: 365	**25**	**5**	10 Pressue Ambient Temperature Ambient	Waste Code	- Fire	N-DECANOL N-OCTANOL PARAFFIN WAX HYDROTREATED LIGHT DISTILLATE STRAIGHT RUN MIDDLE DISTILLATE	5 % 10 % 1 % 20 % 70 %		112-30-1 111-87-5 8002-74-2 64742-47-8 64741-44-2
	FIRE FIGHTING FOAM CAS No 112-18-5	**Gallons** State Liquid Type Mixture Storage Container Plastic/Non-metalic Drum Days on Site: 365	**330**	**55**	330 Pressue Ambient Temperature Ambient	Waste Code		WATER DIETHYLENE GLYCOL BUTYL ETHER MIXTURE PROP HYDROCARBON SURFACTANT PROP FLUOROSURFACTANT	40 % 27 % 33 %		7732-18-5 112-34-5
	BOILER TREATMENT 7220 CAS No	**Gallons** State Liquid Type Mixture Storage Container Plastic/Non-metalic Drum	**10**	**5**	5 Pressue Temperature	Waste Code					
	REVERSE OSMOSIS ANTISCALANT PC-510T CAS No	**Gallons** State Liquid Type Mixture Storage Container Plastic/Non-metalic Drum Days on Site: 365	**55**	**55**	25 Pressue Ambient Temperature Ambient	Waste Code					
	SCALE INHIBITOR 3DT157 CAS No	**Gallons** State Liquid Type Mixture Storage Container Plastic/Non-metalic Drum Days on Site: 365	**55**	**55**	25 Pressue Ambient Temperature Ambient	Waste Code					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **STIG WATER TREATMENT BUILDING**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 9 - Misc. Hazardous Materials	**Lithium Bromide** CAS No 7550-35-8	**Pounds** State Solid Type Pure	**90** Storage Container Plastic/Non-metalic Drum Days on Site: 365	**30**	30 Pressue Ambient Temperature Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **STIG/LEC BATTERY ROOMS**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	LEAD ACID BATTERY	**Pounds**	**13500**	**75**	13500		- Fire	SULFURIC ACID SOLUTION	18 %	✓	7664-93-9
	CAS No ✓EHS	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code	- Acute Health	LEAD DIOXIDE POSITIVE PLATE			1309-60
		Type	Days on Site: 365		Temperature: Ambient			LEAD NEGATIVE PLATE	52 %		

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **STIG/LEC CEMS BUILDINGS/LEC SCR**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	CALIBRATION GAS	**Cu. Feet**	**5922**	**141**	3525		- Pressure	NITRIC OXIDE	1 %		10102-43-9
	CAS No	State: Gas	Storage Container: Cylinder		Pressue: Ambient	Waste Code	Release - Acute Health - Chronic health	NITROGEN	99 %		7727-37-9
		Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **STIG/LEC WATER TREATMENT BUILDINGS**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	SODIUM BISULFITE PC-7408	**Gallons**	**220**	**220**	165			SODIUM BISULFITE	15 %		7631-90-5
	CAS No 7631-90-5	State: Liquid	Storage Container: Tank Inside Building		Pressue: Ambient	Waste Code		WATER			7732-18-5
		Type	Days on Site: 365		Temperature: Ambient						
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Sensitizer, Toxic	**BIOCIDE PC-11**	**Gallons**	**220**	**110**	55		- Acute Health - Chronic health	DIBROMOACETONITRILE	1 %		3252-43-5
	CAS No 55965-84-9	State: Liquid	Storage Container: Plastic/Non-metalic Drum		Pressue: Ambient	Waste Code		2,2-DIBROMO-3-NITRILOPROPIONAMIDE			10222-01-2
		Type: Pure	Days on Site: 365		Temperature: Ambient			POLYETHYLENE GLYCOL	10 %		
	REVERSE OSMOSIS ANTISCALANT	**Gallons**	**200**	**200**	55						
	CAS No Grid: F7	State: Liquid	Storage Container: Tote Bin		Pressue: Ambient	Waste Code					
		Type: Mixture	Days on Site: 365		Temperature: Ambient						

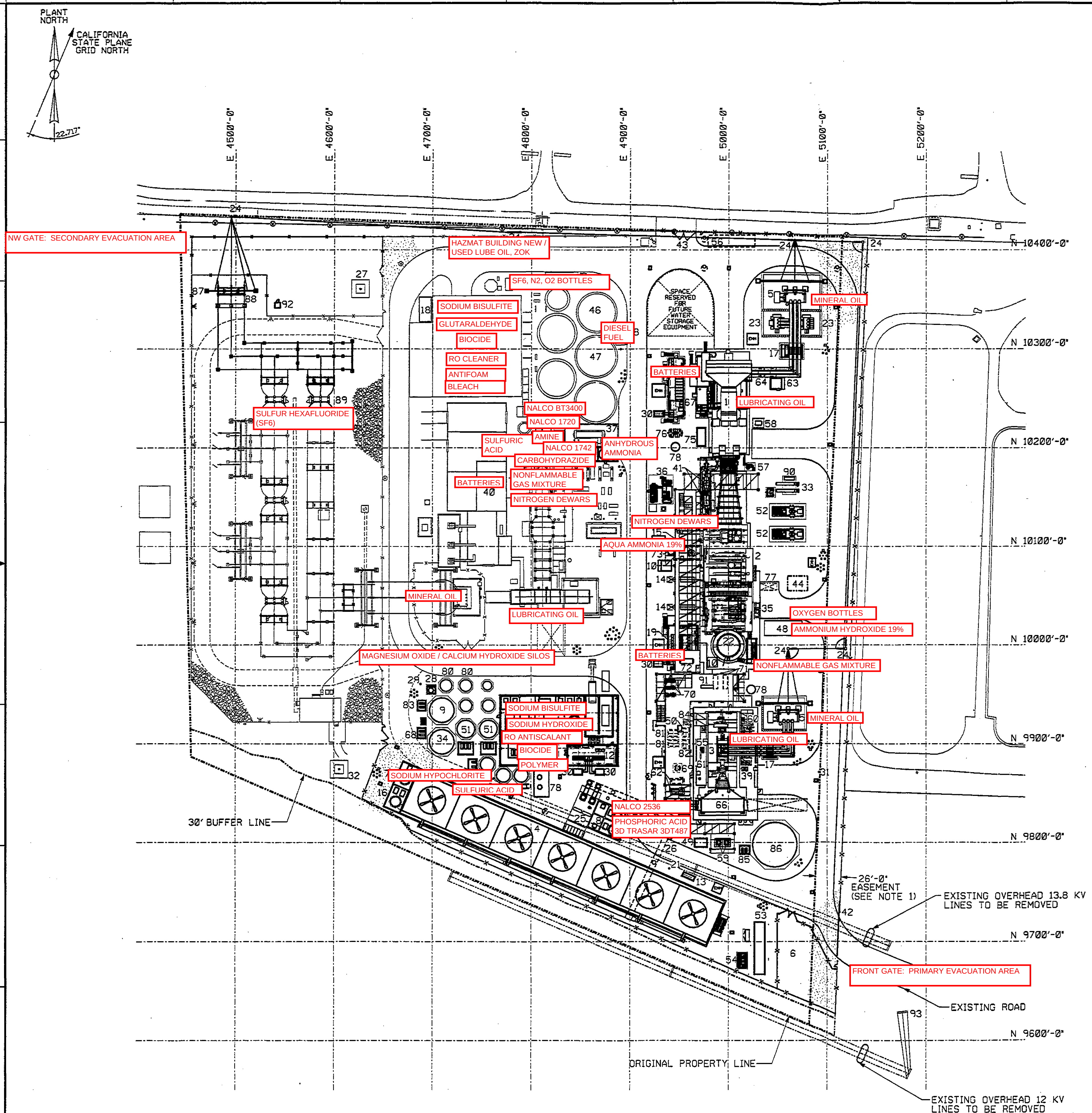
Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **NORTHERN CALIFORNIA POWER AGENCY**
Facility Name **NORTHERN CALIF POWER AGENCY**
12745 N THORNTON RD, LODI 95242

Chemical Location **WEST STIG HRSG/WEST LEC HRSG**

CERS ID **10183585**
Facility ID
Status **Submitted** on 11/22/2017 11:15 AM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 2.2 - Nonflammable Gases Cryogen	**Nitrogen, Liquid** CAS No 7727-37-9 Grid: D8.5	**Cu. Feet** State Liquid Type Pure	**30632** Storage Container Cylinder, Other Days on Site: 365	**3713**	11139 Pressue Ambient Temperature Ambient	Waste Code	- Pressure Release - Acute Health				



PLANT SITE DESCRIPTION

1. COMBUSTION TURBINE/GENERATOR
2. HRSG
3. STEAM TURBINE/GENERATOR
4. COOLING TOWER
5. GSU TRANSFORMER
6. GAS METERING AREA (BY PG&E)
7. WATER TREATMENT BUILDING
8. COOLING TOWER CHEMICAL AREA
9. DEMINERALIZED WATER TANK
10. CEMS BUILDING
11. STIG PLANT COOLING TOWER (TEMPORARY)
12. ELEC SWGR ROOM
13. OIL/WATER SEPARATOR-PROCESS DRAINS
14. BOILER FEED WATER PUMP
15. BOILER BLOWDOWN TANK / SUMP / PUMPS
16. SULFURIC ACID TANK AND PUMPS
17. GEN. CIRCUT BREAKER
18. ON SITE OIL & WASTE STORAGE
19. STG/HRSG PDC
20. CTG PDC
21. ALTERNATE WATER SOURCE WELL
22. STACK
23. 4160V UNIT AUX. TRANSFORMER
24. TRANSMISSION TOWER
25. CIRCULATING WATER PUMP STRUCTURE
26. CIRCULATING WATER PIPING (U/G)
27. EXISTING INJECTION WELL
28. POTABLE WATER SKID
29. POTABLE WATER WELL
30. 480 V SUS DRY TYPE TRANSFORMER
31. REPLACEMENT WELL (FUTURE)
32. INJECTION WELL HEAD
33. FUEL GAS PERFORMANCE HEATER
34. INJECTION WATER STORAGE TANK
35. AIG SKID
36. AUXILIARY BOILER
37. AMMONIA STORAGE TANK (EXISTING)
38. FIRE PUMP (EXISTING)
39. S.T. CONTROL OIL SUPPLY UNIT
40. CONTROL ROOM (EXISTING)
41. ROTOR AIR COOLERS
42. MAIN ENTRANCE
43. SECONDARY ENTRANCE
44. POST CONSTRUCTION TRAILER AREA
45. STIG PLANT COOLING WATER PUMPS (TEMP.)
46. FIREWATER TANK (EXISTING 250,000 GAL.)
47. FIREWATER TANK (EXISTING 250,000 GAL.)
48. STEAM CYCLE CHEMICAL FEED AREA
49. CONDENSATE POLISHING UNIT
50. COMPRESSED AIR FILTER
51. CLARIFIERS
52. GAS COMPRESSOR
53. STIG PLANT GAS COMPRESSOR (RELOCATED)
54. FUEL GAS SCRUBBER SKID
55. GLAND STEAM CONDENSER
56. OIL/WATER SEPARATOR-STORM WATER
57. C.T. FUEL GAS FILTER/SEPARATORS
58. C.T. CONTROL OIL SKID
59. CONDENSATE EXTRACTION PUMPS
60. S.T. LUBE OIL SKID
61. GLAND STEAM UNIT (BELOW GLAND STEAM CONDENSER)
62. VACUUM PUMPS
63. EXCITATION SKID AND TRANSFORMER
64. GENERATOR VT AND SURGE CUBICLE
65. C.T. ELECTRICAL PACKAGE
66. CONDENSER
67. C.T. LUBE OIL PACKAGE
68. INJECTION WATER PUMP SKID
69. S.T. DRAIN TANK
70. CLOSED COOLING WATER PUMPS
71. CLOSED COOLING WATER HEAT EXCHANGERS
72. CLOSED COOLING WATER HEAD TANK
73. BLOWDOWN TANK SILENCER
74. SAMPLE PANEL
75. COMPRESSOR WASH SKID (PORTABLE, BUT SET IN PLACE)
76. C.T. WATER WASH TANK (UNDER GROUND)
77. CATALYST REMOVAL AREA
78. WASTE COLLECTION SUMP
79. COAGULANT SKID AND PUMPS
80. DRY LIME & MAGOX SILOS
81. AIR COMPRESSOR
82. COMPRESSED AIR DRYER
83. DEMINERALIZED WATER PUMP SKID
84. COMPRESSED AIR RECEIVER
85. SERVICE WATER PUMPS
86. SERVICE WATER TANK
87. TAKE OFF TOWER
88. DISCONNECT SWITCH
89. CIRCUIT BREAKER
90. AUXILIARY BOILER PRESSURE REDUCING STATION
91. AUXILIARY STEAM SUPER HEATER
92. PG&E METERING ENCLOSURE
93. NEW 12 KV INTERFACE POLE

COORDINATE SYSTEM:

LOCATION	STATE COORDINATE	PLANT COORDINATE
CENTERLINE OF HRSG STACK NORTH/ SOUTH	N 2219819.42	N 9999'-7"
CENTERLINE OF HRSG STACK EAST/ WEST	E 6306478.84	E 5000'-0"
TOP OF CTG & HRSG FOUNDATION CONC.	EL 9.5	EL 100'-0"
SIEMENS' EL. 0'-0"	EL 9.5	EL 100'-0"
N/E HRSG EL. 0'-0"	EL 9.75	EL 100'-3"

STATE COORDINATES BASED ON CALIFORNIA STATE PLANE GRID - NAD83 ZONE III

LEGEND

- GRAVEL
- CONCRETE
- ASPHALT
- ELECTRICAL MANHOLE
- FIRE MAIN POST IND VLV
- FIRE HYDRANT
- FIRE DEPARTMENT CONNECTION

NOTE

1. NO PERMANENT ABOVE GROUND OR UNDERGROUND FEATURES SHALL BE LOCATED IN EASMENT ON EAST SIDE OF SITE EXCEPT ROAD, TRANSMISSION TOWERS, FENCE, GATES AND REQUIRED UTILITIES.

50 0 50 100 150

SCALE: 1" = 50'

REV	DATE	DESCRIPTION	DRAWN	CHECKED	LEAD DESIGNER	ENGINEER/ TECH SPEC	LEAD DISC ENGINEER	PROJ ENGR MANAGER	PROJECT MANAGER
D	5/06/10	GENERAL REVISION	WPF		MC	SAB	SB		SB
C	12/21/09	GENERAL REVISION	WPF		MC	MP	SB		SB
B	11/17/09	GENERAL REVISION	WPF		MC	MP	SB		SB
A	9/17/09	INITIAL ISSUE	WPF		MC	MP	SB		SB

PRELIMINARY STATUS DATE — REPRESENTS GENERAL DESIGN CONCEPTS BASED ON ASSUMPTIONS. REVIEWED NOT CHECKED.
LDE S. BOLLES 9/17/09

APPROVED STATUS DATE — REPRESENTS REVIEWED AND APPROVED DESIGN. ANY PORTION MARKED "HOLD" RETAINS PRELIMINARY STATUS.
LDE

ORIGINATING PERSONNEL | PROFESSIONAL ENGINEER'S SEAL

DRAWN BY: WPF
CHECKED BY:
LEAD DESIGNER: M. CARTER
ENGINEER/TECH SPECIALIST: M. PELLETIER
PROJECT ENGINEERING MANAGER:
PROJECT MANAGER: S. BLUE

Zero Harm — Leadership, No Incidents, Safe Behavior

ORIGINALLY PREPARED UNDER THE RESPONSIBLE SUPERVISION OF
PE: ______ STATE: ______
LIC. NO.: ______ DATE: ______

WorleyParsons
resources & energy

CLIENT/PROJECT TITLE
A PUBLIC AGENCY NCPA NORTHERN CALIFORNIA POWER AGENCY
LODI ENERGY CENTER

GENERAL ARRANGEMENT
OVERALL SITE

SCALE: 1"=50'
DRAWING SIZE: ARCH D (36" x 24")
WORLEYPARSONS DWG. NO.: LODI-1-DW-111-002-001
REV: D

..\11002001.dgn 5/6/2010 1:54:25 PM

D. DISTRIBUTION

Name	Date
Randy S. Howard, General Manager Northern California Power Agency	11/7/2016
Ken Speer, Assistant General Manager, Generation Services	11/7/2016
Bob Young, Manager, Geothermal Facilities, Generation Services	11/7/2016
Randy Bowersox, Manager, Hydroelectric Facility, Generation Services	11/7/2016
Michael DeBortoli, Manager, CTs and Lodi Energy Center, Generation Services	11/7/2016
John Koos, Compliance Manager, Geothermal Facilities	11/7/2016
Vinnie Venethongkham, Compliance Manager, CTs/Lodi Energy Center	11/7/2016
Dennis Tarap, Operations Supervisor, Hydroelectric Facility	11/7/2016
Vicki Cichocki, Human Resources Director NCPA	11/7/2016

Lodi Energy Center
Annual Compliance Report

APPENDIX F: COPIES OF THE NOVs and LEC'S RESPONSES

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

REVISED

BREAKDOWN / TITLE V - DEVIATION REPORTING FORM

Check the appropriate box if using this form to submit/report a:

☐ Breakdown Notification (must be reported within 1 hour)

☐ Title V Deviation

☒ Breakdown Follow-up Report

☐ Title V Deviation/Breakdown Follow-up Report

This form can be used to file the initial report of an equipment breakdown, and as the follow-up report for both a breakdown and/or deviation from a Federal Title V permit condition. The required reports must be submitted to the nearest District regional office as follows:

- Breakdown follow-up reports no later than 10 days after returning to compliance
- Deviation reports no later than 10 days after discovery

Company Name: Northern California Power Agency Facility ID: **N-2697**

Breakdown - Initial Notification:

Reported by: Matt Cottrell Date: 12/21/2018

Reported to: North.Breakdown@valleyair.org Time: 01:12AM

BREAKDOWN / DEVIATION INFORMATION

1. **Permit unit and condition #'s:**
   N-2697-5-3 Condition 50

2. **Equipment involved:**
   The equipment involved was the data acquisition and handling system (DAHS) and the communication card for the Continuous Emission Monitoring System (CEMS).

3. **Location of operation:**
   12745 N. THORNTON RD LODI, CA 95242

4. **Description of permit condition:**

   50. The owner or operator shall maintain the following records: the date, time and duration of any malfunction of the continuous monitoring equipment; dates of performance testing; dates of evaluations, calibrations, checks, and adjustments of the continuous monitoring equipment; date and time period which a continuous monitoring system or monitoring device was inoperative.

5. **Date, time, and duration of breakdown/deviation:**
   12/20/2018, 9:44PM – 12/21/2018, 09:19AM (11 hours 35 min duration)

6. Description of breakdown/deviation (include excess and visible emissions, if applicable):

On 12/21/2018 at 12:15AM it was discovered that the data acquisition and handling system (DAHS) for Lodi Energy Center Unit CT1 (N-2697-5-3) was not adequately displaying CEMS data. Upon further investigation it was determined that the CEMS PLC Communication/Network card failed. Data was lost for the time period of the breakdown. Missing data substitution procedures will be followed.

During the initial discovery, the operator verified the CEMS monitoring and analyzing equipment was in proper operating order. The operator then reported the communication breakdown to SJVAPCD. Afterwards, the operator called the "oncall" NCPA technician to troubleshoot the communication issue. It was determined there was an issue with the network card on the PLC. After consulting with Teledyne, the CEMS manufacture, the technician restarted the PLC to reinitiate the Communication/Network card. Once the PLC restarted all communications returned.

In follow-up to this issue, the NCPA technician is in process of procuring a new communication card for the CEMS PLC.

Note of correction:

In the initial breakdown report, Matt Cottrell listed the initial breakdown occurring at 12/20/2018 at 12:15AM. The actual breakdown was discovered on 12/21/2018 12:15AM.

7. **Date and time when breakdown/deviation was discovered:**
12/21/2018, 12:15AM

8. **Date and time compliance was achieved:**
12/21/2018, 09:20 AM

9. **Probable cause of breakdown/deviation:**
The cause of the equipment malfunction was the failure of CEMS Communication/Network card.

10. **Measures taken to correct this occurrence and prevent recurrence:**
The CEMS was restarted and NCPA is in process of procuring a new communication card for the CEMS PLC.

Provide any additional information necessary to establish that this occurrence was the result of an unavoidable failure or malfunction; Rule 1100 – *Equipment Breakdown* assigns the burden of proof to the source owner/operator seeking relief.

The failure of the CEMS network card was unforeseen and unavoidable because there are no warnings of the failure.

If you have any question or concerns regarding please feel free to contact me, Jeremy Lawson (916) 765.3225.

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

CERTIFICATION:

I declare, under penalty of perjury under the laws of the state of California, that based on information and belief formed after reasonable inquiry, all information provided in this report is true, accurate, and addresses all deviations that resulted from this event:

Michael DeBortoli
Signature of Responsible Official
(Responsible Official only required for Title V Permit Holders)

12/27/18
Date

Michael DeBortoli
Name of Responsible Official

209-210-5000
Telephone

Plant Manager
Title of Responsible Official

michael.debortoli@ncpa.com
Email

Northern Region Office
(Merced, San Joaquin, & Stanislaus Counties)
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 ♦ FAX: (209) 557-6475

Central Region Office
(Fresno, Kings, & Madera Counties)
1990 E Gettysburg Ave
Fresno, CA 93726-0244
Tel: (559) 230-5950 ♦ FAX: (559) 230-6062

Southern Region Office
(Tulare County & Valley portion of Kern County)
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: (661) 392-5500 ♦ FAX: (661) 392-5585

www.valleyair.org www.healthairliving.com

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

Tuesday, January 08, 2019

Mike DeBortoli
NORTHERN CALIFORNIA POWER
651 COMMERCE DR
ROSEVILLE, CA 95678

RE: Breakdown Request # N-2018-12-13

Dear Mike DeBortoli,

NORTHERN CALIFORNIA POWER requested breakdown relief on 12/21/2018 for the (N-2697-5-3) located at 12745 N THORNTON RD. After a careful review, the District has determined that this equipment failure qualifies for breakdown relief as per District Rule 1100 – Equipment Breakdown. No further enforcement action will be taken on this occurrence.

If you have any questions please contact me or Lori Sheridan at (209) 557-6427.

Sincerely,

Jake Felton
Supervising Air Quality Inspector

BREAKDOWN / TITLE V - DEVIATION REPORTING FORM

Check the appropriate box if using this form to submit/report a:

☐ Breakdown Notification (must be reported within 1 hour)

☐ Title V Deviation

☒ Breakdown Follow-up Report

☐ Title V Deviation/Breakdown Follow-up Report

This form can be used to file the initial report of an equipment breakdown, and as the follow-up report for both a breakdown and/or deviation from a Federal Title V permit condition. The required reports must be submitted to the nearest District regional office as follows:

- Breakdown follow-up reports no later than 10 days after returning to compliance
- Deviation reports no later than 10 days after discovery

Company Name: Northern California Power Agency Facility ID: **N-2697**

Breakdown - Initial Notification:

Reported by: James Wertz Date: 12/4/2018

Reported to: North.Breakdown@valleyair.org Time: 10:15AM

BREAKDOWN / DEVIATION INFORMATION

1. **Permit unit and condition #'s:**
   N-2697-5-3 CONDITION #19, #41, #43 and #54

2. **Equipment involved:**
   THE DATA ACQUISITION AND HANDLING SYSTEM USED FOR CONTINUOUS EMISSION MONITORING REPORTING ON THE 294MW (NOMINAL) COMBINED-CYCLE ELECTRIC GENERATION PLANT CONSISTING OF A SIEMENS INDUSTRIAL FRAME "FLEX PLANT 30" STG6-5000F NATURAL GAS-FIRED TURBINE ENGINE WITH DRY LOW-NOX COMBUSTORS, AN UNFIRED HEAT RECOVERY STEAM GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION WITH AMMONIA INJECTION AND AN OXIDIZATION CATALYST AND A STEAM TURBINE GENERATOR.

3. **Location of operation:**
   12745 N. THORNTON RD LODI, CA 95242

4. **Description of permit condition:**
   19. Each 3-hour rolling average period will be compiled from the three most recent one hour periods.
   41. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NOx, CO and O2 concentrations.
   43. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour
   54. The owner or operator shall maintain records of hourly and daily emissions

5. **Date, time, and duration of breakdown/deviation:**
12/3/2018, 21:40PM – 12/3/2018 22:13 is the duration of lost and missing data. The final repairs to the DAHS were completed on 12/6/2018, 12:00PM (61 hours 20 min duration)

6. Description of breakdown/deviation (include excess and visible emissions, if applicable):

On 12/3/2018 at 22:40 it was discovered that the data acquisition and handling system (DAHS) for Lodi Energy Center Unit CT1 (N-2697-5-3) was not adequately displaying CEMS data. Review of the system and analyzers showed that the emission monitors were still functioning. Further investigation revealed that the primary hard drive, followed by the secondary hard drive for the DAHS failed. At the time it was not thought to be a breakdown because the PLC/Analyzers continued to function. As the problem was diagnosed, at 12/4/18 at 09:30 AM it was discovered that a breakdown had occurred. During this time all CEMS data was still collected and stored on the PLC and fed to the emissions control equipment. The district indicated that their polling system was able to collect the data.

On 12/6/2018 at 12:00PM Teledyne Monitor Labs was able to fully restore one of the hard drives enabling data collection and viewing on the DAHS.

Missing data will be reconciled with data substitution procedures from the CFR.

7. **Date and time when breakdown/deviation was discovered:**
12/4/2018, 09:30AM

8. **Date and time compliance was achieved:**
12/6/2018, 12:00PM the system was fully functional.

9. **Probable cause of breakdown/deviation:**
The cause of the equipment malfunction was the failure of Dell hard drives on the DAHS.

10. **Measures taken to correct this occurrence and prevent recurrence:**
They failed equipment was replaced with new and the operating system and DAHS management software was reloaded.

Provide any additional information necessary to establish that this occurrence was the result of an unavoidable failure or malfunction; Rule 1100 – *Equipment Breakdown* assigns the burden of proof to the source owner/operator seeking relief.

The failure of the DAHS hard drives was unforeseen and unavoidable due to dell hard drives typically having a 5 year life expectance and maintenance regiment; the current hard drives were 3 years old.

If you have any question or concerns regarding please feel free to contact me, (209) 210-5009.

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING

CERTIFICATION:

I declare, under penalty of perjury under the laws of the state of California, that based on information and belief formed after reasonable inquiry, all information provided in this report is true, accurate, and addresses all deviations that resulted from this event:

Michael DeBortoli
Signature of Responsible Official
(Responsible Official only required for Title V Permit Holders)

1/1/19
Date

Michael DeBortoli
Name of Responsible Official

209-210-5000
Telephone

Plant Manager
Title of Responsible Official

michael.debortoli@ncpa.com
Email

Northern Region Office
(Merced, San Joaquin, & Stanislaus Counties)
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 ♦ FAX: (209) 557-6475

Central Region Office
(Fresno, Kings, & Madera Counties)
1990 E Gettysburg Ave
Fresno, CA 93726-0244
Tel: (559) 230-5950 ♦ FAX: (559) 230-6062

Southern Region Office
(Tulare County & Valley portion of Kern County)
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: (661) 392-5500 ♦ FAX: (661) 392-5585

www.valleyair.org www.healthairliving.com

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

Tuesday, January 08, 2019

Mike DeBortoli
NORTHERN CALIFORNIA POWER
651 COMMERCE DR
ROSEVILLE, CA 95678

RE: Breakdown Request # N-2018-12-14

Dear Mike DeBortoli,

NORTHERN CALIFORNIA POWER requested breakdown relief on 12/04/2018 for the (N-2697-5-3) located at 12745 N THORNTON RD. After a careful review, the District has determined that this equipment failure qualifies for breakdown relief as per District Rule 1100 – Equipment Breakdown. No further enforcement action will be taken on this occurrence.

If you have any questions please contact me or Lori Sheridan at (209) 557-6427.

Sincerely,

Jake Felton
Supervising Air Quality Inspector

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

BREAKDOWN / TITLE V - DEVIATION REPORTING FORM

Check the appropriate box if using this form to submit/report a:

☐ Breakdown Notification (must be reported within 1 hour)

☐ Title V Deviation

☒ Breakdown Follow-up Report

☐ Title V Deviation/Breakdown Follow-up Report

This form can be used to file the initial report of an equipment breakdown, and as the follow-up report for both a breakdown and/or deviation from a Federal Title V permit condition. The required reports must be submitted to the nearest District regional office as follows:

- Breakdown follow-up reports no later than 10 days after returning to compliance
- Deviation reports no later than 10 days after discovery

Company Name: Northern California Power Agency Facility ID: **N-2697**

Breakdown - Initial Notification:

Reported by: Matthew Cottrell Date: 1/27/2018

Reported to: North.Breakdown@valleyair.org Time: 03:43AM

BREAKDOWN / DEVIATION INFORMATION

1. Permit unit and condition number(s):
   N-2697-5-3 CONDITION NUMBER 17

2. Equipment involved:

   294 MW (NOMINAL) COMBINED-CYCLE ELECTRIC GENERATION PLANT CONSISTING OF A SIEMENS INDUSTRIAL FRAME "FLEX PLANT 30" STG6-5000F NATURAL GAS-FIRED TURBINE ENGINE WITH DRY LOW-NOX COMBUSTORS, AN UNFIRED HEAT RECOVERY STEAM GENERATOR SERVED BY A SELECTIVE CATALYTIC REDUCTION WITH AMMONIA INJECTION AND AN OXIDIZATION CATALYST AND A STEAM TURBINE GENERATOR.

3. Location of operation:
   12745 N. THORNTON RD LODI, CA 95242

4. Description of permit condition:

   EXCEPT DURING STARTUP, SHUTDOWN AND COMBUSTOR TUNING PERIODS, EMISSIONS FROM THE GAS TURBINE SYSTEM SHALL NOT EXCEED CO - 2.0 PPMVD @ 15% 02. ALL EMISSION LIMITS ARE BASED ON 3-HOUR ROLLING AVERAGE PERIOD.

5. Date, time, and duration of breakdown/deviation:
   1/27/2018, 02:00 – 02:59AM, 1 hour duration

6. Description of breakdown/deviation (include excess and visible emissions, if applicable):

On 1/27/2018 at 03:00am the operator at Lodi Energy Center received an alarm indicating the CO ppmvdc 3-hour rolling average was 2.2 ppmvd (0.2 ppmvd over the limit). Due to the operating schedule put out by Cal-ISO that day the unit was consistently changing loads which causes higher than normal CO levels. During this time Cal-ISO has external automatic generation control of the unit; the plant is not in control of the unit's load movements.

Upon discovery of the high CO levels caused by Cal-ISO constantly moving the units load, the operator acted proactively and initiated a plant shutdown, removing control from Cal-ISO. Because of the operator's prompt response in eliminating emissions by shutting down the unit, the unit was able to regain compliance within the next operating hour.

7.	Date and time when breakdown/deviation was discovered: 1/27/2018, 03:00AM
8.	Date and time compliance was achieved: 1/27/2018, 03:00AM
9.	Probable cause of breakdown/deviation: Due to the operating schedule put out by Cal-ISO that day the unit was consistently changing loads which causes higher than normal CO levels. During this time Cal-ISO has external automatic generation control of the unit; the plant is not in control of the unit's load movements. If Cal-ISO had not conducted such dramatic load changes the unit would not have exceeded its limit.
10.	Measures taken to correct this occurrence and prevent recurrence: Upon discovery of the high CO levels caused by Cal-ISO, the plant operator's immediately removed the controls from Cal-ISO and initiated shutdown, bringing the unit back into compliance. In attempt to prevent Cal-ISO's actions from causing a CO exceedance in the future, a tuning was conducted on the engine by the manufacturer. The low level CO valves were adjusted to open earlier and the low load exhaust temperature was increased. Additionally, a pre-exceedance alarm was added to the CEMS.
•	Provide any additional information necessary to establish that this occurrence was the result of an unavoidable failure or malfunction; Rule 1100 – *Equipment Breakdown* assigns the burden of proof to the source owner/operator seeking relief. Attached is a trend showing the changes in load that Cal-ISO was conducting during the time of exceedance. If you have any question or concerns regarding this assessment please feel free to contact me, (209) 210-5009.

CERTIFICATION:

I declare, under penalty of perjury under the laws of the state of California, that based on information and belief formed after reasonable inquiry, all information provided in this report is true, accurate, and addresses all deviations that resulted from this event:

Signature of Responsible Official
(Responsible Official only required for Title V Permit Holders)

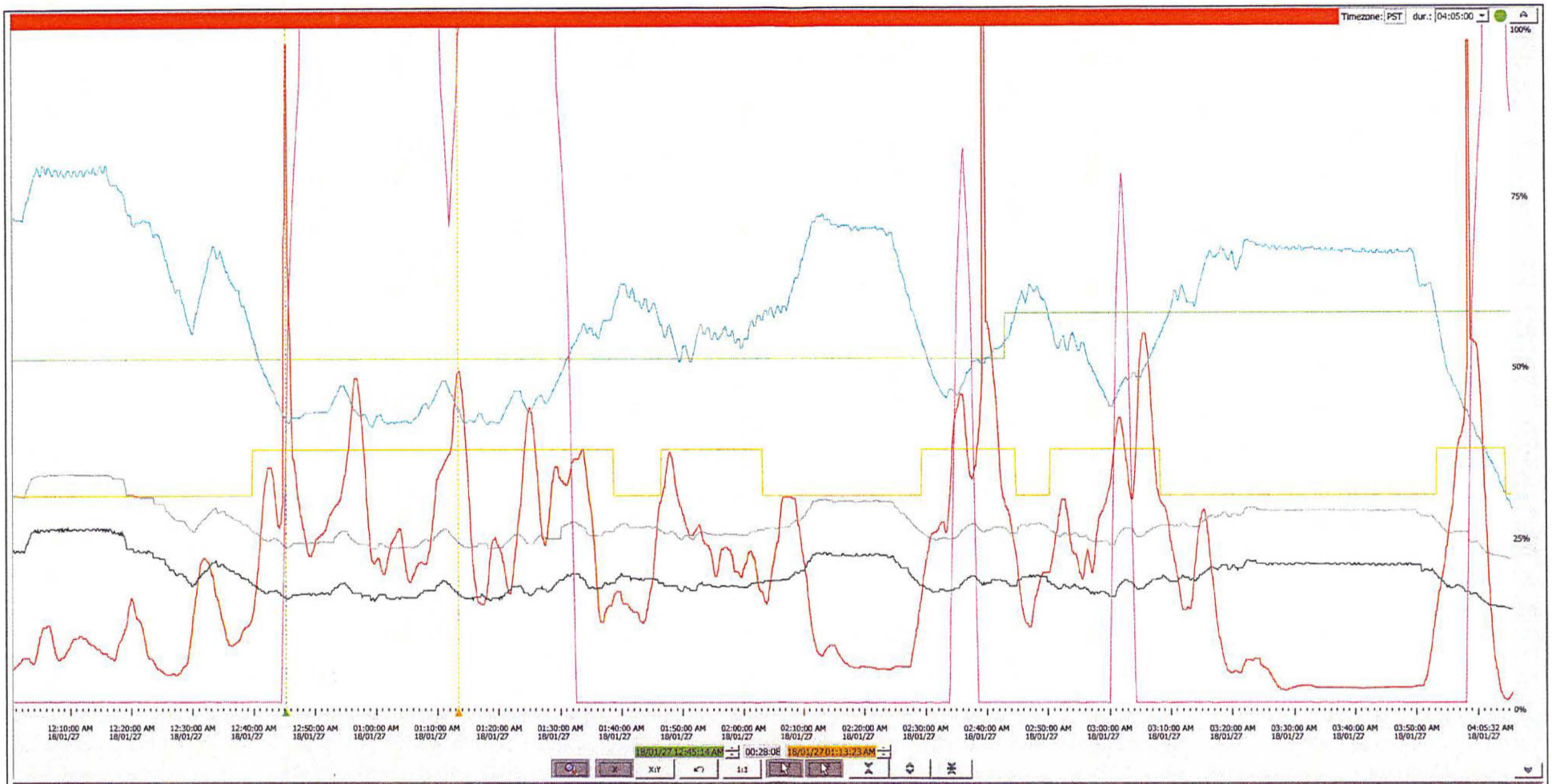
2/1/18
Date

BROOKLYN SAYLOR
Name of Responsible Official

(209) 210-5000
Telephone

Compliance Manager
Title of Responsible Official

brooklyn.saylor@NCPA.com
Email



SIGNAL TAG	DESIGNATION	RANGE LOW	RANGE HI	CURSOR 1	CURSOR 2	UNIT	LAST
10HNE10CQ901||OUT	HRSG STK CO AT 15% O2	0.0000	10.0000	9.7656	4.9154	PPMVD	0.2250
11_MKA01CE003S||XQ03	GT1 LOAD	-10.0000	250.0000	101.1545	104.3330	MW	66.2095
11HBK10CP002||XQ01	CO DIFFERENTIAL PRESS	0.0000	4.0000	0.6447	0.6688	in H2O	0.5806
11HBK10CP003||XQ01	SCR DIFFERENTIAL PRESS	0.0000	4.0000	0.9491	0.9852	in H2O	0.8798
11HAD31EJ001||Q1	CO 3 HOUR AVERAGE			0	0		1
11_MBH21CG001||XQ02	CO-REDUCTION CONTROL VLV POS	0.0000	100.0000	37.9232	92.0428		87.2541
11_MBH21EC001||ZV10	LOW CO CONTROL			1	1		0

				Date	11/02/03
				Drawn By	
				Checked By	
State	Change	Date	Editor	Standard	

CEMS AND SCR SYSTEMS

Trend Display 10HNE10CQ901|293499

= CEMS AND SCR

2018/01/27 04:30:23 AM

A PUBLIC AGENCY
NCPA
NORTHERN CALIFORNIA POWER AGENCY

Combustion Turbine
Lodi Energy Center
PO Box 1478
Lodi CA 95241-1478

(209) 333-6370 phone
(209) 333-6374 fax

www.ncpa.com

February 26, 2018

Ms. Lori Sheridan
San Joaquin Valley Air Pollution Control District
Northern Regional Office
4800 Enterprise Way
Modesto, CA 95356-8718

Re: Northern California Power Agency, Lodi Energy Center, Permit No. N-2697-5-3
Deviation Report for January 27, 2018 Breakdown of Outlet Temperature Control System.

Dear Ms. Sheridan,

On 1/27/2018 at 03:00am the operator at Lodi Energy Center received an alarm indicating the CO ppmvdc 3-hour rolling average was 2.2 ppmvd (0.2 ppmvd over the limit). Upon discovery of the high CO levels the operator initiated a plant shutdown and was able to return the unit to compliance within the next operating hour.

In response to the excess of CO emissions Siemens Energy Inc. was contacted to conduct an analysis of the unit and determine the cause of the high CO emission. Siemens determined that there was a malfunction with the unit's low load CO (LLCO) valves causing CO excursions to occur at 50% of the load even when the LLCO valves are fully open. This should not be the case within normal operating parameters and is an indication that the unit's equipment is not operating as intended.

In order to correct this malfunction a mid-level tuning of the outlet temperature control system was conducted. The tuning included re-adjusting the parameters of the LLCO valves to open sooner as the unit comes down in load. The low load exhaust set point temperature was also increased in order to raise firing temperatures and help mitigate future high CO levels.

The initial corrections made by Siemens have shown to be sufficient in lowering CO levels below the permit limits however higher than normal CO spikes are still being observed during rapid low and mid-level load changes. Siemen's investigation of the cause and adjustments within the Distributor Control System T3000 are still ongoing.

If you have any additional questions or would like additional information regarding the changes and corrections made to the Distributor Control System in response to the high CO levels please feel free to contact me.

Attached is the time sheet of initial actions and corrections made by Siemens to correct the malfunctions within the outlet temperature control system.

Sincerely,

Brooklyn Saylor
Compliance Manager
(209) 210-5009

Issue(s):
Site responding to wide swings on rate control, 165 MW to 295 MW. They have trouble keeping CO emissions stable, they go up after every change. They have tried OTC bias, but it goes off at 220MW's.

Initial Action Taken:
*** Comment entered by Frank Edge on 1/27/2018 2:38:33 PM ***
Pulled partial and called on-call engineer, G. Chapman.

*** Comment entered by Garrett Chapman on 1/27/2018 3:08:17 PM ***
Called back and spoke with CRO Jeff. Site reports that while GT is at low loads, site is having CO excursions as high as 10 ppm. Permit limit is a 3 hour rolling average of 2 ppm. External AGC system moves load around rapidly, and it is believed that the LLCO valves may be too sluggish to keep up. High CO is reportedly an ongoing issue. Siemens has provided an OTC bias for mitigation, but it has not been completely effective. Ambient temperatures are approximately 60°F which is typical for the season.

PDC will review partial data file and engage SE for recommendations.

*** Comment entered by Garrett Chapman on 1/27/2018 3:52:29 PM ***
Called back to site to report that data has been reviewed and SE has been engaged. The CO excursions are happening around 50% load even with LLCO valves fully open. Issue may require further mid load tuning of OTC system. Recommendations will be sent to site when available.

*** Comment entered by Garrett Chapman on 1/27/2018 7:32:40 PM ***
Urgent ticket 3-18-001254 entered.

*** Comment entered by Garrett Chapman on 1/27/2018 9:14:09 PM ***
SE called back and discussed the changes that were recommended for site including a sooner opening of the LLCO valves as the unit comes down in load and an increase in the low load exhaust temperature setpoint which should bring the firing temperature up and mitigate high CO.

PDC called back to site and discussed these recommendations with the on duty CRO. CRO stated unit was back online but will be shutdown soon via normal operational schedule. CRO requested a PDC report with changes sent to the normal distribution list to be implemented first thing Monday. No further assistance requested at this time.

PDF with recommended markup of the logic has been attached to this email. If changes are made while unit is online, it is recommended to have load above 65%.

Garrett Chapman
GT Specialist
Power Diagnostics®

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

☒ Northern Region Office
4800 Enterprise Way
Modesto, CA 95356-8718
(209) 557-6400

☐ Central Region Office
1990 E Gettysburg Ave
Fresno, CA 93726-0244
(559) 230-5950

☐ Southern Region Office
34946 Flyover Court
Bakersfield, CA 93308
(661) 392-5500

NOTICE OF VIOLATION NO. 5019524 Amended

ISSUED TO:

NAME: Northern California Power
ADDRESS: 651 Commerce Dr
CITY: Roseville **STATE:** CA **ZIP:** 95678
PHONE: (209) 210-5009

PERMIT/FACILITY: N-2697
PERMITS: 5-3

OCCURRENCE LOCATION:

NAME:
ADDRESS: 12745 N Thornton Rd ☐ Same as Above
CITY: Lodi **STATE:** CA **ZIP:** 95241
DATE: January 27, 2018 **TIME:** 2:00 am

THIS NOTICE HAS BEEN ISSUED AS A RESULT OF A VIOLATION OF:

☒ San Joaquin Valley Unified Air Pollution Control District Rules and Regulation
☐ California Health and Safety Code / California Code of Regulations

Rule(s)/Section(s): 2070 - Standards for Granting Applications, 2201 - New and Modified Stationary Source Review Rule, 4001 - New Source Performance Standards, 4302 - Incinerator Burning, 4703 - Stationary Gas Turbines

Equipment Type (If Applicable): Power Generation Plant

Description: The CO emissions from the gas turbine system exceeded the 2.0 ppmvd @ 15% O2 limit.

RECIPIENT NAME: BROOKLYN SAYLOR **TITLE:** EH&S Specialist

SIGNING THIS NOTICE IS NOT AN ADMISSION OF GUILT x _____
SIGNATURE

RETURN A COPY OF THIS NOTICE WITH A WRITTEN DESCRIPTION OF THE IMMEDIATE CORRECTIVE ACTION YOU HAVE TAKEN TO PREVENT A CONTINUED OR RECURRENT VIOLATION.

THIS VIOLATION IS SUBJECT TO SUBSTANTIAL PENALTY, YOUR RESPONSE DOES NOT PRECLUDE FURTHER LEGAL ACTION.

ISSUED BY: Lori Sheridan
DATE: Tue February 27, 2018 TIME: 8:47 am ☒ MAILED/EMAILED

Continued

INSTRUCTIONS

THIS VIOLATION IS SUBJECT TO SUBSTANTIAL PENALTY, AND YOUR RESPONSE DOES NOT PRECLUDE FURTHER LEGAL ACTION.

A VARIANCE SHOULD BE SOUGHT IF IT IS NECESSARY TO CONTINUE TO OPERATE IN VIOLATION OF DISTRICT REGULATIONS. A VARIANCE CANNOT BE GRANTED FOR OPERATING WITHOUT A PERMIT OR FOR ACTIVITIES WHICH CREATE A NUISANCE

FOR FURTHER INFORMATION ON ELIGIBILITY FOR, OR THE FILING OF A VARIANCE PETITION, CALL THE COMPLIANCE DIVISION AT THE INDICATED REGIONAL OFFICE

OPERATION WITHOUT A PERMIT

A permit application must be submitted immediately to the District's Permit Services Division. The permit application must reference the Notice of Violation number: 5019524.

If there are any questions regarding the submission of a permit application, contact the Permit Services Division at the indicated Regional office.

All OTHER VIOLATIONS

Within 10 days, return a copy of this notice with a written description of the corrective action you have taken to prevent continued or recurrent violation. Immediate corrective action must be taken to stop the violation.

If you have any questions or require additional information, contact the Compliance Division at the indicated Regional Office for assistance.

Para asistencia en Español, por favor llama a la oficina del Distrito del Aire a (559) 230-6000.

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

April 16, 2018

Brooklyn Saylor
Northern California Power
651 Commerce Dr.
Roseville, CA 95678

RE: NOTICE OF VIOLATION & PROPOSED SETTLEMENT
CASE NUMBER: N18-0229
NOV NUMBER: 5019524
PERMIT NUMBER: N-2697-5-3

Dear Brooklyn Saylor:

On February 23, 2018, staff from the San Joaquin Valley Air Pollution Control District(District) conducted a records review of Northern California Power's facility located at 12745 N. Thornton Road, Lodi, California. The review revealed that CO emissions from permit unit N-2697-5-3 exceeded the 2.0 ppmvd at 15% O2 limit.

In light of the above, it has been determined that you are in violation of District Rule 2070 - Standards for Granting Applications, 2201 - New and Modified Stationary Source Review Rule, 4001 - New Source Performance Standards, 4703 - Stationary Gas Turbines.

California Health & Safety Code (CH&SC) Section 42402.1 specifies that the penalty for such violations can include civil penalties of up to $25,000.00 for each day of each violation. The monetary amount of the District's offer specified below takes into account the magnitude and severity of the violation, as well as the prior history of violations of a similar nature. All parties, whether private, commercial, or governmental, are treated similarly in the settlement process, with any settlements offered being based upon an evaluation of the same factors and criteria in all cases.

Parties interested in resolving this matter may do so in accordance with the District's settlement policy as follows:

1. Payment of a civil penalty in the amount of $3,000.00, in accordance with CH&SC section 42400.7, recovery of a civil penalty precludes further prosecution for this violation.

2. In the event any further violations occur, the District may offer evidence to prove the facts of the current violation(s) in connection with any petition for a variance, permit revocation, abatement order before the District Hearing Board, or other legal proceeding. Similarly, you may raise any defenses or contrary proof you may have concerning the facts of current violation(s).

3. Entering into this settlement shall not constitute an admission of violating District Rules nor shall it be inferred to be such an admission in any administrative or judicial proceeding.

4. As an alternative to paying the entire penalty in one payment, the District is willing to discuss your situation and arrange a payment schedule in order to resolve this case.

If the above terms are acceptable, please remit payment by check or money order in the amount of $3,000.00 to:

San Joaquin Valley Unified Air Pollution Control District
Attn: Finance
1990 E Gettysburg Ave
Fresno, CA 93726-0244

Please write Case Number N18-0229 on your check and use the yellow envelope provided. You may also pay online by going to www.valleyair.org, click on "Online Bill Payment" and "Make Payments." You will need your case number and mailing zip code.

This letter constitutes an offer of settlement. If you wish to discuss this case with District personnel, please contact Chris Kalashian at (559) 230-5999.

If the District does not receive correspondence or payment within 14 days, it is assumed that you are not interested in resolving this matter and the case will be referred to District Legal Counsel for further action, which can include civil penalties of up to $25,000.00 per day for each day you were in violation.

Sincerely,

Clay Bishop
Supervising Air Quality Specialist

IF YOU HAVE ANY LEGAL QUESTIONS REGARDING SETTLEMENT, PENALTIES, OR PROCEDURES, YOU SHOULD SEEK THE ADVICE OF YOUR ATTORNEY.

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

May 01, 2018

Brooklyn Saylor
Northern California Power
651 Commerce Dr.
Roseville, CA 95678

RE: NOTICE OF VIOLATION & PROPOSED SETTLEMENT
CASE NUMBER: N18-0229
NOV NUMBER: 5019524
PTO NUMBER: N-2697
LOCATION: 12745 N Thornton Rd, Lodi, CA

Dear Brooklyn Saylor:

On April 19, 2018, the District received check number PM_223999505 in the amount of $3,000.00. The District considers Case number N18-0229 settled and closed.

Thank you for your cooperation in settling this matter.

Sincerely,

for Chris Kalashian
Air Quality Specialist II
Mutual Settlement Group

CK/lv

Account Information

Payment type:	**Notice of Violation**
Facility/Ag Permit Number or Case Number:	**N18-0229**
Zip code:	**95678**
Payment method:	**Credit Card**

Payment Information

Card type:	**Visa**
Card number:	**************9272**
Card holder name:	**Melissa C Philpot**
Payment amount (ex: 100.00):	**$3,000.00**
Processing fee:	**$80.70**

Michael DeBortoli

From: Melissa Philpot
Sent: Wednesday, April 18, 2018 12:38 PM
To: Michael DeBortoli
Subject: FW: Payment Confirmation

Kind regards,
Melissa C. Philpot
Material Procurement and Warehouse Coordinator

Northern California Power Agency
(209) 210-5024 – direct
(209) 333-6370 - main
(209) 333-6374 - fax

From: billpay@paymentus.com <billpay@paymentus.com>
Sent: Wednesday, April 18, 2018 12:28 PM
To: Melissa Philpot <Melissa.Philpot@ncpa.com>
Subject: Payment Confirmation

Dear MICHAEL DEBORTOLI,
We are pleased to confirm your payment with San Joaquin Valley Unified Air Pollution Control District. Below is the summary of your payment transaction. Your payment has been received and will be posted to your account on the next business day. Thank you for your continued relationship with San Joaquin Valley Unified Air Pollution Control District.

Confirmation number:	**223999505**	
Payment date:	**Apr 18, 2018 12:28:19 PM**	
Payment components:	**1. Case Number: N18-0229:**	**Amount Due - 3,000.00**
Payment amount (ex: 100.00):	**$3,000.00**	
Processing fee:	**$80.70**	
Total amount charged:	**$3,080.70**	

Contact Information

First name:	**Michael**
Last name:	**DeBortoli**
ZIP code:	**95678**
Daytime phone number:	**(916) 521-0047**
Email address:	**melissa.philpot@ncpa.com**

SAN JOAQUIN COUNTY
Greatness grows here.

Environmental Health Department

Linda Turkatte, REHS, Director

Kasey Foley, REHS, *Assistant Director*

PROGRAM COORDINATORS
Robert McClellon, REHS
Jeff Carruesco, REHS, RDI
Rodney Estrada, REHS
Willy Ng, REHS
Muniappa Naidu, REHS

November 07, 2018

CERS ID: 10183585

NORTHERN CALIFORNIA POWER AGENCY
RE: NORTHERN CALIF POWER AGENCY
P.O. BOX 1478
LODI, CA 95241

RE: NORTHERN CALIF POWER AGENCY
12745 N THRONTON RD
LODI, CA 95242

On January 06, 2016, Aris Veloso of the San Joaquin County Environmental Health Department (EHD) performed a routine hazardous waste inspection at the above referenced site.

An inspection report was issued identifying information to be submitted to bring this site into compliance. This information was required to be submitted 30 days after receiving the inspection report. This information has not been received resulting in a non-compliant status for this facility.

The outstanding violations are itemized on the following pages and may include violations from past inspections. Complete and submit a copy of the Return to Compliance Certification form to the EHD with a statement documenting the corrective actions that have been or will be taken for each violation, and any supporting paperwork.

Note: All EHD staff time associated with failing to comply, including the issuance of this letter, is billed at the current hourly rate ($152). Failure to submit the completed information immediately may result in a re-inspection, additional violations, and/or further legal action.

If you have any questions, please contact Elianna Florido at (209) 468-0343.

Thank you,

Elianna Florido, EHS

The following is an itemized list of hazardous waste violations that have not been addressed for NORTHERN CALIF POWER AGENCY as of November07, 2018.

Open violations from January 06, 2016 inspection

Violation #108 - Failed to complete, sign or date manifest; or obtain dated signature of transporter.
The uniform hazardous waste manifests are being completed using the address 12751 N. Thornton Rd. which is a City of Lodi facility address. The address for this facility is 12745 N. Thornton Rd. The generator and waste sections of the uniform manifest shall be completed and signed and dated by the generator. The transporter shall also sign and date the manifest. Ensure that all manifests are properly completed for any transport of a hazardous waste for off-site transfer, treatment, storage or disposal.

San Joaquin County
Environmental Health Department
1868 East Hazelton Avenue, Stockton, California 95205-6232
Telephone: (209) 468-3420 ***Fax:*** (209) 468-3433 ***Web:*** www.sjgov.org/ehd

RETURN TO COMPLIANCE CERTIFICATION

Any MINOR violations noted in the "Notice to Comply" in the attached Inspection Report must be corrected within 30 days of receipt of this inspection. This certification form must be submitted to the Environmental Health Department (EHD) address at the top of this form within 30 days of receipt of the Inspection Report. HSC 25404.1.2(c)(1)

All corrections to other violations noted in the attached Inspection Report (IR) or Continuation Form, or disputes to any violations, are to be submitted using this certification and returned to EHD within 30 days unless otherwise specified in the Inspection Report. HSC 25185(c)(3)

Note: All EHD staff time associated with failing to comply by the above noted dates will be billed at the current hourly rate.

For this certification to be complete, the operator of the site must include:

- A statement documenting what corrective actions were taken or will be taken for each violation
- Copies of sample results/manifests/training records/other appropriate paperwork, and/or photos verifying corrections
- Operator's certification

Inspection Date: January 06, 2016 **Inspected By:** Aris Veloso

Facility Address: 12745 N THRONTON RD **CERS ID:** 10183585

I certify under penalty of law that:

1. I have corrected the violations specified in the Inspection Report from the above-mentioned inspection date.
2. I have personally examined the following documentation submitted as proof of compliance FOR EACH VIOLATION and I believe the information to be true, accurate, and complete:

   _____Photos __X__Paperwork _____Statement
3. I am authorized to submit this certification on behalf of the Respondent.
4. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and/or imprisonment for known violations. (HSC 25191)

Name: Brooklyn Saylor Title: Compliance Manager

Signature: Date: 12/18/2018

State of California – California Environmental Protection Agency

Department of Toxic Substances Control
Office of Environmental Information Management

PERMANENT STATE ID NUMBER APPLICATION

Please type or print legibly in ink.

NEW NUMBER REQUESTS Check all that apply.

☒ 1. I am applying for a **new** permanent California ID number as a hazardous waste: ☒ **Generator** ☐ **Transporter**

Reason for a new number: A. ☐ Never had a number B. ☒ Business moved C. ☐ Legal owner of business changed

If your business generates greater than 100 kg of RCRA hazardous waste other than those hazardous waste listed in 40 CFR 261.5 subparts (c) and (d) per month, please complete Form 8700-12 for a federal EPA ID number.

CHANGES TO STATUS OR INFORMATION FOR AN EXISTING STATE ID NUMBER

For existing ID number: CAR000004333

☐ 2. I am updating the mailing address and/or contact information only.

☒ 3. I am inactivating this ID number.

☐ 4. I am reactivating this ID number. Reason (please select one): A. ☐ Verification Questionnaire B. ☐ Other

☐ 5. I am changing the business name only, no ownership change.

6. Site/Facility/Business Name (Include DBA): Northern California Power Agency LEC/STIG

7. Site Location: 12745 N Thornton Rd.
Street

Lodi — City | CA — State | 95242 — Zip Code | San Joaquin — County

8. (a) Federal Employer ID Number 94-2550072 (b) Board of Equalization Fee Account Number _____
((b) is only required from generators of greater than 5 tons per calendar year.)

9. Mailing Address: 12745 N Thornton Rd
Street

Lodi — City | CA — State | 95242 — Zip Code

10. Site Contact Person: Brooklyn — First Name | Snyder — Last Name

Contact Person Address: 12745 N Thornton Rd.
Street

Lodi — City | CA — State | 95242 — Zip Code

Contact Person Phone Number: (209) 210-5009 — Area Code / Phone Number
Fax Number: (916) 783-7693 — Area Code / Fax Number

Contact Person Business Email Address: brooklyn.saylor@NCPA.com

11. Legal Business Owner (not property owner): Northern California Power Agency
Name

Owner Address: 651 Commerce Dr. Roseville CA 95678
Street — City — State — Zip Code

Owner Phone Number: (916) 521-0047 — Area Code / Phone Number
Fax Number: (____) — Area Code / Fax Number

12. Standard Industrial Classification (SIC) Code for the Site: 4911 (4-Digit Number)

13. Certification: *I certify under penalty of law that the information on this document was prepared to the best of my knowledge and belief to be true, accurate and complete.*

SIGNATURE (handwritten) _____ Date 12/18/2018

Name (print) Brooklyn Snyder Title Compliance Manager Phone 209-210-5009

DTSC Form 1358 (09/18)

Lodi Energy Center
Annual Compliance Report

APPENDIX G: Post-Certification Changes – CPM Approvals

CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512
www.energy.ca.gov

February 21, 2018

Brooklyn Saylor
Environmental Health & Safety Specialist
Northern California Power Authority
Lodi Energy Center
12745 N. Thornton Road
Lodi, CA 95242

LODI ENERGY CENTER (08-AFC-10C) COMPLIANCE ADVICE LETTER FOR THE USE OF MOSQUITO VECTOR WELL WATER

Dear Ms. Saylor:

Thank you for meeting with Energy Commission staff on February 6, 2018 to discuss staff's interpretation and implementation of Lodi Energy Center's (LEC) condition of certification **SOIL&WATER-7** and whether or not an amendment needs to be filed to change the condition to allow for ongoing emergency use of a groundwater well operated by a vector control district within the 14-day limit specified in **SOIL&WATER-7**.

Based on staff's review of all materials and discussions, staff concludes that an amendment would not need to be filed. Staff notes it would be allowable for LEC to use the district well on an ongoing basis as a backup for emergencies where the project well cannot meet demand. The use of this well in addition to the project well would still be pursuant to the 14-day limit provided in **SOIL&WATER-7.** If the district well is not available during an emergency and supplemental flow is needed to make up for the project well, any new sources would also need to be reviewed and approved by the CPM.

Staff also concludes that the 14 days noted in **SOIL&WATER-7** should be interpreted as 24-hour days, not just numbers of interruptions and the limit is based on the cumulative use during 336 hours of operation.

BACKGROUND AND INTRODUCTION

The Lodi Energy Center's (LEC) license granted by the Final Decision of 2010 (2010 Decision) allows the project to use groundwater or potable water for backup purposes in emergency cases where recycled water, the primary water source for project operation, is interrupted. The 2010 Decision also limits the use of groundwater or potable water for operation purposes to 14 days per condition of certification **SOIL&WATER-7**. However, the 2010 Decision also allows the project owner to seek approval from the compliance project manager (CPM) if an interruption in recycled water supply is expected to exceed 14 days.

On February 6, 2018 staff met with the project owner to discuss interpretation and implementation of condition of certification **SOIL&WATER-7**. The project owner wanted to determine whether they should file an amendment to change the condition to allow for ongoing emergency use of a groundwater well operated by a vector control district within the 14-day limit specified in **SOIL&WATER-7**. The same well was used in July of 2017, during an emergency outage of the recycled water supply. The project owner also wanted clarification on the meaning of the 14-day limit in the condition and how it would be applied in future emergencies.

JULY 2017 INCIDENT

In July 2017, there was a major interruption in recycled water delivery to LEC when a contractor realigning the industrial wastewater line to the treatment plant mistakenly connected it to the domestic wastewater line, which caused a disruption in the treatment process. Because of that incident the project owner had to switch to groundwater for operation purposes. Because the capacity of the approved project well was not sufficient to meet project demand, the project owner proposed to supplement flows by adding pumping from an agricultural well owned by the city of Lodi and operated by the local Vector Control District (district) and exceed the 14-day limit for a relatively short term.

The district facility and well are on land owned by the city of Lodi and are located adjacent to the project site. The district well is also in the same groundwater basin as the project well. Even though the combined flow rate from both wells was slightly less than the maximum instantaneous project demand of 1400 gallons per minute (gpm), the project owner determined the combined flow rate would be adequate for project operational needs based on historical use.

Staff reviewed the request and determined that in both the Final Staff Analysis (FSA, 2009) in the original proceeding and the 2010 Decision, the basin where the project well would be extracting groundwater would not cause impacts and could be used for project operation in an emergency. As noted in the FSA, the project owner had proposed to limit the use of the backup well to 14 days and that if it turned out that the 14-day limit was not sufficient, the project owner would evaluate the options and technologies available at the time and would present mitigation measures to the Energy Commission for review and approval. Staff concurred then with the project owner because staff believes that the 14 days are a reasonable duration to ensure impact to the groundwater resource is insignificant and that if the duration repeatedly goes over 14 days the owner would evaluate other options for backup use.

Staff had evaluated the use of water from the project well under the assumption that it would be designed to meet the project maximum instantaneous demand if needed as a backup (FSA 2009). Since the project well could not meet the demand and the nearby district well was available, staff determined that the combined use of the wells would be the same as using a single well in the groundwater basin and there would still be no

impacts. Staff also concluded that since this was the first time a request had been made to exceed the 14-day limit and the exceedance would be for a relatively short term while the pipeline connection was repaired, there would be no significant impacts. Staff therefore approved use of the project well and district well pursuant to **SOIL&WATER-7** as documented in an email communication sent to the project owner on July 21, 2017. Staff concluded that the district well could be used in combination with the project well for emergency backup purposes in compliance with **SOIL&WATER-7**. The wells were ultimately only used during an 11-day period from July 20 to July 31, 2017.

Based on the staff analysis and findings regarding groundwater impacts in the 2010 Decision which were based on the life of the project, staff concludes it would be allowable to use the district well on an ongoing basis as a backup for emergencies where the project well cannot meet demand. The use of this well in addition to the project well would still be pursuant to the 14-day limit provided in **SOIL&WATER-7.** If the district well is not available during an emergency and supplemental flow is needed to make up for the project well, any new sources would also need to be reviewed and approved by the CPM.

INTERPRETATION OF THE 14-DAY DURATION

In addition to the source of emergency supply, the project owner wanted clarification of how to interpret the 14-day limit on the use of the emergency backup supply. The project owner is concerned that staff would limit use of the backup supply by counting any partial day use as a full day of use that counts toward the 14-day limit. The project owner believes that the intent of the condition was to allow for cumulative emergency water use equivalent to 14, 24-hour days.

Staff notes that in a letter to the CPM dated April 21, 2014 the project owner requested guidance on how to report the usage of backup potable water under **SOIL&WATER-7**. At that time staff stated 'For purposes of "keeping track" of cumulative use of backup water, staff is not opposed to NCPA reporting hours as fractions of a day. Instead of relying solely on the definition of "14 days", staff believes that timely reporting of frequency, length, and cause of service interruptions is a good indicator of a potential problem.

CONCLUSIONS

Consistent with this past guidance staff confirms this interpretation and notes that the purpose of the requirement in **SOIL&WATER-7** was to limit the amount of ground water or potable water used by limiting the maximum duration it is used. Therefore, staff concludes that the 14 days should be interpreted as 24-hour days, not just numbers of interruptions.

SOIL&WATER-7 also requires the project owner to submit a request to the CPM for approval to exceed this duration. The 14-day limit and need for CPM review and

approval beyond that time period is required so staff can evaluate whether the project is operating as anticipated. If emergency backup water use exceeds this time period or if it repeatedly exceeds this time period staff may recommend other project changes or an amendment to address ongoing problems related to water supply or project operation and ensure there would be no impacts to water resources that may not have been addressed in the 2010 Decision.

For clarification of the compliance record, staff concludes that for the purpose of determining whether the 14-day limit has been reached, the limit is based on the cumulative use during 336 hours of operation.

Should you have any questions or concerns, please contact Mary Dyas, Compliance Project Manager, at (916) 651-8891 or at mary.dyas@energy.ca.gov.

Sincerely,

Christine Root

Christine Root
Compliance Office Manager
Siting, Transmission, and Environmental Protection (STEP) Division

cc: Karen Parker, Jacobs (CH2M)
Jerry Salamy, Jacobs (CH2M)
Shawn Pittard, STEP Deputy Director
Paul Marshall, P.E., STEP Engineering Office, Soil & Water Supervisor
Karim Abulaban, STEP Engineering Office, Soil & Water Staff
Mike Conway, STEP Engineering Office, Soil & Water Staff
Jared Babula, Staff Counsel, Energy Commission

Lodi Energy Center
Annual Compliance Report

APPENDIX I: OPERATIONS & MAINTENANCE HEALTH & SAFETY PLAN

DUE TO THE SIZE, THIS PLAN HAS BEEN PROVIDED AS A SEPARATE ELECTRONIC FILE SUBMITTED WITH THE 2018 ANNUAL COMPLIANCE REPORT.

Lodi Energy Center
Annual Compliance Report

APPENDIX J: SOIL & WATER 9b ANNUAL EPA INJECTION WELL MONITORING REPORT

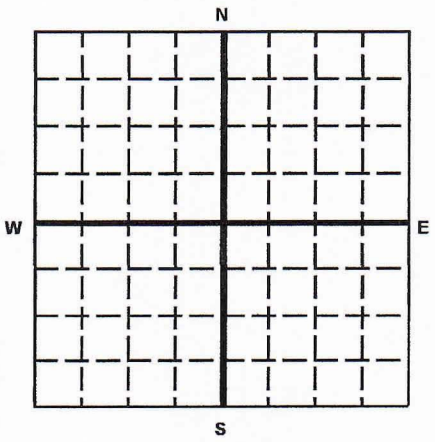
OMB No. 2040-0042 Approval Expires 12/31/2018

United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee	Name and Address of Surface Owner
Northern California Power Agency 12745 North Thornton Road, Lodi, CA 95241	Northern California Power Agency 12745 North Thornton Road, Lodi, CA 95241

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
CA	San Joaquin	CA 1091003

Surface Location Description - SEE ATTACHMENT

____ 1/4 of ____ 1/4 of ____ 1/4 of ____ 1/4 of Section ____ Township ____ Range ____

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface - SEE ATTACHMENT

Location ____ ft. frm (N/S) ____ Line of quarter section

and ____ ft. from (E/W) ____ Line of quarter section.

WELL ACTIVITY	TYPE OF PERMIT
☑ Brine Disposal	☐ Individual
☑ Enhanced Recovery	☑ Area
☐ Hydrocarbon Storage	Number of Wells 3

Lease Name N/A Well Number LEC-1

	INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH YEAR	AVERAGE PSI	MAXIMUM PSI	BBL	MCF	MINIMUM PSI	MAXIMUM PSI
January-2018	85.0	451.2	101,741.3	569,751.8	188.0	347.4
February-2018	83.9	486.6	97,427.81	545,595.73	152.0	392.8
March-2018	77.0	550.9	128,338.3	718,694.4	156.0	553.0
April-2018	118.0	455.8	34,406.9	192,678.4	154.0	350.8
May-2018	25.7	242.7	29,811.4	166,944.0	152.0	308.0
June-2018	10.6	94.7	67,112.0	345,827.2	142.0	290.0
July-2018	36.9	159.3	198,620.2	1,112,273.1	170.7	208.7
August-2018	40.0	237.0	190,936.36	1,069,243.6	182.0	257.0
September-2018	36.0	203.6	108,661.74	608,505.73	141.8	245.0
October-2018	82.1	325.8	190,042.67	1,064,238.93	215.8	343.0
November-2018	107.5	300.6	153,645.71	860,416.0	137.6	313.2
December-2018	138.6	332.0	129,456.0	724,953.6	146.0	305.0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
MICHAEL DEBORTOLI	Michael DeBortoli	01/24/19

EPA Form 7520-11 (Rev. 12-11)

PAPERWORK REDUCTION ACT

The public reporting and record keeping burden for this collection of information is estimated to average 30 hours per quarter. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

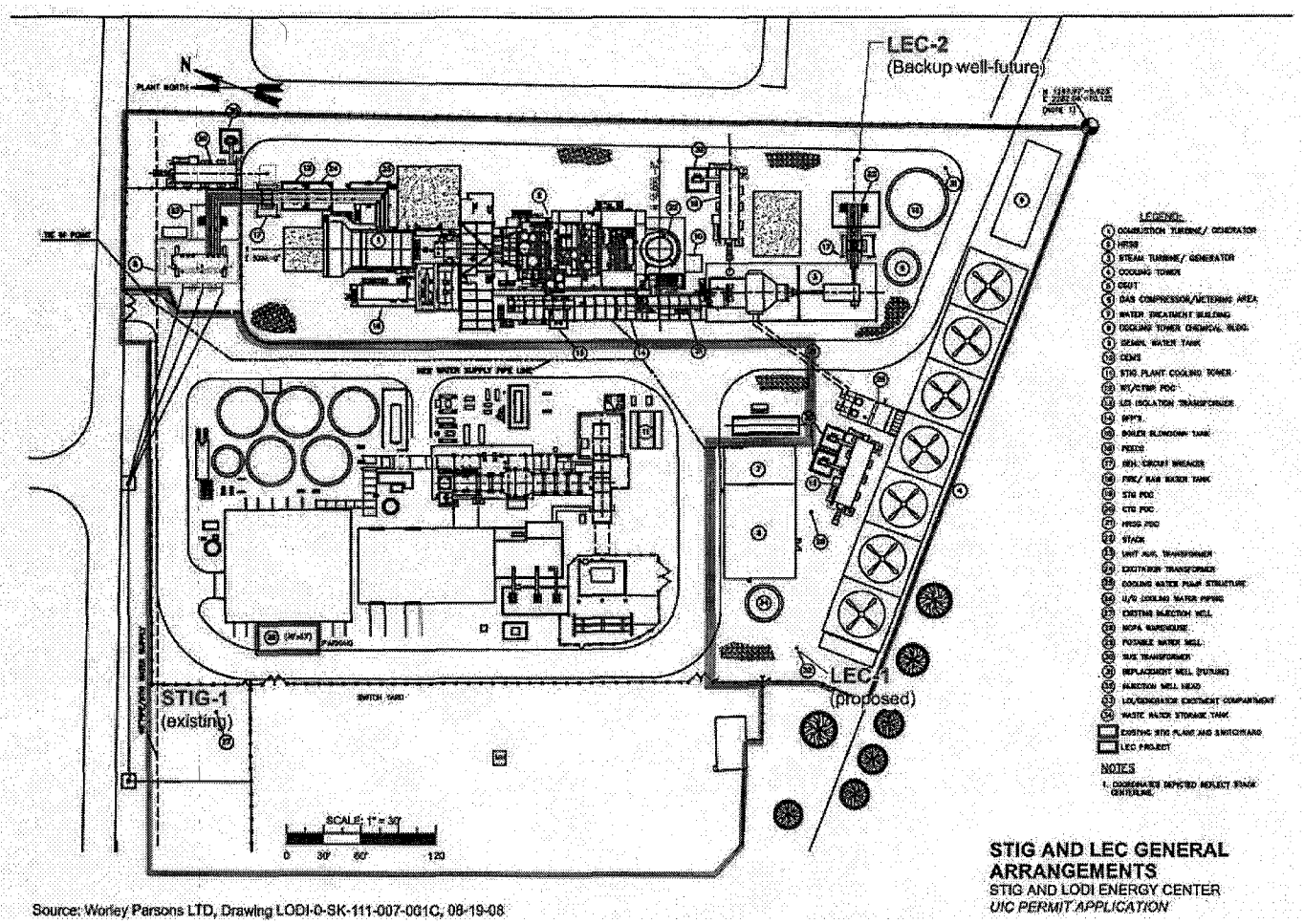
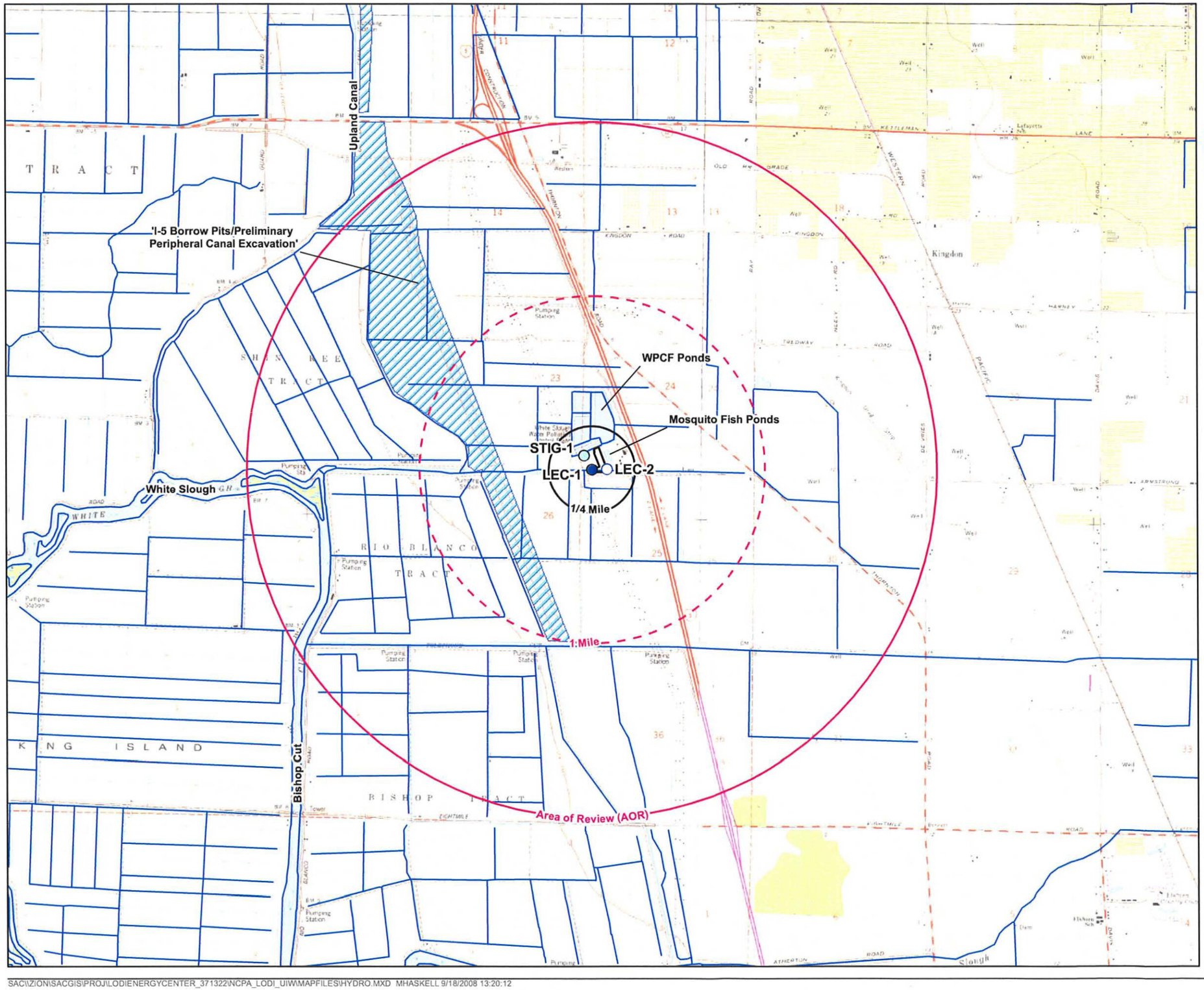


Figure 3. STIG and Lodi Energy Center general arrangements, showing the site of currently existing well STIG-1, and the proposed locations for wells LEC-1 and LEC-2 (from the Introduction to the Permit Application).



LEGEND

- New Injection Well Location (LEC-1)
- Existing Injection Well (STIG-1)
- Potential Backup Injection Well Location (LEC-2)
- Ditches, Canals and Streams
- 1/4 Mile
- 1 Mile
- Area of Review (AOR) - 2 Miles
- White Slough Wildlife Area
- LEC Project Site

This base map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

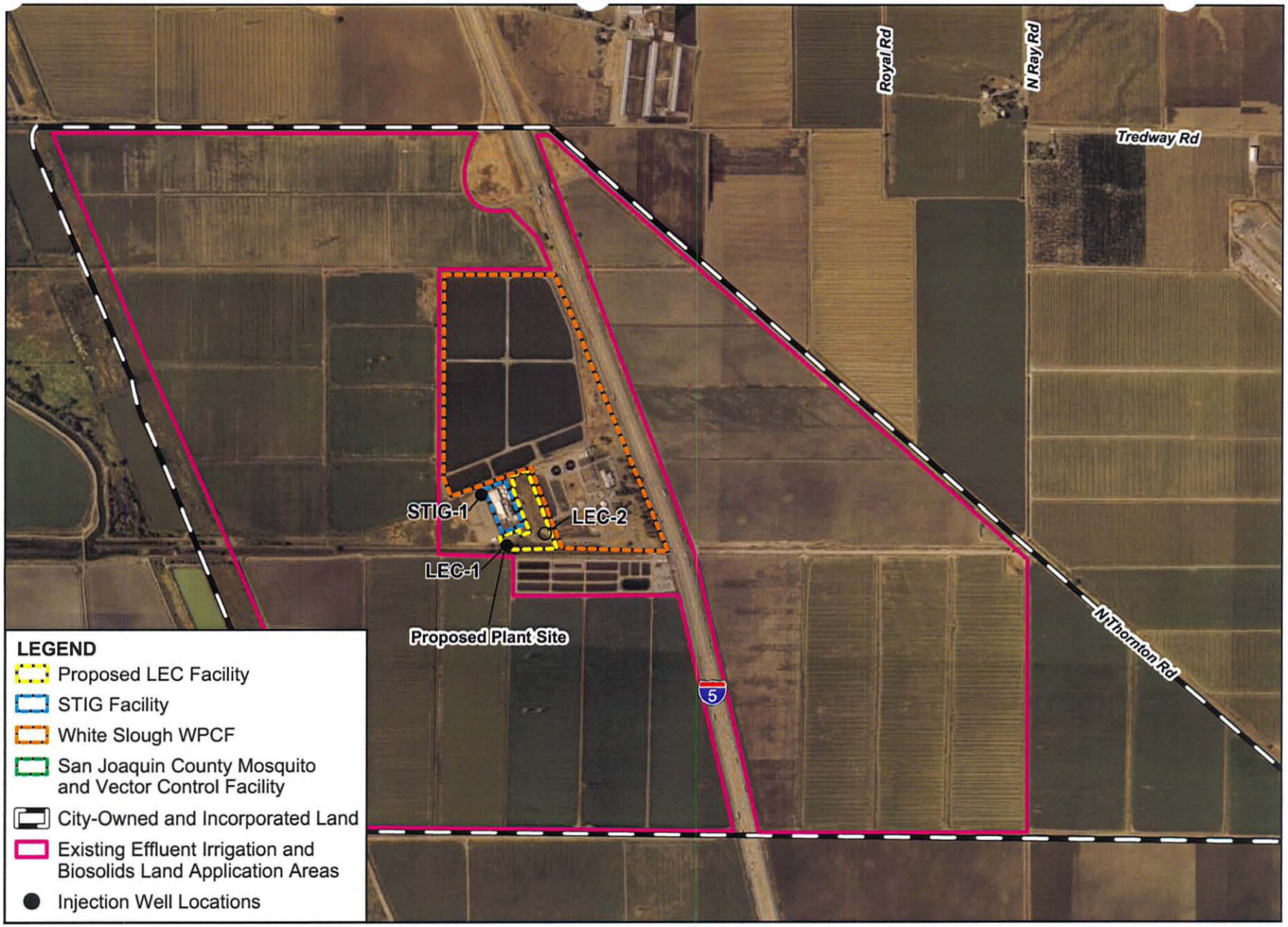
N

0 1,500 3,000
Feet

FIGURE B-1
SURFACE WATER WITHIN THE AREA OF REVIEW
STIG-LEC FACILITY
LODI, CALIFORNIA

CH2MHILL

SAC\\ZION\SACGIS\PROJ\LODIENERGYCENTER_371322\NCPA_LODI_UIW\MAPFILES\HYDRO.MXD MHASKELL 9/18/2008 13:20:12



This map was compiled from various scale source data and maps and is intended for use as only an approximate representation of actual locations.

0 1,000 2,000
Feet

N

FIGURE B-2
SITE LOCATION
STIG AND LODI ENERGY CENTER
UIC PERMIT APPLICATION

CH2MHILL

EY062008001SAC Figure_B-2.ai 09.26.08 tdaus