DOCKETED

Docket Number:	99-AFC-03C
Project Title:	METCALF Energy Center Compliance
TN #:	206509
Document Title:	Annual Compliance Report for Metcalf Energy Center 2014
Description:	COM-7 Annual Compliance Report (ACR) for Metcalf Energy Center (99-AFC-3C) for 2014
Filer:	Eric Veerkamp
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	11/4/2015 3:48:20 PM
Docketed Date:	11/4/2015

Metcalf Energy Center, LLC

1 Blanchard Road
Coyote, CA 95013

August 18, 2015

Mr. Eric Veerkamp
Compliance Project Manager
Systems Assessment & Facility Sitting Division
California Energy Commission
1516 Ninth Street, MS-2000
Sacramento, CA 95814

Re: Metcalf Energy Center, LLC.
Docket No. 99-AFC-3
COM-7 - Annual Compliance Report for 2014

Dear Mr. Veerkamp:

In accordance with the Conditions of Certification for the Metcalf Energy Center, LLC, this report is intended to fulfill the requirements of the Annual Compliance Report for 2014 in Condition of Certification COM-7.

Enclosed are the documents required by the Conditions of Certification. The documents are provided as appendices, as noted in the Annual Compliance Summary:

- Annual Compliance Summary
- Conditions of Certification Matrix
- Operating Data Summary
- AQ-13: Gas Turbine and HRSG Firing with Natural Gas
- AQ-14: Heat Input Hourly Limit
- AQ-15: Heat Input daily Limit
- AQ-16: Heat Input Annual Limit
- AQ-17: HRSG Duct Burners Firing
- AQ-18: S-1 and S-2 SCR Operation and Maintenance
- AQ-19: S-3 and S-4 SCR Operation and Maintenance
- AQ-20:Gas Turbine Emissions
- AQ-21: Gas Turbine Mass Emissions
- AQ-22: Gas Turbine Start-up
- AQ-24: Gas Turbine and HRSG Total Combined Daily Emissions
- AQ-25: Gas Turbine and HRSG Total Combined 12-Month Emissions
- AQ-26: Annual Toxic Air Contaminants Emissions
- AQ-27: Operation and Maintenance of Continuous Monitors
- AQ-28: Calculation and Recording of Daily Mass Emissions
- AQ-29: Projected Annual Emissions of Formaldehyde, Benzene, Specific PAHs

- AQ-36: Notification of Violations
- AQ-44: Compliance with 40 CFR Part 75
- AQ-56: Cold Start-up Hours
- BIO-2: Designated Biologist Summaries
- HAZ-1: Hazardous Materials List
- LAND-1: Trail Network Connection
- PUBLIC HEALTH-1: Cooling Tower Inspection
- SOIL & WATER-1: Water Use Summary
- TLSN-2: Radio and TV Interference
- TLSN-4: Transmission Right-of-Way
- TRANS-3: Permits or Licenses for Hazardous Material Transport
- VIS-1: Treatment of Project Structures
- VIS-10: Visible Plumes
- WASTE-3: Waste Management Comparison

If you have any additional questions, please feel free to contact Rosemary Silva, EHS Specialist, at 408-361-4954.

Sincerely,

Terry Mahoney
General Manager
Metcalf Energy Center, LLC.

Enclosures: Via Email

cc: Barbara McBride Calpine Corp.
Katherine Piper Calpine Corp

California Energy Commission
2014 Annual Compliance Report
Metcalf Energy Center – 99-AFC-3

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METCALF ENERGY CENTER, LLC

TRANS-3 HAZARDOUS MATERIAL DELIVERIES

JANUARY				
VENDOR NAME	CHEMICAL	RECEIVED	QUANTITY	UOM
HILL BROTHERS CHEMICAL CO.	AMMONIA	1/2/2014	6700.5	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	1/2/2014	6700.5	GAL
UNIVAR	SULFURIC ACID	1/3/2014	46960	LBS
UNIVAR	SODIUM HYPOCHLORITE	1/3/2014	4516.2	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	1/5/2014	6702.8	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	1/9/2014	6700.1	GAL
CHEMTREAT	CL240	1/21/2014	4400	LBS
FEBRUARY				
VENDOR NAME	CHEMICAL	RECEIVED	QUANTITY	UOM
HILL BROTHERS CHEMICAL CO.	AMMONIA	2/14/2014	6700.4	GAL
ChemTreat	BL152	2/19/2014	1592	LBS
ChemTreat	CL4500	2/20/2014	10130	LBS
Univar	SODIUM HYPOCHLORITE	2/21/2014	4538	GAL
ChemTreat	BL1795	2/21/2014	483	LBS
UNIVAR	SULFURIC ACID	2/24/2014	47720	LBS
MARCH				
VENDOR NAME	CHEMICAL	RECEIVED	QUANTITY	UOM
HILL BROTHERS CHEMICAL CO.	AMMONIA	3/2/2014	6700.6	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	3/6/2014	6701.6	GAL
ChemTreat	RL1245	3/11/2014	1022	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	3/15/2014	6701.7	GAL
GOLDEN GATE PETROLEUM	UNIION TURBINE OIL 32	3/17/2014	385	GAL
GOLDEN GATE PETROLEUM	UNIION TURBINE OIL 32	3/20/2014	2100	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	3/22/2014	6702.3	GAL
UNIVAR	SULFURIC ACID	3/24/2014	47260	LBS
Univar	SODIUM HYPOCHLORITE	3/24/2014	4540	GAL
ChemTreat	BL152	3/26/2014	1194	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	3/27/2014	6709.7	GAL
APRIL				
VENDOR NAME	CHEMICAL	RECEIVED	QUANTITY	UOM
HILL BROTHERS CHEMICAL CO.	AMMONIA	4/4/2014	6702.6	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	4/12/2014	6703	GAL
UNIVAR	SULFURIC ACID	4/14/2014	46280	LBS
Univar	SODIUM HYPOCHLORITE	4/16/2014	4540	GAL
ChemTreat	BL152	4/16/2014	1194	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	4/18/2014	6700.2	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	4/29/2014	6701.7	GAL
ChemTreat	BL152	4/30/2014	1194	LBS
MAY				
VENDOR NAME	CHEMICAL	RECEIVED	QUANTITY	UOM
HILL BROTHERS CHEMICAL CO.	AMMONIA	5/8/2014	6700	GAL
UNIVAR	SULFURIC ACID	5/9/2014	44924	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	5/16/2014	6701.2	GAL
GOLDEN GATE PETROLEUM	DIESEL	5/21/2014	200.8	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	5/23/2014	6701.1	GAL

Univar	SODIUM HYPOCHLORITE	5/23/2014	4843	GAL
ChemTreat	CL2875	5/23/2014	994	LBS
ChemTreat	BL1795	5/23/2014	483	LBS
ChemTreat	RL1245	5/27/2014	1533	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	5/30/2014	6701.1	GAL
ChemTreat	BL152	5/30/2014	1194	LBS

JUNE

VENDOR NAME	CHEMICAL	RECEIVED	QUANTITY	UOM
UNIVAR	SULFURIC ACID	6/3/2014	46720	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	6/5/2014	6701.3	GAL
ChemTreat	BL152	6/11/2014	1194	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	6/12/2014	6701.5	GAL
ChemTreat	RL9007	6/12/2014	519	LBS
Univar	SODIUM HYPOCHLORITE	6/13/2014	3	55 GAL DRUMS
Univar	SODIUM HYPOCHLORITE	6/16/2014	4538	GAL
GOLDEN GATE PETROLEUM	76 FAM, MULTIPURPOSE R&O 220	6/18/2014	55	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	6/24/2014	6700.5	GAL
UNIVAR	SULFURIC ACID	6/25/2014	48220	LBS

JULY

VENDOR NAME	CHEMICAL	RECEIVED	QUANTITY	UOM
HILL BROTHERS CHEMICAL CO.	AMMONIA	7/6/2014	6700.1	GAL
ChemTreat	BL152	7/10/2014	1592	LBS
ChemTreat	BL1795	7/11/2014	483	LBS
ChemTreat	RL1245	7/11/2014	1533	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	7/12/2014	6700.2	GAL
ChemTreat	CL240	7/15/2014	4400	LBS
Univar	SODIUM HYPOCHLORITE	7/19/2014	4540	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	7/24/2014	6731.1	GAL
UNIVAR	SULFURIC ACID	7/30/2014	46300	LBS
ChemTreat	BL152	7/30/2014	1194	LBS
ChemTreat	CL206	7/31/2014	102	LBS

AUGUST

VENDOR NAME	CHEMICAL	RECEIVED	QUANTITY	UOM
HILL BROTHERS CHEMICAL CO.	AMMONIA	8/1/2014	6702.4	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	8/7/2014	6701.5	GAL
Univar	SODIUM HYPOCHLORITE	8/12/2014	4034	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	8/14/2014	6701.1	GAL
ChemTreat	BL152	8/14/2014	796	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	8/21/2014	6700.7	GAL
UNIVAR	SULFURIC ACID	8/21/2014	47860	LBS
Univar	SODIUM HYPOCHLORITE	8/27/2014	4541	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	8/28/2014	6703.4	GAL
ChemTreat	RL1245	8/28/2014	1533	LBS
ChemTreat	BL1795	8/29/2014	966	LBS

SEPTEMBER

VENDOR NAME	CHEMICAL	RECEIVED	QUANTITY	UOM
HILL BROTHERS CHEMICAL CO.	AMMONIA	9/3/2014	6701	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	9/9/2014	6700.3	GAL
ChemTreat	BL152	9/10/2014	398	LBS
UNIVAR	SULFURIC ACID	9/12/2014	47920	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	9/16/2014	6700.4	GAL

HILL BROTHERS CHEMICAL CO.	AMMONIA	9/22/2014	6700.9	GAL
Univar	SODIUM HYPOCHLORITE	9/23/2014	4589	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	9/30/2014	6000.2	GAL
OCTOBER				
VENDOR NAME	**CHEMICAL**	**RECEIVED**	**QUANTITY**	**UOM**
HILL BROTHERS CHEMICAL CO.	AMMONIA	10/11/2014	6700	GAL
Pacific Coast Chemicals	SULFURIC ACID	10/13/2014	45260	LBS
ChemTreat	BL152	10/15/2014	796	LBS
ChemTreat	BL152	10/15/2014	1194	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	10/16/2014	6700	GAL
Univar	SODIUM HYPOCHLORITE	10/17/2014	4536	GAL
ChemTreat	RL1245	10/20/2014	1533	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	10/21/2014	6892.9	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	10/27/2014	6702.7	GAL
ChemTreat	RL9007	10/27/2014	519	LBS
Pacific Coast Chemicals	SULFURIC ACID	10/30/2014	50380	LBS
GOLDEN GATE PETROLEUM	FAMILY, TURBINE OIL 100	10/30/2014	55	GAL
NOVEMBER				
VENDOR NAME	**CHEMICAL**	**RECEIVED**	**QUANTITY**	**UOM**
HILL BROTHERS CHEMICAL CO.	AMMONIA	11/1/2014	6700.2	GAL
Univar	SODIUM HYPOCHLORITE	11/6/2014	4538	GAL
ChemTreat	CL206	11/6/2014	51	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	11/8/2014	6702.1	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	11/13/2014	6705.6	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	11/18/2014	6717.4	GAL
ChemTreat	BL152	11/18/2014	1194	LBS
Univar	SODIUM HYPOCHLORITE	11/19/2014	4	55 GAL DRUMS
ChemTreat	BL152	11/20/2014	398	LBS
Pacific Coast Chemicals	SULFURIC ACID	11/21/2014	45420	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	11/23/2014	6702.4	GAL
DECEMBER				
VENDOR NAME	**CHEMICAL**	**RECEIVED**	**QUANTITY**	**UOM**
Univar	SODIUM HYPOCHLORITE	12/1/2014	4387	GAL
ChemTreat	BL152	12/1/2014	1592	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	12/2/2014	6701.2	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	12/7/2014	6708.8	GAL
UNIVAR	SULFURIC ACID	12/11/2014	47580	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	12/12/2014	6751.7	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	12/17/2014	6700	GAL
Univar	SODIUM HYPOCHLORITE	12/18/2014	4539	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	12/21/2014	6700.5	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	12/24/2014	6700	GAL
HILL BROTHERS CHEMICAL CO.	AMMONIA	12/30/2014	6700	GAL
GOLDEN GATE PETROLEUM	FAMILY, TURBINE OIL 100	12/30/2014	110	GAL
UNIVAR	SULFURIC ACID	12/31/2014	46900	LBS
HILL BROTHERS CHEMICAL CO.	AMMONIA	11/27/2015	6701.5	GAL

California Energy Commission's Condition of Certification

VISUAL RESOURCES-1

METCALF ENERGY CENTER, LLC
STATUS REPORT REGARDING THE ARCHITECTURAL DESIGN TREATMENT MAINTENANCE

California Energy Commission Condition of Certification Visual Resources – 1 requires the Metcalf Energy Center to submit in its Annual Compliance Report a status report regarding the treatment maintenance of the project structures. The project structures, which are visible to the public, have been painted with CPM-approved and City of San Jose-approved non-reflective colors with a low-gloss finish.

The Metcalf Energy Center Maintenance Department has procedures to address all aspects for maintaining the power plant efficiently. Issues such as coating or painting are captured by staff's surveillance and utilization of checklists. Once an item is deemed in need of maintenance, Plant Management schedule and prioritizes the maintenance through a work order process. Outside contractors are also utilized at Metcalf Energy Center. Plant Management inspects and signs off on the work once it is fully complete.

A copy of the checklists used to survey the architectural screen as well as the other painted surfaces visible from offsite is attached to this summary.

ARCHITECTURAL DESIGN TREATMENT INSPECTION METCALF ENERGY CENTER

UNIT: Steam Turbine

	TURBINE / GENERATOR ENCLOSURE	GENERATOR / CONDENSER SOUND WALL
Chalking	1	1
Erosion	1	1
Discoloration	1	1
Fading	1	1
Loss of Gloss	1	1
Mildew Defacement	1	1
Moisture Blushing	1	1
Orange Peel	1	1
Wrinkling	1	1
Chemical Attack	1	1
High Temperature Attack	1	1
Mottling	1	1
Crackling	1	1
Saponification	1	1
Disbanding (peel/blister)	1	1
Crawling (fish eye)	1	1

Comments:

Rating System: Mark a number from 1 through 5 in the appropriate box to indicate the condition of the coating:
1 = No Problems; 2 = Minor Problems; 3 =Average Problems; 4 = Increased Problems; 5 = Major Problems.

ARCHITECTURAL DESIGN TREATMENT INSPECTION METCALF ENERGY CENTER

UNIT: Cooling Tower

	SUPERSTRUCTURE
Chalking	1
Erosion/Corrosion	1
Discoloration	1
Fading	1
Loss of Gloss	1
Mildew Defacement	2
Moisture Blushing	1
Orange Peel	1
Wrinkling	1
Chemical Attack	1
High Temperature Attack	1
Mottling	1
Crackling	1
Saponification	1
Disbanding {peel/blister)	1
Crawling (fish eye)	1

Comments:

Slight algae growth on the superstructure (not visible from outside the Plant).

Rating System: Mark a number from 1 through 5 in the appropriate box to indicate the condition of the coating:
1 = No Problems; 2 = Minor Problems; 3 =Average Problems; 4 = Increased Problems; 5 = Major Problems.

ARCHITECTURAL DESIGN TREATMENT INSPECTION METCALF ENERGY CENTER

UNIT: HRSG & Gas Turbine 1

	INLET AIR FILTER HOUSE	TURBINE/ GENERATOR	STACK	SCREENING
Chalking	1	1	1	1
Erosion/Corrosion	1	1	1	1
Discoloration	1	1	1	1
Fading	1	1	1	1
Loss of Gloss	1	1	1	1
Mildew Defacement	1	1	1	1
Moisture Blushing	1	1	1	1
Orange Peel	1	1	1	1
Wrinkling	1	1	1	1
Chemical Attack	1	1	1	1
High Temperature Attack	1	1	1	1
Mottling	1	1	1	1
Crackling	1	1	1	1
Saponification	1	1	1	1
Disbanding (peel/blister)	1	1	1	1
Crawling (fish eye)	1	1	1	1

Comments:

Rating System: Mark a number from 1 through 5 in the appropriate box to indicate the condition of the coating:
1 = No Problems; 2 = Minor Problems; 3 =Average Problems; 4 = Increased Problems; 5 = Major Problems.

ARCHITECTURAL DESIGN TREATMENT INSPECTION METCALF ENERGY CENTER

UNIT: HRSG & Gas Turbine 2

	INLET AIR FILTER HOUSE	TURBINE/ GENERATOR	STACK	SCREENING
Chalking	1	1	1	1
Erosion/Corrosion	1	1	1	1
Discoloration	1	1	1	1
Fading	1	1	1	1
Loss of Gloss	1	1	1	1
Mildew Defacement	1	1	1	1
Moisture Blushing	1	1	1	1
Orange Peel	1	1	1	1
Wrinkling	1	1	1	1
Chemical Attack	1	1	1	1
High Temperature Attack	1	1	1	1
Mottling	1	1	1	1
Crackling	1	1	1	1
Saponification	1	1	1	1
Disbanding (peel/blister)	1	1	1	1
Crawling (fish eye)	1	1	1	1

Comments:

Rating System: Mark a number from 1 through 5 in the appropriate box to indicate the condition of the coating:
1 = No Problems; 2 = Minor Problems; 3 =Average Problems; 4 = Increased Problems; 5 = Major Problems.

ARCHITECTURAL DESIGN TREATMENT INSPECTION METCALF ENERGY CENTER

UNIT: Water Tanks

	SERVICE/FIRE WATER	DEMINERALIZED WATER
Chalking	1	1
Erosion/Corrosion	1	1
Discoloration	1	1
Fading	1	1
Loss of Gloss	1	1
Mildew Defacement	1	1
Moisture Blushing	1	1
Orange Peel	1	1
Wrinkling	1	1
Chemical Attack	1	1
High Temperature Attack	1	1
Mottling	1	1
Crackling	1	1
Saponification	1	1
Disbanding (peel/blister)	1	1
Crawling (fish eye)	1	1

Comments:

Rating System: Mark a number from 1 through 5 in the appropriate box to indicate the condition of the coating:
1 = No Problems; 2 = Minor Problems; 3 =Average Problems; 4 = Increased Problems; 5 = Major Problems.

ARCHITECTURAL DESIGN TREATMENT INSPECTION METCALF ENERGY CENTER

UNIT: Buildings

	ADMINISTRATION	WAREHOUSE
Chalking	1	1
Erosion/Corrosion	1	1
Discoloration	1	1
Fading	1	1
Loss of Gloss	1	1
Mildew Defacement	1	1
Moisture Blushing	1	1
Orange Peel	1	1
Wrinkling	1	1
Chemical Attack	1	1
High Temperature Attack	1	1
Mottling	1	1
Crackling	1	1
Saponification	1	1
Disbanding (peel/blister)	1	1
Crawling (fish eye)	1	1

Comments:

Rating System: Mark a number from 1 through 5 in the appropriate box to indicate the condition of the coating:
1 = No Problems; 2 = Minor Problems; 3 =Average Problems; 4 = Increased Problems; 5 = Major Problems.

Appendix 1

Metcalf Energy Center – 99-AFC-3
2014 Annual Compliance Report

Project Status

The Metcalf Energy Center, LLC (MEC) declared commercial operation (COD) on May 29, 2005. MEC is dispatched into the merchant market by Calpine Energy Services (CES) and participates in the Ancillary Services market with the California ISO.

The Annual Compliance Report has been prepared in accordance with the General Conditions of the Compliance Plan.

1. **An updated compliance matrix which shows the status of all conditions of certification (fully satisfied and/or closed conditions do not need to be included in the matrix after they have been reported as closed).**

   The compliance matrix is included as an attachment. See Appendix 2.

2. **A summary of the current project operating status and an explanation of any significant changes to facility operations during the year.**

   The facility is currently operating in a normal status. There have been no significant changes to facility operations during the reporting year. See Appendix 3

3. **Documents required by specific conditions to be submitted along with the Annual Compliance Report. Each of these items must be identified in the transmittal letter, and should be submitted as attachments to the Annual Compliance Report.**

   The documents required by specific conditions are included in this report as attachments and are identified in the transmittal letter.

4. **A cumulative listing of all post-certification changes approved by the Energy Commission or cleared by the CPM.**

   - Petition to maintain the facility's post-commissioning daily and annual emission limits amendment. Order number 05-0316—03, approved on March 16, 2005.

5. **An explanation for any submittal deadlines that were missed, accompanied by an estimate of when the information will be provided.**

   There are currently no outstanding submittals for the 2014 reporting period.

6. **A listing of filings made to, or permits issued by, other governmental agencies during the year.**

   - Annual compliance report submitted to CEC
     - Monthly Plume Abatement Status Reports
   - Annual Permit to Operate BAAQMD
     - Monthly Air Reports
   - Annual Title V Compliance Certification Report submitted to BAAQMD and EPA.

- Annual Hazardous Material Permit City of San Jose
    - Annual Hazardous Materials Business Plan Update and Certification
- Annual Fire Safety Permit City of San Jose
- Annual Business License City of San Jose.
- Annual Storm Water Report to the State Water Resources Control Board
- Annual EIA-923S and EIA-860A to the U.S. Department of Energy
- Quarterly Electronic Data Reporting to the EPA (40 CFR 75)
- Semi-Annual NSPS Report to the EPA
- Semi-Annual Title V Monitoring Reports
- Semi-Annual Waste Water Self-Monitoring Report to the City of San Jose
- Monthly EIA-923M to the U.S. Department of Energy
- All submittals, except as noted above, required under our permits have been made on time to include, for the 2014 reporting year.

7. **A projection of project compliance activities scheduled during the next year.**

   Currently there is no compliance activities scheduled.

8. **A listing of the year's additions to the on-site compliance file.**

   No additions have been made to the on-site compliance files as required by the Decision.

9. **An evaluation of the on-site contingency plan for unplanned facility closure, including any suggestions necessary for bringing the plan up to date.**

   An evaluation to the on-site contingency plan for unexpected facility closure was conducted with no modifications.

   In addition, insurance coverage for the site remains current. Currently the site major equipment warranties have expired.

10. **A listing of complaints, notices of violation, official warnings, and citations received during the year, a description of the resolution of any resolved complaints, and the status of any unresolved complaints.**

    There were no complaints, notices of violations, official warnings or citations during the reporting period.

CONDITIONS OF CERTIFICATION SPECIFIC REQUIREMENTS

AQ-13 **The Gas Turbines and the Heat Recovery Steam Generators shall be fired exclusively on natural gas.**

No violation of this condition occurred for the 2014 reporting year

AQ-14 **The combined heat input rate to each power train shall not exceed 2,124 mmBTU per hour, averaged over any rolling 3-hour period.**

No violation of this condition occurred for the 2014 reporting year

AQ-15 **The combined heat input rate to each power train shall not exceed 49,908 mmBTU per calendar day.**

No violation of this condition occurred for the 2014 reporting year.

AQ-16 **The combined cumulative heat input rate for the Gas Turbines and HRSGs shall not exceed 35,274,060 mmBTU per year.**

No violation of this condition occurred for the 2014 reporting year.

AQ-17 **The HRSG duct burners shall not be fired unless its associated gas turbine is in operation.**

No violation of this condition occurred for the 2014 reporting year.

AQ-18 **S-1 Gas Turbine and S-2 HRSG shall be abated by the properly operated and properly maintained A-1 Selective Catalytic Reduction (SCR) system whenever fuel is combusted at those sources and the A-1 catalyst bed has reached minimum operating temperature.**

No violation of this condition occurred for the 2014 reporting year.

AQ-19 **S-3 Gas Turbine and S-4 HRSG shall be abated by the properly operated and properly maintained A-2 Selective Catalytic Reduction (SCR) system whenever fuel is combusted at those sources and the A-2 catalyst bed has reached minimum operating temperature.**

No violation of this condition occurred for the 2014 reporting year.

AQ-20 **The Gas Turbines and HRSGs shall comply emission requirements (a) through (h) under all operating scenarios, including duct burner firing mode and steam injection power augmentation mode. Requirements (a) through (h) do not apply during a gas turbine start-up or shutdown.**

- On June 1, 2014 the facility exceeded the NH3 Slip 3-Hour rolling average emission limit on Unit 1. Details are in Appendix 9.
- On August 7, 2014 the facility exceeded the NOx 1-hour rolling average and the NOx lb/mmBTU 1-hour rolling average limits on Unit 2. Details are in Appendix 9.

- On December 30, 2014 exceeded the NH3 Slip 3-Hour rolling average emission limit on Unit 1. Details are in Appendix 9.

AQ-21 **The regulated air pollutant mass emission rates from each of the Gas Turbines during a start-up or a shutdown shall not exceed the limits.**

- On May 12, 2014 the facility exceeded the CO emissions limit during a startup on Unit 1. Details are in Appendix 9.

- On July 22, 2014 the facility exceeded the CO emissions limit during a start-up on Unit 2. Details are in Appendix 9.

AQ-22 **The Gas Turbines shall not be in start-up mode simultaneously.**

No violation of this condition occurred for the 2014 reporting year.

AQ-24 **Total combined emissions from the Gas Turbines and HRSGs including emissions generated from the cooling tower and during Gas Turbine start-ups and shutdowns shall not exceed the following limits during any calendar day.**

No violation of this condition occurred for the 2014 reporting year.

AQ-25 **Combined emissions from the gas turbines and HRSGs, including emissions generated from cooling towers and during gas turbine startups, shutdowns and tuning shall not exceed permit limits during any consecutive twelve (12) month period.**

No violation of this condition occurred for the 2014 reporting year.

AQ-26 **Maximum projected annual toxic air contaminants emissions from the gas turbines shall not exceed permit limits.**

No violation of this condition occurred for the 2014 reporting year.

AQ-27 **Properly operated and maintained continuous monitors.**

Continuous monitors are properly operated and maintained.

AQ-28 **To demonstrate compliance with conditions 20(f), 20(g), 20(h), 21, 24(c') through 24(e), and 25('c) through 25(e) the owner/operator shall calculate and record on a daily basis the POC, PM10, and SO2 mass emissions from each power train.**

No violation of this condition occurred for the 2014 reporting year.

AQ-29 **Calculate and record on an annual basis the maximum projected annual emissions of formaldehyde, benzene and specific PAHs.**

No violation of this condition occurred for the 2014 reporting year.

AQ-36 **Notification to the District and CPM of any violations of permit conditions.**

No violations occurred during the 2014 reporting year.

AQ-44 **Compliance with the continuous emission monitoring requirements of 40 CFR Part 75.**

No violation of this condition occurred for the 2014 reporting year. See Appendix 4

AQ-56 **Cold Start-up hours shall not exceed 30 hours per calendar year for each turbine.**

No violation of this condition occurred for the 2014 reporting year.

BIO-2 **The CPM approved Designated Biologist shall submit record summaries in the Annual Compliance Report:**

The Designated Biologist currently is not conducting any of the tasks as specified in the condition. He does provide an annual report regarding the preserve.

HAZ-1 **Do not use any hazardous materials in reportable quantities not listed in attachment 1 or in greater quantities or strengths than those identified unless approved in advance by Santa Clara County and the CPM.**

A hazardous material inventory is included as an attachment and is identified in the table of contents. See Appendix 5.

LAND-1 **At such time as a connection to a trail network can be made, install and maintain the portion of planned trail that would cross the site.**

No trail updates have been made at this time. MEC is awaiting direction from the City of San Jose for trail construction.

PUBLIC HEALTH-1 **Perform a visual inspection of the cooling tower drift eliminators once per calendar year.**

The inspection sheet is included as an attachment and is identified in the table of contents. See Appendix 6.

SOIL & WATER-1 **Potable water may be used for cooling purposes only in the event that SBWR recycled water service is interrupted.**

A record of water consumption has been included and identified in the table of contents. See Appendix 7.

TLSN-2 **Identify and correct any complaints of interference w/ radio and TV signals from operation of line and facilities.**

No complaints of interference were received during the 2014 reporting year. The COC states that this needs to be included for 5 years. This timeframe has expired.

TLSN-4 **Ensure that the transmission line right-of-way is kept free of combustible material.**

The transmission right-of-way has been kept free of combustibles by the site's landscaper. The COC states that this needs to be included for 5 years. This timeframe has expired.

TRANS-3 **Ensure that all federal and state regulations for the transport of hazardous materials are observed during both construction and operation of the facility.**

No permits or licenses have been acquired concerning the transport of hazardous substances.

VIS-1 **Treat the project structures, buildings, and tanks visible to the public in a non-reflective color.**

The plant's structures, buildings, and tanks have all been treated in accordance with this condition of certification. No treatment maintenance has been necessary.

VIS-10 **The power plant shall be designed and operated to minimize visible plume.**

The total cooling tower plume hours for 2014 were 3 hours, as noted in the December 2014 Plume Summary Log. A copy of the submitted log is in Appendix 10.

WASTE-3 **Document the actual waste management methods used during the year compared to planned management methods.**

No violation of this condition occurred. A waste management sheet is included as an attachment and is identified in the table of contents. See Appendix 8.

Appendix 2

METCALF ENERGY CENTER - COMPLIANCE MATRIX							
START OF COMERCIAL OPERATION		5/29/2005					
THROUGH YEAR END OF 2014		12/31/2014					
Condition No.	**Requirements & Task Summary**	**Action required**	**Event**	**Required Submittal Date**	**Date submitted to CPM**	**Date approved by CPM**	**Status/ Comments**
AQ-13	GTs (S-1, S-3) and HRSG (S-2, S-4) shall be fired exclusively on natural gas. (BACT for SO2 and PM10)	As part of the semiannual Air Quality Reports, indicate the date, time, and duration of any violation of this condition.	Semiannual Air Quality Reports	Ongoing	Monthly and Semi-Annually		Ongoing
AQ-14	Combined heat input rate of each power train (S-1 & S-2, S-3 & S-4) shall not exceed 2,124 MMBtu/hr (3-hour rolling average) (PSD for NOx)	As part of the Air Quality monthly Reports, include information on the date and time when the hourly fuel consumption exceed this hourly limit.	Monthly Air Quality Reports	Ongoing	Monthly		Ongoing
AQ-15	Combined heat input rate of each power train (S-1 & S-2 and S-3 & S-4) shall not exceed 49,908 MMBtu/day (PSD for PM10)	As part of the Air Quality monthly Reports, include information on the date and time when the hourly fuel consumption exceed this daily limit.	Monthly Air Quality Reports	Ongoing	Monthly		Ongoing
AQ-16	Combined cumulative heat input rate of GTs (S-1, S-3) and HRSGs(S-2, S-4) shall not exceed 35,274,060 MMBtu/yr. (Offsets)	As part of the Air Quality annual Reports, include information on the date and time when the annual cumulative fuel consumption exceed this annual limit	Monthly Air Quality Reports	Ongoing	Monthly		Ongoing
AQ-17	HRSGs (S-2, S-4) duct burners shall not be fired unless associated GTs (S-1, S-3) are in operation. (BACT for NCx)	As part of the Air Quality Reports, include information on the date, time, and duration of any violation of this permit condition.	Air Quality Reports	Ongoing			Ongoing
AQ-18	GT/HRSG (S-1/S-2) shall be abated by the A-1 SCR system whenever fuel is combusted in these units and the A-1 catalyst bed has reached min. operating temperature.	As part of the Air Quality Reports, provide information on any major problem in the operation of the Oxidizing Catalyst and Selective Catalytic Reduction Systems for the Gas Turbines and HRSG's.	Semi-Annual Air Quality Reports	Ongoing	Semi-Annual		Ongoing
AQ-19	GT/HRSG (S-3/S-4) shall be abated by the A-2 SCR system whenever fuel is combusted in these units and the A-2 catalyst bed has reached min. operating temperature.	As part of the Air Quality Reports, provide info. on any major problem in the operation of the Oxidizing Catalyst and Selective Catalytic Reduction Systems for the Gas Turbines and HRSGs.	Semi-Annual Air Quality Reports	Ongoing	Semi-Annual		Ongoing
AQ-20(a)	Emission requirements: Emission Point P-1 NOx = 19.2 lbs/hr [0.00904 lbs/MMBtu (HHV) of nat. gas fired] ; Emission Point P-2 NOx = 19.2 lbs/hr [0.00904 lbs/MMBtu (HHV) of nat. gas fired] .	As part of the Semi-Annual Air Quality Reports, indicate the date, time, and duration of any violation. Include quantitative info. on the severity of the violation.	Semi-Annual Air Quality Reports	Ongoing	Semi-Annual		Ongoing
AQ-20(b)	NOx Emission concentration = 2.5 ppmvd (corrected to 15% O2), 1-hr average (Emission Point P-1, P-2) (BACT for NOx).	Same as above	Semi-Annual Air Quality Reports	Ongoing	Semi-Annual		Ongoing
AQ-20(c)	CO mass emission = 28.07 lbs/hr (at any 3-hour rolling avg.) (Emission Point P-1, P-2).	Same as above	Semi-Annual Air Quality Reports	Ongoing	Semi-Annual		Ongoing
AQ-20(d)	When the heat input to a CT exceeds 1700 MMBTU/hr (HHV), the CO emission concentration shall not exceed 6.0 ppmvd on dry basis and the CO mass emission rate shall not exceed 0.0132 lb/MMBTU at any 3-hr rolling average.	Same as above	Semi-Annual Air Quality Reports	Ongoing	Semi-Annual		Ongoing
AQ-20(e)	Ammonia (NH3) emission concentration shall not exceed 5 ppm.vd on dry basis, at any 3-hour rolling avg. Ammonia injection rate to A-1, A-2 to be verified through continuous recording of rate.	Same as above	Semi-Annual Air Quality Reports	Ongoing	Semi-Annual		Ongoing

METCALF ENERGY CENTER - COMPLIANCE MATRIX							
START OF COMERCIAL OPERATION	5/29/2005						
THROUGH YEAR END OF 2014	12/31/2014						
Condition No.	**Requirements & Task Summary**	**Action required**	**Event**	**Required Submittal Date**	**Date submitted to CPM**	**Date approved by CPM**	**Status/ Comments**
AQ-20(f)	Precursor organic compounds (POC) mass emissions (as CH4) shall not exceed 2.7 lbs/hr or 0.00126 lbs/MMBTU of natural gas fired. (Emission points P-1, P-2).	Same as above	Semi-Annual Air Quality Reports	Ongoing	Semi-Annual		Ongoing
AQ-20(g)	Sulfur dioxide (SO 2) mass emissions at P-1 ,P-2 each shall not exceed 1.28 pounds per hour or 0 .0006 lb /MM BTU of natural gas fired. (BACT)	Same as above	Semi-Annual Air Quality Reports	Ongoing	Semi-Annual		Ongoing
AQ-20(h)	PM10 mass emission s at P-1 ,P-2 each shall not exceed 9 pounds per hour or 0.00452 lb PM10/MM BTU. Particulate matter (PM10) mass emissions at P-1 ,P-2 each shall not exceed 12 pounds per hour or 0.00565 lb PM10/MM BTU, when HRSG duct burners are in operation.	Same as above	Semi-Annual Air Quality Reports	Ongoing	Semi-Annual		Ongoing
AQ-20(i)	Testing to confirm the PM10 emissions levels shall occur at least three (3) times per year during each of the first two (2) years of operation. Each year, at least one (1) monitoring test shall occur during winter months.	Same as above	Semi-Annual Air Quality Reports	Ongoing	Semi-Annual		Ongoing
AQ-21	GT (S-1, S-3) Start-up and Shutdown emission rates.	Same as above	Semi-Annual Air Quality Reports	Ongoing	Semi-Annual		Ongoing
AQ-22	Not more than one GT (S-1, S-2) shall be in start-up mode at any one time.	In the monthly compliance report the owner/operator shall indicate any violations of this condition.	Monthly Air Quality Reports	Ongoing	Monthly		Ongoing
AQ-24	Total combined emissions in lbs/day, from GTs and HRSGs (S-1, S-2, S-3, S-4), including start-up and shutdown.	As part of the Air Quality Reports, indicate the date of any violation of this Condition including quantitative information on the severity of the violation.	Semi-Annual Air Quality Reports	Ongoing	Semi-Annual		Ongoing
AQ-25	Cumulative combined emissions in tons/any consecutive 12-month period, from GTs and HRSGs shall not exceed Nox = 123.4 (offsets), CO=588, POC=28 (offsets), PM10=91.3 (offsets), SO2=10.6 (cumulative increase).	As part of the Air Quality Reports, indicate the date of any violation of this Condition including quantitative information on the severity of the violation.	Air Quality Reports	Ongoing	Monthly/Annual		Ongoing
AQ-26	Maximum projected combined annual toxic air contaminant emissions from GTs and HRSGs (S-1, S-2, S-3, S-4). (a) formaldehyde = 3,796 lbs/yr (b) Benzene = 460 lbs/yr (c) PAHs=22.8 lbs/yr	As part of the annual Air Quality Reports, indicate the date, duration, and severity of any violation including quantitative information on the severity of the violation.	Annual Air Quality Reports	Ongoing	Monthly/Annual		Ongoing
AQ-26	Perform health risk assessment using emission rates per BAAQMD approved procedures and submit risk analysis to District and CPM.	As part of the annual Air Quality Reports, indicate the date of any violation of this Condition including quantitative information on the severity of the violation or submit risk analysis to District and CPM.	Within 60 days of source test date	Ongoing	Monthly/Annual		Ongoing
AQ-27 (a-d)	Demonstrate compliance with conditions 14-17, 20(a-d), 21, 22, 24(a), 24(b), 25(a), 25(b) by using continuous monitors during all operating hours for the following parameters.	As part of the annual Air Quality Reports, indicate the date of any violation of this Condition including quantitative information on the severity of the violation.	Annual Air Quality Reports	Ongoing	Monthly/Annual		Ongoing

METCALF ENERGY CENTER - COMPLIANCE MATRIX							
START OF COMERCIAL OPERATION		5/29/2005					
THROUGH YEAR END OF 2014		12/31/2014					
Condition No.	**Requirements & Task Summary**	**Action required**	**Event**	**Required Submittal Date**	**Date submitted to CPM**	**Date approved by CPM**	**Status/ Comments**
AQ-27(e-f)	Use parameters in condition 27(a-d) and District approved methods to calculate the following. (e) Heat input rate for S-1 & S-2 combined, and S-3 & S-4 combined (f) Corrected NOx and CO concentrations and mass emissions at each exhaust point (P-1, P-2)	As part of the annual Air Quality Reports, indicate the date of any violation of this Condition including quantitative information on the severity of the violation.	Annual Air Quality Reports	Ongoing	Monthly/Annual		Ongoing
AQ-27(g-l)	For each source, source grouping, or exhaust point record parameters at least once every 15 minutes and calculate and record for the following. Refer to AQ-27 for further details.	As part of the annual Air Quality Reports, indicate the date of any violation of this Condition including quantitative information on the severity of the violation.	Annual Air Quality Reports	Ongoing	Monthly/Annual		Ongoing
AQ-28(a-b)	Demonstrate compliance with conditions 20, 21, 24, 25 by calculating and recording on a daily basis POC, PM10, and SO2 mass emissions fine PM10 and SO2 from each power train.	As part of the monthly Air Quality Reports, the owner/operator shall indicate the date of any violation including quantitative information on the severity of the violation.	Monthly Air Quality Reports	Ongoing	Monthly/Annual		Ongoing
AQ-29	Calculate and record on annual basis the max. projected annual emissions of formaldehyde, benzene, Specified Poly-Aromatic Hydrocarbons (PAH's).	As part of the annual Air Quality Reports, indicate the date of any violation of this Condition including quantitative information on the severity of the violation.	Annual Air Quality Reports	Ongoing	Annual		Ongoing
AQ-35	Maintain records and reports on site for a minimum of 5 years.	During site inspection, make all records and reports available to the District, California Air Resources Board, and CEC staffs.	AQ Inspection per AQ-35		Ongoing		Ongoing
AQ-36	Notify District and CPM of any violations of these permit conditions.	Submittal of these notifications as required by this condition is the verification of these permit conditions.	Violation of Permit Conditions		Ongoing		Ongoing
AQ-44	MEC shall comply with the continuous emission monitoring requirements of 40 CFR Part 75			Ongoing	Ongoing		Ongoing
AQ-45	Take monthly samples of natural gas combusted at MEC and analyze these samples for sulfur content using District-approved lab methods.	Maintain on site the records of all the guarantees received from its natural gas suppliers indicating that the fuel delivered to MEC complies with the 40 CFR Part 60,Subpart CC	On-site Compliance Inspections	Ongoing	Monthly		Ongoing
AQ-47a	Perform visual inspection of cooling tower drift eliminators once per calendar year and repair or replace any drift eliminators which are broken or missing.	As part of the monthly Air Quality Reports, indicate the date of any violation of this Condition.	Air Quality Reports	Ongoing	Annual		Ongoing
AQ-53	The heat input to the fire pump diesel engine shall not exceed 211 MM BTU totaled over any consecutive twelve month period.	As part of the monthly Air Quality Reports, indicate the date of any violation of this Condition including quantitative information on the severity of the violation.	Air Quality Reports	Ongoing	Monthly		Ongoing
AQ-54	The total hours of operation of the emergency generator shall not exceed 200 hours per calendar year, plus an additional 100 hours per calendar year for the purposes of maintenance and testing.	As part of the monthly Air Quality Reports, indicate the date of any violation of this Condition including quantitative information on the severity of the violation.	Air Quality Reports	Ongoing	Annual		Ongoing
AQ-56	Cold Start-up hours shall not exceed 30 hours per calendar year for each Gas Turbine.	Provide dates and durations of any violation of this Condition to the CPM.	Air Quality Reports	Ongoing	Annual		Ongoing

METCALF ENERGY CENTER - COMPLIANCE MATRIX							
START OF COMERCIAL OPERATION		5/29/2005					
THROUGH YEAR END OF 2014		12/31/2014					
Condition No.	**Requirements & Task Summary**	**Action required**	**Event**	**Required Submittal Date**	**Date submitted to CPM**	**Date approved by CPM**	**Status/ Comments**
AQ-57	Record start time, end time, and duration of Gas Turbine Cold Startup and Combustor Tuning Periods.	Make all records available to Agencies during inspection.	Ongoing		Ongoing		Ongoing
BIO-12	Incorporate into closure plan measures that address the local biological resources and incorporate into the BRMIMP.	Address all biological resource-related issues associated with facility closure.	12 months prior to facility closure	Ongoing	12 months Prior to Closure		Ongoing
HAZ-1	Do not use any hazardous material in reportable quantities, not listed in Attachment 1 or in greater quantities or strengths than those identified unless approved in advance by Santa Clara County and the CPM.	Provide to the CPM and Santa Clara County, in the Annual Compliance Report, a list of hazardous materials contained at the facility in reportable quantities.	Annual Compliance Report	Ongoing	Annual		Ongoing
LAND-1	At such time as a connection to a trail network can be made, install and maintain the portion of the planned trail that would cross the site.	In the Annual Compliance Reports provide updates on trail developments in the area around the site.	Annual Compliance Report	Ongoing	Annual		Ongoing
NOISE-2	Throughout the construction and operation, document, investigate, evaluate and attempt to resolve all project related noise complaints.	File a copy of the Noise Complaint Resolution Form with City of San Jose and with the CPM documenting the resolution of the complaint.	30 days after receiving a noise complaint	Ongoing	Within 30 Days		Ongoing
PAL-7	Include in the facility closure plan a description regarding facility closure activity's potential to impact paleontological resources.	Include a description of closure activities in the facility closure plan.	12 months prior to facility closure	Ongoing	12 months Prior to Closure		Ongoing
Public Health-1	Perform a visual inspection of the cooling tower drift eliminators once per calendar year. Prior to initial operation of the project, have the cooling tower vendor's field representative inspect the cooling tower drift eliminator and certify that the installation was performed in a satisfactory manner.	The project owner shall include the results of the annual inspection of the cooling tower drift eliminators and a description of any repairs performed in the next required compliance report.	Annual Compliance Report	Ongoing	Annual		Ongoing
SOIL & WATER-1	Potable water may be used for cooling purposes only in the event that SBWR recycled water service is interrupted	Provide a record of water consumption for the MEC.	Annual Compliance Report	Ongoing	Annual		Ongoing
TRANS-3	Ensure that all federal and state regulations for the transport of hazardous materials are observed.	Copies of all permits and licenses acquired concerning the transport of hazardous substances.	Annual Compliance Report	Ongoing	Annual		Ongoing
VIS-1	Treat the project structures, buildings, and tanks visible to the public in a non-reflective color.	The project owner shall provide a status report regarding treatment maintenance in the Annual Compliance Report.	Annual Compliance Report	Ongoing	Annual		Ongoing
VIS-11	Trail development along the Fisher Creek corridor adjacent to the power plant site.	The project owner shall submit to the City of San Jose and the County of Santa Clara Parks and Recreation Department for review and comment a specific plan.	Start of construction of the trail between Blanchard Road and railroad tracks	Ongoing	Ongoing		Ongoing
VIS-11	Trail development along the Fisher Creek corridor adjacent to the power plant site.	Submit to the CPM for review and approval a specific plan describing its landscape plan.	Start of construction of the trail between Blanchard Road and railroad tracks	Ongoing	Ongoing		Ongoing
VIS-11	Trail development along the Fisher Creek corridor adjacent to the power plant site.	Submit any required revisions.	Within 30 days of notification by the CPM.	Ongoing	Within 30 days		Ongoing
VIS-11	Trail development along the Fisher Creek corridor adjacent to the power plant site.	Notify the CPM, City of San Jose and County of Santa Clara Parks and Recreation Department that the planting installation is ready for	7 days after completion of planting installation	Ongoing	Within 7 days		Ongoing

METCALF ENERGY CENTER - COMPLIANCE MATRIX							
START OF COMERCIAL OPERATION		5/29/2005					
THROUGH YEAR END OF 2014		12/31/2014					
Condition No.	**Requirements & Task Summary**	**Action required**	**Event**	**Required Submittal Date**	**Date submitted to CPM**	**Date approved by CPM**	**Status/ Comments**
WASTE-2	Upon becoming aware of any impending waste management-related enforcement action, notify the CPM of any such enforcement action.	Notify the CPM in writing within 10 days of becoming aware of an impending enforcement action.	Within 10 days of becoming aware of an impending enforcement action	Ongoing	Within 10 Days		Ongoing
WASTE-3	Prepare and submit to the CPM a waste management plan for all wastes generated during construction and operation of the facility.	In the Annual Compliance Reports, document the actual waste management methods used during the year compared to planned management methods.	Annual Compliance Report	8/1/06	Annual		Ongoing
Compliance matrix	A compliance matrix shall be submitted by along with each annual compliance report.	Submit compliance matrix to CPM	Annual Compliance Report	Ongoing	Annual		Ongoing

Appendix 3

Operating Data Summary January 2014 - December 2014

Metcalf CT1			Metcalf CT2			Metcalf ST1		
Date	Total Net MWh	Total Primary Fuel Quantity Burned (MMcf GG)	Date	Total Net MWh	Total Primary Fuel Quantity Burned (MMcf GG)	Date	Total Net MWh	Total Primary Fuel Quantity Burned (MMcf GG)
January	47,285	520.8	January	46,570	524.3	January	55,696	-
February	15,306	175.3	February	1,452	22.1	February	9,036	-
March	65,997	744.2	March	73,546	842.6	March	78,919	-
April	58,862	671.6	April	61,357	704.4	April	70,835	-
May	72,607	829.6	May	62,826	723.8	May	80,807	-
June	54,375	627.9	June	45,837	529.2	June	58,282	-
July	68,420	782.9	July	55,447	641.2	July	73,878	-
August	69,621	805.2	August	66,806	780.1	August	81,974	-
September	73,610	849.2	September	65,496	762.2	September	84,798	-
October	75,801	870.3	October	72,128	839.0	October	89,877	-
November	98,512	1,120.7	November	93,957	1,086.3	November	119,106	-
December	111,195	1,252.8	December	111,651	1,278.2	December	137,942	-

Appendix 4

ECMPS Client Tool

Version 1.0 2014 Q1

United States Environmental Protection Agency (EPA)
Emissions Collection and Monitoring Plan System (ECMPS) Feedback
April 2, 2014 11:36 AM

Re: Metcalf Energy Center (55393) - 1

Dear Certifying Official:

Thank you for submitting your Quarterly Emissions Report using the U. S. EPA's Emissions Collection and Monitoring Plan System (ECMPS) software. This ECMPS Feedback report provides you with a detailed submission receipt, a summary of the evaluations performed on your submission, and guidance on any follow-up actions needed if any errors were found. EPA has also received a copy of this Feedback Report as part of your submission.

SUBMISSION STATUS

The EPA has received your Quarterly Emissions Report for the Facility and Monitoring Location(s) listed in Table 1 below. The Table also provides confirmation of EPA's receipt (Date, Time, etc.) of your submission. Prior to submission ECMPS evaluated your emissions report and assigned an overall "Error Status Level" to it, based on the results (see Table 1). This Feedback Report also contains Table 2, which displays EPA-Accepted Cumulative Values for emissions and other parameters.

Table 1: Submission Receipt and Error Status Level Information

Report Received for Facility ID (ORIS Code):	55393
Facility Name:	Metcalf Energy Center
State:	CA
Monitoring Locations:	1
Submission Type:	EM for 2014 QTR 1
Error Status Level:	No Errors
Submission Date/Time:	04/02/2014 11:35:48 AM
Submitter User ID:	rsilva
Submission ID:	754450
Resubmission Required:	No
EPA Analyst:	Art Diem; (202) 343-9340; diem.art@epa.gov

EXPLANATION OF YOUR ERROR STATUS LEVEL LISTED IN TABLE 1

The EPA has accepted your Emissions data submission. ECMPS detected no errors in your data based on the checks performed. NOTE: The ECMPS submission access window for this Emissions report has been closed. If you need to resubmit this data, please see the DATA RESUBMISSION guidance, below.

OTHER INFORMATION AND BULLETINS FROM EPA

QUESTIONS: Please contact your EPA Analyst listed in Table 1 with any questions regarding this submission and the evaluation results. If you need assistance with correcting problems in the Emissions data for this facility, please send an email to ECMPS Technical Support at: ecmps-support@camdsupport.com.

DATA RESUBMISSION: If you need to resubmit emissions data, including for previous calendar quarters, please complete the ECMPS Data Resubmission Request Form located at: http://ecmps.camdsupport.com/help_resubmit_form.shtml. Please provide detailed documentation of the reasons for the resubmission. Support staff will review your request and notify you via e-mail when the necessary database access window has been granted for your resubmission.

TECHNICAL SUPPORT: please visit the ECMPS Technical Support website at: http://ecmps.camdsupport.com for information about ECMPS software downloads, ECMPS News, Technical Support, documentation, tutorials, FAQs, and more.

ECMPS Data Reporting Instructions: for detailed information about reporting Monitoring Plan, QA/Certification Test, and Emissions data, please see the ECMPS Reporting Instructions on EPA's website at: http://www.epa.gov/airmarkets/business/ecmps/reporting-instructions.html.

If you have any questions regarding this correspondence, please feel free to contact your EPA Analyst listed in Table 1 as soon as possible. Thank you for your attention to this matter.

Table 2: Cumulative Data Summary -- EPA-Accepted Values

Unit/Stack/Pipe ID: 1

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	884					884
Operating Time (hrs)	859.33					859.33
SO2 Mass (tons)	0.4					0.4
CO2 Mass (tons)	85,931.3					85,931.3
Heat Input (mmBtu)	1,445,985					1,445,985
NOx Emission Rate (lb/mmBtu)	0.014					0.014

ECMPS Client Tool

Version 1.0 2014 Q1

United States Environmental Protection Agency (EPA)
Emissions Collection and Monitoring Plan System (ECMPS) Feedback
April 2, 2014 11:37 AM

Re: Metcalf Energy Center (55393) - 2

Dear Certifying Official:

Thank you for submitting your Quarterly Emissions Report using the U. S. EPA's Emissions Collection and Monitoring Plan System (ECMPS) software. This ECMPS Feedback report provides you with a detailed submission receipt, a summary of the evaluations performed on your submission, and guidance on any follow-up actions needed if any errors were found. EPA has also received a copy of this Feedback Report as part of your submission.

SUBMISSION STATUS

The EPA has received your Quarterly Emissions Report for the Facility and Monitoring Location(s) listed in Table 1 below. The Table also provides confirmation of EPA's receipt (Date, Time, etc.) of your submission. Prior to submission ECMPS evaluated your emissions report and assigned an overall "Error Status Level" to it, based on the results (see Table 1). This Feedback Report also contains Table 2, which displays EPA-Accepted Cumulative Values for emissions and other parameters.

Table 1: Submission Receipt and Error Status Level Information

Report Received for Facility ID (ORIS Code):	55393
Facility Name:	Metcalf Energy Center
State:	CA
Monitoring Locations:	2
Submission Type:	EM for 2014 QTR 1
Error Status Level:	No Errors
Submission Date/Time:	04/02/2014 11:37:05 AM
Submitter User ID:	rsilva
Submission ID:	754455
Resubmission Required:	No
EPA Analyst:	Art Diem; (202) 343-9340; diem.art@epa.gov

EXPLANATION OF YOUR ERROR STATUS LEVEL LISTED IN TABLE 1

The EPA has accepted your Emissions data submission. ECMPS detected no errors in your data based on the checks performed. NOTE: The ECMPS submission access window for this Emissions report has been closed. If you need to resubmit this data, please see the DATA RESUBMISSION guidance, below.

OTHER INFORMATION AND BULLETINS FROM EPA

QUESTIONS: Please contact your EPA Analyst listed in Table 1 with any questions regarding this submission and the evaluation results. If you need assistance with correcting problems in the Emissions data for this facility, please send an email to ECMPS Technical Support at: ecmps-support@camdsupport.com.

DATA RESUBMISSION: If you need to resubmit emissions data, including for previous calendar quarters, please complete the ECMPS Data Resubmission Request Form located at: http://ecmps.camdsupport.com/help_resubmit_form.shtml. Please provide detailed documentation of the reasons for the resubmission. Support staff will review your request and notify you via e-mail when the necessary database access window has been granted for your resubmission.

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If you have any questions regarding this correspondence, please feel free to contact your EPA Analyst listed in Table 1 as soon as possible. Thank you for your attention to this matter.

Table 2: Cumulative Data Summary -- EPA-Accepted Values

Unit/Stack/Pipe ID: 2

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	851					851
Operating Time (hrs)	825.76					825.76
SO2 Mass (tons)	0.4					0.4
CO2 Mass (tons)	82,866.0					82,866.0
Heat Input (mmBtu)	1,394,396					1,394,396
NOx Emission Rate (lb/mmBtu)	0.010					0.010

ECMPS Client Tool

Version 1.0 2014 Q1

United States Environmental Protection Agency (EPA)
Emissions Collection and Monitoring Plan System (ECMPS) Feedback
July 21, 2014 12:22 PM

Re: Metcalf Energy Center (55393) - 1

Dear Certifying Official:

Thank you for submitting your Quarterly Emissions Report using the U. S. EPA's Emissions Collection and Monitoring Plan System (ECMPS) software. This ECMPS Feedback report provides you with a detailed submission receipt, a summary of the evaluations performed on your submission, and guidance on any follow-up actions needed if any errors were found. EPA has also received a copy of this Feedback Report as part of your submission.

SUBMISSION STATUS

The EPA has received your Quarterly Emissions Report for the Facility and Monitoring Location(s) listed in Table 1 below. The Table also provides confirmation of EPA's receipt (Date, Time, etc.) of your submission. Prior to submission ECMPS evaluated your emissions report and assigned an overall "Error Status Level" to it, based on the results (see Table 1). This Feedback Report also contains Table 2, which displays EPA-Accepted Cumulative Values for emissions and other parameters.

Table 1: Submission Receipt and Error Status Level Information

Report Received for Facility ID (ORIS Code):	55393
Facility Name:	Metcalf Energy Center
State:	CA
Monitoring Locations:	1
Submission Type:	EM for 2014 QTR 2
Error Status Level:	No Errors
Submission Date/Time:	07/21/2014 12:21:57 PM
Submitter User ID:	rsilva
Submission ID:	787463
Resubmission Required:	No
EPA Analyst:	Carlos Martinez; (202) 343-9747; martinez.carlos@epa.gov

EXPLANATION OF YOUR ERROR STATUS LEVEL LISTED IN TABLE 1

The EPA has accepted your Emissions data submission. ECMPS detected no errors in your data based on the checks performed. NOTE: The ECMPS submission access window for this Emissions report has been closed. If you need to resubmit this data, please see the DATA RESUBMISSION guidance, below.

OTHER INFORMATION AND BULLETINS FROM EPA

QUESTIONS: Please contact your EPA Analyst listed in Table 1 with any questions regarding this submission and the evaluation results. If you need assistance with correcting problems in the Emissions data for this facility, please send an email to ECMPS Technical Support at: ecmps-support@camdsupport.com.

DATA RESUBMISSION: If you need to resubmit emissions data, including for previous calendar quarters, please complete the ECMPS Data Resubmission Request Form located at: http://ecmps.camdsupport.com/help_resubmit_form.shtml. Please provide detailed documentation of the reasons for the resubmission. Support staff will review your request and notify you via e-mail when the necessary database access window has been granted for your resubmission.

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If you have any questions regarding this correspondence, please feel free to contact your EPA Analyst listed in Table 1 as soon as possible. Thank you for your attention to this matter.

Table 2: Cumulative Data Summary -- EPA-Accepted Values

Unit/Stack/Pipe ID: 1

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	884	1,426				2,310
Operating Time (hrs)	859.33	1,339.90				2,199.23
SO2 Mass (tons)	0.4	0.6				1.0
CO2 Mass (tons)	85,931.3	127,833.2				213,764.5
Heat Input (mmBtu)	1,445,985	2,151,028				3,597,013
NOx Emission Rate (lb/mmBtu)	0.014	0.012				0.013

ECMPS Client Tool

Version 1.0 2014 Q1

United States Environmental Protection Agency (EPA)
Emissions Collection and Monitoring Plan System (ECMPS) Feedback
July 21, 2014 12:23 PM

Re: Metcalf Energy Center (55393) - 2

Dear Certifying Official:

Thank you for submitting your Quarterly Emissions Report using the U. S. EPA's Emissions Collection and Monitoring Plan System (ECMPS) software. This ECMPS Feedback report provides you with a detailed submission receipt, a summary of the evaluations performed on your submission, and guidance on any follow-up actions needed if any errors were found. EPA has also received a copy of this Feedback Report as part of your submission.

SUBMISSION STATUS

The EPA has received your Quarterly Emissions Report for the Facility and Monitoring Location(s) listed in Table 1 below. The Table also provides confirmation of EPA's receipt (Date, Time, etc.) of your submission. Prior to submission ECMPS evaluated your emissions report and assigned an overall "Error Status Level" to it, based on the results (see Table 1). This Feedback Report also contains Table 2, which displays EPA-Accepted Cumulative Values for emissions and other parameters.

Table 1: Submission Receipt and Error Status Level Information

Report Received for Facility ID (ORIS Code):	55393
Facility Name:	Metcalf Energy Center
State:	CA
Monitoring Locations:	2
Submission Type:	EM for 2014 QTR 2
Error Status Level:	No Errors
Submission Date/Time:	07/21/2014 12:23:38 PM
Submitter User ID:	rsilva
Submission ID:	787496
Resubmission Required:	No
EPA Analyst:	Carlos Martinez; (202) 343-9747; martinez.carlos@epa.gov

EXPLANATION OF YOUR ERROR STATUS LEVEL LISTED IN TABLE 1

The EPA has accepted your Emissions data submission. ECMPS detected no errors in your data based on the checks performed. NOTE: The ECMPS submission access window for this Emissions report has been closed. If you need to resubmit this data, please see the DATA RESUBMISSION guidance, below.

OTHER INFORMATION AND BULLETINS FROM EPA

QUESTIONS: Please contact your EPA Analyst listed in Table 1 with any questions regarding this submission and the evaluation results. If you need assistance with correcting problems in the Emissions data for this facility, please send an email to ECMPS Technical Support at: ecmps-support@camdsupport.com.

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Table 2: Cumulative Data Summary -- EPA-Accepted Values

Unit/Stack/Pipe ID: 2

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	851	1,259				2,110
Operating Time (hrs)	825.76	1,194.23				2,019.99
SO2 Mass (tons)	0.4	0.6				1.0
CO2 Mass (tons)	82,866.0	116,333.6				199,199.6
Heat Input (mmBtu)	1,394,396	1,957,547				3,351,943
NOx Emission Rate (lb/mmBtu)	0.010	0.012				0.011

ECMPS Client Tool

Version 1.0 2014 Q3 SP2

United States Environmental Protection Agency (EPA)
Emissions Collection and Monitoring Plan System (ECMPS) Feedback
October 16, 2014 11:30 AM

Re: Metcalf Energy Center (55393) - 1

Dear Certifying Official:

Thank you for submitting your Quarterly Emissions Report using the U. S. EPA's Emissions Collection and Monitoring Plan System (ECMPS) software. This ECMPS Feedback report provides you with a detailed submission receipt, a summary of the evaluations performed on your submission, and guidance on any follow-up actions needed if any errors were found. EPA has also received a copy of this Feedback Report as part of your submission.

SUBMISSION STATUS

The EPA has received your Quarterly Emissions Report for the Facility and Monitoring Location(s) listed in Table 1 below. The Table also provides confirmation of EPA's receipt (Date, Time, etc.) of your submission. Prior to submission ECMPS evaluated your emissions report and assigned an overall "Error Status Level" to it, based on the results (see Table 1). This Feedback Report also contains Table 2, which displays EPA-Accepted Cumulative Values for emissions and other parameters.

Table 1: Submission Receipt and Error Status Level Information

Report Received for Facility ID (ORIS Code):	55393
Facility Name:	Metcalf Energy Center
State:	CA
Monitoring Locations:	1
Submission Type:	EM for 2014 QTR 3
Error Status Level:	No Errors
Submission Date/Time:	10/16/2014 11:29:55 AM
Submitter User ID:	rsilva
Submission ID:	806997
Resubmission Required:	No
EPA Analyst:	Carlos R Martinez; (202) 343-9747; martinez.carlos@epa.gov

EXPLANATION OF YOUR ERROR STATUS LEVEL LISTED IN TABLE 1

The EPA has accepted your Emissions data submission. ECMPS detected no errors in your data based on the checks performed. NOTE: The ECMPS submission access window for this Emissions report has been closed. If you need to resubmit this data, please see the DATA RESUBMISSION guidance, below.

OTHER INFORMATION AND BULLETINS FROM EPA

QUESTIONS: Please contact your EPA Analyst listed in Table 1 with any questions regarding this submission and the evaluation results. If you need assistance with correcting problems in the Emissions data for this facility, please send an email to ECMPS Technical Support at: ecmps-support@camdsupport.com.

DATA RESUBMISSION: If you need to resubmit emissions data, including for previous calendar quarters, please complete the ECMPS Data Resubmission Request Form located at: http://ecmps.camdsupport.com/help_resubmit_form.shtml. Please provide detailed documentation of the reasons for the resubmission. Support staff will review your request and notify you via e-mail when the necessary database access window has been granted for your resubmission.

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If you have any questions regarding this correspondence, please feel free to contact your EPA Analyst listed in Table 1 as soon as possible. Thank you for your attention to this matter.

Table 2: Cumulative Data Summary -- EPA-Accepted Values

Unit/Stack/Pipe ID: 1

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	884	1,426	1,616			3,926
Operating Time (hrs)	859.33	1,339.90	1,513.08			3,712.31
SO2 Mass (tons)	0.4	0.6	0.7			1.7
CO2 Mass (tons)	85,931.3	127,833.2	145,336.1			359,100.6
Heat Input (mmBtu)	1,445,985	2,151,028	2,445,539			6,042,552
NOx Emission Rate (lb/mmBtu)	0.014	0.012	0.012			0.013

ECMPS Client Tool

Version 1.0 2014 Q3 SP2

United States Environmental Protection Agency (EPA)
Emissions Collection and Monitoring Plan System (ECMPS) Feedback
October 16, 2014 11:31 AM

Re: Metcalf Energy Center (55393) - 2

Dear Certifying Official:

Thank you for submitting your Quarterly Emissions Report using the U. S. EPA's Emissions Collection and Monitoring Plan System (ECMPS) software. This ECMPS Feedback report provides you with a detailed submission receipt, a summary of the evaluations performed on your submission, and guidance on any follow-up actions needed if any errors were found. EPA has also received a copy of this Feedback Report as part of your submission.

SUBMISSION STATUS

The EPA has received your Quarterly Emissions Report for the Facility and Monitoring Location(s) listed in Table 1 below. The Table also provides confirmation of EPA's receipt (Date, Time, etc.) of your submission. Prior to submission ECMPS evaluated your emissions report and assigned an overall "Error Status Level" to it, based on the results (see Table 1). This Feedback Report also contains Table 2, which displays EPA-Accepted Cumulative Values for emissions and other parameters.

Table 1: Submission Receipt and Error Status Level Information

Report Received for Facility ID (ORIS Code):	55393
Facility Name:	Metcalf Energy Center
State:	CA
Monitoring Locations:	2
Submission Type:	EM for 2014 QTR 3
Error Status Level:	No Errors
Submission Date/Time:	10/16/2014 11:31:19 AM
Submitter User ID:	rsilva
Submission ID:	807006
Resubmission Required:	No
EPA Analyst:	Carlos R Martinez; (202) 343-9747; martinez.carlos@epa.gov

EXPLANATION OF YOUR ERROR STATUS LEVEL LISTED IN TABLE 1

The EPA has accepted your Emissions data submission. ECMPS detected no errors in your data based on the checks performed. NOTE: The ECMPS submission access window for this Emissions report has been closed. If you need to resubmit this data, please see the DATA RESUBMISSION guidance, below.

OTHER INFORMATION AND BULLETINS FROM EPA

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If you have any questions regarding this correspondence, please feel free to contact your EPA Analyst listed in Table 1 as soon as possible. Thank you for your attention to this matter.

Table 2: Cumulative Data Summary -- EPA-Accepted Values

Unit/Stack/Pipe ID: 2

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	851	1,259	1,405			3,515
Operating Time (hrs)	825.76	1,194.23	1,328.49			3,348.48
SO2 Mass (tons)	0.4	0.6	0.7			1.7
CO2 Mass (tons)	82,866.0	116,333.6	130,712.7			329,912.3
Heat Input (mmBtu)	1,394,396	1,957,547	2,199,433			5,551,376
NOx Emission Rate (lb/mmBtu)	0.010	0.012	0.012			0.012

ECMPS Client Tool

Version 1.0 2014 Q4 SP1

United States Environmental Protection Agency (EPA)
Emissions Collection and Monitoring Plan System (ECMPS) Feedback

January 6, 2015 03:26 PM

Re: Metcalf Energy Center (55393) - 2

Dear Certifying Official:

Thank you for submitting your Quarterly Emissions Report using the U. S. EPA's Emissions Collection and Monitoring Plan System (ECMPS) software. This ECMPS Feedback report provides you with a detailed submission receipt, a summary of the evaluations performed on your submission, and guidance on any follow-up actions needed if any errors were found. EPA has also received a copy of this Feedback Report as part of your submission.

SUBMISSION STATUS

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Table 1: Submission Receipt and Error Status Level Information

Report Received for Facility ID (ORIS Code):	55393
Facility Name:	Metcalf Energy Center
State:	CA
Monitoring Locations:	2
Submission Type:	EM for 2014 QTR 4
Error Status Level:	No Errors
Submission Date/Time:	01/06/2015 3:25:58 PM
Submitter User ID:	rsilva
Submission ID:	823955
Resubmission Required:	No
EPA Analyst:	Carlos R Martinez; (202) 343-9747; martinez.carlos@epa.gov

EXPLANATION OF YOUR ERROR STATUS LEVEL LISTED IN TABLE 1

The EPA has accepted your Emissions data submission. ECMPS detected no errors in your data based on the checks performed. NOTE: The ECMPS submission access window for this Emissions report has been closed. If you need to resubmit this data, please see the DATA RESUBMISSION guidance, below.

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QUESTIONS: Please contact your EPA Analyst listed in Table 1 with any questions regarding this submission and the evaluation results. If you need assistance with correcting problems in the Emissions data for this facility, please send an email to ECMPS Technical Support at: ecmps-support@camdsupport.com.

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If you have any questions regarding this correspondence, please feel free to contact your EPA Analyst listed in Table 1 as soon as possible. Thank you for your attention to this matter.

Table 2: Cumulative Data Summary -- EPA-Accepted Values

Unit/Stack/Pipe ID: 2

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	851	1,259	1,405	1,923		5,438
Operating Time (hrs)	825.76	1,194.23	1,328.49	1,905.48		5,253.96
SO2 Mass (tons)	0.4	0.6	0.7	1.0		2.7
CO2 Mass (tons)	82,866.0	116,333.6	130,712.7	192,721.2		522,633.5
Heat Input (mmBtu)	1,394,396	1,957,547	2,199,433	3,242,907		8,794,283
NOx Emission Rate (lb/mmBtu)	0.010	0.012	0.012	0.009		0.011

ECMPS Client Tool

Version 1.0 2014 Q4 SP1

United States Environmental Protection Agency (EPA)
Emissions Collection and Monitoring Plan System (ECMPS) Feedback
January 7, 2015 08:09 AM

Re: Metcalf Energy Center (55393) - 1

Dear Certifying Official:

Thank you for submitting your Quarterly Emissions Report using the U. S. EPA's Emissions Collection and Monitoring Plan System (ECMPS) software. This ECMPS Feedback report provides you with a detailed submission receipt, a summary of the evaluations performed on your submission, and guidance on any follow-up actions needed if any errors were found. EPA has also received a copy of this Feedback Report as part of your submission.

SUBMISSION STATUS

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Table 1: Submission Receipt and Error Status Level Information

Report Received for Facility ID (ORIS Code):	55393
Facility Name:	Metcalf Energy Center
State:	CA
Monitoring Locations:	1
Submission Type:	EM for 2014 QTR 4
Error Status Level:	No Errors
Submission Date/Time:	01/07/2015 8:09:52 AM
Submitter User ID:	rsilva
Submission ID:	824192
Resubmission Required:	No
EPA Analyst:	Carlos R Martinez; (202) 343-9747; martinez.carlos@epa.gov

EXPLANATION OF YOUR ERROR STATUS LEVEL LISTED IN TABLE 1

The EPA has accepted your Emissions data submission. ECMPS detected no errors in your data based on the checks performed. NOTE: The ECMPS submission access window for this Emissions report has been closed. If you need to resubmit this data, please see the DATA RESUBMISSION guidance, below.

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If you have any questions regarding this correspondence, please feel free to contact your EPA Analyst listed in Table 1 as soon as possible. Thank you for your attention to this matter.

Table 2: Cumulative Data Summary -- EPA-Accepted Values

Unit/Stack/Pipe ID: 1

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	884	1,426	1,616	1,980		5,906
Operating Time (hrs)	859.33	1,339.90	1,513.08	1,965.64		5,677.95
SO2 Mass (tons)	0.4	0.6	0.7	1.0		2.7
CO2 Mass (tons)	85,931.3	127,833.2	145,336.1	195,018.8		554,119.4
Heat Input (mmBtu)	1,445,985	2,151,028	2,445,539	3,281,580		9,324,132
NOx Emission Rate (lb/mmBtu)	0.014	0.012	0.012	0.009		0.011

Appendix 5

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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 Map: 1 Grid: 4B	**Pounds** State Gas Type Pure	**448** Storage Container Other Days on Site: 365	**64**	448 Pressue < Ambient Temperature Ambient	Waste Code	- Pressure Release - Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
Aqueous Ammonia Storage Area

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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)	**AMMONIA** CAS No ✓EHS 7664-41-7 Map: 1 Grid: 4G	**Pounds** State Liquid Type Mixture	**27527.7** Storage Container Aboveground Tank Days on Site: 365	**32382**	27527.7 Pressue Ambient Temperature Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health	Ammonia	28 %	✓	7664-41-7

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
AUXILLARY TRANSFORMERS

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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: 9 - Misc. Hazardous Materials	**HYTRANS 61**	**Gallons**	**1956**	**489**	1956		- Fire - Acute Health	OIL, HYDRO LIGHT NAPH DIST	99 %		64742-53-6
	CAS No	State: Liquid	Storage Container: Other		Pressue: < Ambient	Waste Code		2, 6-DI-T-BUTYL-P-CRESOL (BHT)	1 %		128-37-0
	Map: 1 Grid: 5D, 3D, D1, 5E	Type: Mixture	Days on Site: 365		Temperature: Ambient						
DOT: 2.2 - Nonflammable Gases	**NITROGEN, COMPRESSED**	**Cu. Feet**	**920**	**230**	920		- Pressure Release				
	CAS No 7727-37-9	State: Gas	Storage Container: Cylinder		Pressue	Waste Code					
	Map: 1 Grid: 2D, 3D, 5E, 5D	Type: Pure	Days on Site: 365		Temperature						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
BALANCE OF PLANT

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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)	**LEAD-ACID BATTERY**	**Gallons**	**865**	**14.4**	865			LEAD, LEAD COMPONENTS	60 %		7439-92-1
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code		SULFURIC ACID	30 %	✓	7664-93-9
Corrosive	Map: 1 Grid: 2E	Type: Pure	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
BOILER FEED PUMPS

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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: 9 - Misc. Hazardous Materials	**LUBRICATING OIL**	**Gallons**	**520**	**130**	520		- Fire				
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code					
	Map: 1 Grid: 2H, 3H	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
Boiler Water Chemical Treatment Area

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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	**CHEMTREAT BL-152** CAS No Map: 1 Grid: 2G	**Gallons** State Liquid Type Mixture	**800** Storage Container Tote Bin Days on Site: 365	**400**	680 Pressue Ambient Temperature Ambient	Waste Code	- Acute Health	AMMONIUM HYDROXIDE ETHANOLAMINE	30 % 10 %		1336-21-6 141-43-5
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**CHEMTREAT BL1795** CAS No Map: 1 Grid: 2G	**Gallons** State Liquid Type Mixture	**400** Storage Container Tote Bin Days on Site: 365	**400**	340 Pressue Ambient Temperature Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health	SODIUM HYDROXIDE TRISODIUM PHOSPHATE			1310-73-2 7601-54-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
COMBUSTION TURBINE #1

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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)	**LEAD-ACID BATTERY**	**Gallons**	**324**	**2.7**	324			LEAD, LEAD COMPONENTS	60 %		7439-92-1
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code		SULFURIC ACID	30 %	✓	7664-93-9
Corrosive	Map: 1 Grid: 4E	Type: Pure	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
COMBUSTION TURBINE #2

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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)	**LEAD-ACID BATTERY**	**Gallons**	**324**	**2.7**	324			LEAD, LEAD COMPONENTS	60 %		7439-92-1
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code		SULFURIC ACID	30 %	✓	7664-93-9
Corrosive	Map: 1 Grid: 2E	Type: Pure	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
Combustion Turbine Lube Oil

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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	**76 TURBINE OIL 68**	**Gallons**	**7200**	**3600**	7200		- Fire				
	CAS No	State: Solid	Storage Container: Other		Pressue: Ambient	Waste Code					
	Map: 1 Grid: 2E, 4E	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location **Connex Near Storm Water Pond**

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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: 9 - Misc. Hazardous Materials	**Sodium Carbonate**	**Pounds**	**300**	**50**	300		- Acute Health				
	CAS No 497-19-8 Map: 1 Grid: 6K	State Solid Type Pure	Storage Container Bag Days on Site: 365		Pressue Ambient Temperature Ambient	Waste Code					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
Cooling Tower Chemical Treatment Area

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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: 9 - Misc. Hazardous Materials	**CHEMTREAT CL240** CAS No NA Map: 1 Grid: 5D	**Gallons** State Liquid Type Mixture	**1500** Storage Container Aboveground Tank Days on Site: 365	**1500**	1350 Pressue Ambient Temperature Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health				
DOT: 9 - Misc. Hazardous Materials	**CHEMTREAT CL4500** CAS No Map: 1 Grid: 5D	**Gallons** State Liquid Type Mixture	**1500** Storage Container Aboveground Tank Days on Site: 365	**1500**	750 Pressue Ambient Temperature Ambient	Waste Code	- Acute Health				
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**SODIUM HYPOCHLORITE 12.5%** CAS No Map: 1 Grid: 5D	**Gallons** State Liquid Type Mixture	**8000** Storage Container Aboveground Tank Days on Site: 365	**8000**	6800 Pressue Ambient Temperature Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health	SODIUM HYDROXIDE SODIUM HYPOCHLORITE >12.5%-15% SODIUM CHLORIDE WATER	1 % 13 %		1310-73-2 7681-52-9 7647-14-5 7732-18-5
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Water Reactive, Class 1	**SULFURIC ACID 93%** CAS No ✓EHS 7664-93-9 Map: 1 Grid: 5D	**Pounds** State Liquid Type Pure	**42762.8** Storage Container Aboveground Tank Days on Site: 365	**85526**	42762.8 Pressue Ambient Temperature Ambient	Waste Code	- Reactive - Acute Health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
CT CONTROL OIL TANK

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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	**MOBIL DTE 26**	**Gallons**	**200**	**100**	200		- Fire - Acute Health				
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code					
	Map: 1 Grid: 2F, 3F	Type: Pure	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
CYLINDER GAS STORAGE

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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	**ARGON, COMPRESSED** CAS No 7440-37-1 Map: 1 Grid: H3	**Cu. Feet** State Gas Type Pure	**672** Storage Container Cylinder Days on Site: 365	**336**	672 Pressue Temperature	Waste Code	- Pressure Release				
DOT: 2.2 - Nonflammable Gases	**CALIBRATION GAS (NITROGEN, CARBON MONOXIDE)** CAS No Map: 1 Grid: 3H	**Cu. Feet** State Gas Type Mixture	**290** Storage Container Cylinder Days on Site: 365	**145**	290 Pressue < Ambient Temperature Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health	NITROGEN OXYGEN CARBON MONOXIDE	83 % 12 % 5 %		7727-37-9 7782-44-7 124-38-9
DOT: 2.2 - Nonflammable Gases	**HELIUM** CAS No 7440-59-7 Map: 1 Grid: 3H	**Cu. Feet** State Gas Type Pure	**292** Storage Container Cylinder	**292**	292 Pressue Temperature	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health				
DOT: 2.2 - Nonflammable Gases	**NITROGEN** CAS No 7727-37-9 Map: 1 Grid: 3H	**Cu. Feet** State Gas Type Pure	**1610** Storage Container Cylinder Days on Site: 365	**230**	1610 Pressue < Ambient Temperature Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health				
DOT: 2.2 - Nonflammable Gases	**NITROGEN / NITRIC OXIDE CALIBRATION GAS** CAS No Map: 1 Grid: 3H	**Cu. Feet** State Gas Type Mixture	**1450** Storage Container Cylinder Days on Site: 365	**145**	870 Pressue Ambient Temperature Ambient	Waste Code	- Pressure Release	NITRIC OXIDE NITROGEN	0 % 99 %	✓	10102-43-9 7727-37-9
DOT: 2.2 - Nonflammable Gases	**NITROGEN / OXYGEN CALIBRATION GAS** CAS No Map: 1 Grid: 3H	**Cu. Feet** State Gas Type	**435** Storage Container Cylinder Days on Site: 365	**145**	435 Pressue Ambient Temperature Ambient	Waste Code	- Pressure Release - Acute Health				
DOT: 2.2 - Nonflammable Gases Oxidizing, Class 2	**OXYGEN** CAS No 7782-44-7 Map: 1 Grid: 3H	**Cu. Feet** State Gas Type Pure	**3653** Storage Container Cylinder Days on Site: 365	**281**	3653 Pressue Ambient Temperature Ambient	Waste Code	- Fire - Pressure Release				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
DIESEL FIRE PUMP HOUSE

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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)	**LEAD-ACID BATTERY**	**Gallons**	**12**	**6**	12		- Acute Health - Chronic health	Sulfuric Acid	40 %	✓	7664-93-9
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code: 792		Lead, Lead Components	60 %		7439-92-1
Corrosive	Map: 1 Grid: 5I	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
Fire Pump House

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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	**DIESEL** CAS No 68334-30-5 Map: 1 Grid: 5I	**Gallons** State Liquid Type Mixture	**572** Storage Container Aboveground Tank Days on Site: 365	**572**	550 Pressue Ambient Temperature Ambient	Waste Code 331	- Fire - Acute Health	FUELS, DIESEL, NO. 2	100 %		
								GAS OIL, LIGHT	0 %		64741-44-2
								HYDRODESULFURIZED MIDDLE DISTILLATE	0 %		64742-80-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
FUEL GAS COMPRESSORS

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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: 9 - Misc. Hazardous Materials	**LUBRICATING OIL**	**Gallons**	**135**	**45**	135		- Fire				
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code					
	Map: 1 Grid: 5J, 6J	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
GSU Transformers

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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	**HYTRANS 61**	**Gallons**	**47883**	**18345**	47883		- Fire - Acute Health	OIL, HYDRO LIGHT NAPH DIST	99 %		64742-53-6
	CAS No	State: Liquid	Storage Container: Other		Pressue: < Ambient	Waste Code		2, 6-DI-T-BUTYL-P-CRESOL (BHT)	1 %		128-37-0
	Map: 1 Grid: 2D, 3D, 4E	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
Hazardous Material Storage Area

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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: 4.1 - Flammable Solids	**DEBRIS/RAGS CONTAMINATED WITH PETROLEUM/OIL** CAS No Map: 1 Grid: 5G, 5H	**Pounds** State: Solid Type: Waste	**100** Storage Container: Steel Drum Days on Site: 365	**55**	25 Pressue: Ambient Temperature: Ambient	500 Waste Code: 352	- Fire				
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class II	**USED OIL** CAS No NA Map: 1 Grid: 5G, 5H	**Gallons** State: Liquid Type: Waste	**400** Storage Container: Tote Bin Days on Site: 365	**400**	200 Pressue: Ambient Temperature: Ambient	660 Waste Code: 221	- Fire - Acute Health				
DOT: 4.1 - Flammable Solids	**USED OIL FILTERS** CAS No Map: 1 Grid: 5G, 5H	**Pounds** State: Solid Type: Waste	**100** Storage Container: Steel Drum Days on Site: 365	**100**	25 Pressue: Ambient Temperature: Ambient	200 Waste Code:	- Fire - Reactive - Pressure Release - Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
Lube Oil Storage

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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	**76 TURBINE OIL 68** CAS No Map: 1 Grid: 5H	**Gallons** State: Liquid Type: Mixture	**220** Storage Container: Steel Drum Days on Site: 365	**55**	220 Pressue: Ambient Temperature: Ambient	Waste Code					
DOT: 3 - Flammable and Combustible Liquids	**Megaflow AW HVI Hydraulic Oil** CAS No Map: 1 Grid: 5H	**Gallons** State: Liquid Type: Mixture	**55** Storage Container: Steel Drum Days on Site: 365	**55**	55 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire				
DOT: 3 - Flammable and Combustible Liquids	**MISCELLANEOUS LUBE OIL** CAS No Map: 1 Grid: 5H	**Gallons** State: Liquid Type: Mixture	**90** Storage Container: Carboy Days on Site: 365	**5**	90 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire - Acute Health				
DOT: 3 - Flammable and Combustible Liquids	**MOBIL DTE 26** CAS No Map: 1 Grid: 5H	**Gallons** State: Liquid Type: Pure	**110** Storage Container: Steel Drum Days on Site: 365	**55**	110 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire - Acute Health				
DOT: 3 - Flammable and Combustible Liquids	**MULTIPURPOSE R+O OIL 220** CAS No Map: 1 Grid: 5H	**Gallons** State: Liquid Type: Mixture	**165** Storage Container: Steel Drum Days on Site: 365	**55**	165 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire - Acute Health	LUBRICANT BASE OIL ADDITIVES	99 % 1 %		
DOT: 3 - Flammable and Combustible Liquids	**Release Number 1 VOC** CAS No Map: 1 Grid: 5H	**Gallons** State: Liquid Type: Mixture	**55** Storage Container: Steel Drum Days on Site: 365	**55**	55 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire				
DOT: 3 - Flammable and Combustible Liquids	**SHELL TELLUS OIL** CAS No Map: 1 Grid: 5H	**Gallons** State: Liquid Type: Pure	**110** Storage Container: Steel Drum Days on Site: 365	**55**	110 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location **Lube Oil Storage**

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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	**Shell Turbo Oil DR 46** CAS No Map: 1 Grid: 5H	**Gallons** State: Liquid Type: Mixture	**55** Storage Container: Steel Drum Days on Site: 365	**55**	55 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire				
DOT: 3 - Flammable and Combustible Liquids	**TURBO T OIL 32** CAS No Map: 1 Grid: 5H	**Gallons** State: Liquid Type: Pure	**330** Storage Container: Steel Drum Days on Site: 365	**55**	330 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire - Acute Health				
DOT: 3 - Flammable and Combustible Liquids	**Vaprotec Light** CAS No Map: 1 Grid: 5H	**Gallons** State: Liquid Type: Mixture	**55** Storage Container: Steel Drum Days on Site: 365	**55**	55 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location **MAINTENANCE SHOP**

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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 Flammable Liquid, Class I-B	***MISCELLANEOUS FLAMMABLE LIQUID, CLASS IB** CAS No Map: 1 Grid: 3J	**Gallons** State: Liquid Type: Pure	**65** Storage Container: Can, Glass Bottle or Jug, Plastic Bottle or Jug Days on Site: 365	**1**	65 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire				
DOT: 2.1 - Flammable Gases Unstable (Reactive), Class 2, Flammable Gas	**ACETYLENE** CAS No 74-86-2 Map: 1 Grid: 3J	**Cu. Feet** State: Gas Type: Pure	**185** Storage Container: Cylinder Days on Site: 365	**185**	185 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire - Reactive - Pressure Release				
DOT: 2.2 - Nonflammable Gases	**ARGON / CARBON DIOXIDE / HELIUM** CAS No Map: 1 Grid: 3J	**Cu. Feet** State: Gas Type: Mixture	**215** Storage Container: Cylinder Days on Site: 365	**215**	215 Pressue: Ambient Temperature: Ambient	Waste Code	- Pressure Release - Acute Health				
DOT: 2.2 - Nonflammable Gases Other	**ARGON, COMPRESSED** CAS No 7440-37-1 Map: 1 Grid: 3J	**Cu. Feet** State: Gas Type: Pure	**336** Storage Container: Cylinder Days on Site: 365	**336**	336 Pressue: Ambient Temperature: Ambient	Waste Code	- Pressure Release				
DOT: 2.2 - Nonflammable Gases	**CARBON DIOXIDE** CAS No 124-38-9 Map: 1 Grid: 3J	**Cu. Feet** State: Gas Type: Pure	**376** Storage Container: Cylinder Days on Site: 365	**376**	376 Pressue: Ambient Temperature: Ambient	Waste Code	- Pressure Release - Acute Health - Chronic health				
DOT: 2.2 - Nonflammable Gases Oxidizing, Class 2	**OXYGEN** CAS No 7782-44-7 Map: 1 Grid: 3J	**Cu. Feet** State: Gas Type: Pure	**281** Storage Container: Cylinder Days on Site: 365	**281**	281 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire - Pressure Release				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location **PROPANE STORAGE**

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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 Flammable Liquid, Class I-B	***MISCELLANEOUS FLAMMABLE LIQUID, CLASS IB** CAS No Map: 1 Grid: 3H	**Gallons** State: Liquid Type: Pure	**55** Storage Container: Can, Plastic Bottle or Jug Days on Site: 365	**1**	55 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire				
DOT: 2.1 - Flammable Gases Flammable Liquid, Class I-A	**PROPANE** CAS No 74-98-6 Map: 1 Grid: 3H	**Gallons** State: Gas Type: Pure	**60** Storage Container: Cylinder Days on Site: 365	**10**	60 Pressue: < Ambient Temperature: Ambient	Waste Code	- Fire - Pressure Release - Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
STATION SERVICE TRANSFORMERS

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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	**HYTRANS 61**	**Gallons**	**7038**	**3519**	7038		- Fire - Acute Health	OIL, HYDRO LIGHT NAPH DIST	99 %		64742-53-6
	CAS No	State: Liquid	Storage Container: Other		Pressue: < Ambient	Waste Code		2, 6-DI-T-BUTYL-P-CRESOL (BHT)	1 %		128-37-0
	Map: 1 Grid: 2D, 3D	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
STEAM TURBINE CONTROL OIL TANK

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted on 2/9/2015 3:40 PM**

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: 9 - Misc. Hazardous Materials	**Sheli Turbo Oil DR 46**	**Gallons**	**200**	**200**	200		- Fire				
	CAS No	State: Liquid	Storage Container: Other		Pressue: Ambient	Waste Code					
	Map: 1 Grid: 4F	Type: Mixture	Days on Site: 365		Temperature: Ambient						

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
Steam Turbine Flammable Locker

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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 Flammable Liquid, Class I-B	***MISCELLANEOUS FLAMMABLE LIQUID, CLASS IB** CAS No Map: 1 Grid: 4E	**Gallons** State: Liquid Type: Pure	**210** Storage Container: Can, Glass Bottle or Jug, Plastic Bottle or Jug Days on Site: 365	**1**	210 Pressue: Ambient Temperature: Ambient	Waste Code					
DOT: 3 - Flammable and Combustible Liquids Flammable Liquid, Class I-B, Other Health Hazard, Irritant	**GASOLINE** CAS No 8006-61-9 Map: 1 Grid: 4F	**Gallons** State: Liquid Type: Pure	**70** Storage Container: Can Days on Site: 365	**5**	70 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
STEAM TURBINE PACKAGE

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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 Other	**REOLUBE TURBOFLUID 46B** CAS No Map: 1 Grid: 4G	**Gallons** State Liquid Type Mixture	**6850** Storage Container Other Days on Site: 365	**6650**	6850 Pressue Ambient Temperature Ambient	Waste Code	- Fire - Acute Health	TERT-BUTYLATED TRIPHENYL PHOSPHATES TRIPHENYL PHOSPHATE			68937406 115-86-6

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location **SWITCH YARD**

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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	**FLOODED LEAD-CALCIUM BATTERY** CAS No Map: 1 Grid: 4B	**Gallons** State Liquid Type Pure	**9** Storage Container Other Days on Site: 365	**0.6**	9 Pressue Ambient Temperature Ambient	Waste Code		LEAD, LEAD COMPONENTS SULFURIC ACID	65 % 8 %	 ✓	7439-92-1 7664-93-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location **UNIT 1 CEMS GASES**

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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	**NITROGEN / NITRIC OXIDE CALIBRATION GAS** CAS No Map: 1 Grid: 4H	**Cu. Feet** State Gas Type Mixture	**870** Storage Container Cylinder Days on Site: 365	**145**	435 Pressue Ambient Temperature Ambient	Waste Code	- Pressure Release	NITRIC OXIDE NITROGEN	0 % 99 %	✓	10102-43-9 7727-37-9
DOT: 2.2 - Nonflammable Gases	**NITROGEN / OXYGEN CALIBRATION GAS** CAS No Map: 1 Grid: 4H	**Cu. Feet** State Gas Type	**435** Storage Container Cylinder Days on Site: 365	**145**	435 Pressue Ambient Temperature Ambient	Waste Code	- Pressure Release - Acute Health				
DOT: 2.2 - Nonflammable Gases	**NITROGEN/CARBON MONOXIDE CALIBRATION GAS** CAS No Map: 1 Grid: 4H	**Cu. Feet** State Gas Type Mixture	**435** Storage Container Cylinder Days on Site: 365	**145**	290 Pressue < Ambient Temperature Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health	NITROGEN OXYGEN CARBON MONOXIDE	83 % 12 % 5 %		7727-37-9 7782-44-7 124-38-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
UNIT 1 NITROGEN STORAGE

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted on 2/9/2015 3:40 PM**

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	**NITROGEN** CAS No 7727-37-9 Map: 1 Grid: 3E	**Pounds** State Gas Type Pure	**600** Storage Container Cylinder Days on Site: 365	**100**	600 Pressue < Ambient Temperature Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location **UNIT 2 CEMS GASES**

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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	**NITROGEN / NITRIC OXIDE CALIBRATION GAS** CAS No Map: 1 Grid: 2H	**Cu. Feet** State Gas Type Mixture	**870** Storage Container Cylinder Days on Site: 365	**145**	870 Pressue Ambient Temperature Ambient	Waste Code	- Pressure Release	NITRIC OXIDE NITROGEN	0 % 99 %	✓	10102-43-9 7727-37-9
DOT: 2.2 - Nonflammable Gases	**NITROGEN / OXYGEN CALIBRATION GAS** CAS No Map: 1 Grid: 2H	**Cu. Feet** State Gas Type	**435** Storage Container Cylinder Days on Site: 365	**145**	435 Pressue Ambient Temperature Ambient	Waste Code	- Pressure Release - Acute Health				
DOT: 2.2 - Nonflammable Gases	**NITROGEN/CARBON MONOXIDE CALIBRATION GAS** CAS No Map: 1 Grid: 2H	**Cu. Feet** State Gas Type Mixture	**435** Storage Container Cylinder Days on Site: 365	**145**	290 Pressue < Ambient Temperature Ambient	Waste Code	- Pressure Release - Acute Health	NITROGEN OXYGEN CARBON MONOXIDE	83 % 12 % 5 %		7727-37-9 7782-44-7 124-38-9

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
UNIT 2 NITROGEN STORAGE

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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	**NITROGEN** CAS No 7727-37-9 Map: 1 Grid: 2E	**Pounds** State Gas Type Pure	**600** Storage Container Cylinder Days on Site: 365	**100**	600 Pressue < Ambient Temperature Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location
WATER TREATMENT BUILDING

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted on 2/9/2015 3:40 PM**

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	**CHEMTREAT BL-152** CAS No Map: 1 Grid: 4J	**Gallons** State: Liquid Storage Container: Plastic/Non-metalic Drum Type: Mixture	**55**	**55**	55 Pressue: Ambient Temperature: Ambient	Waste Code	- Acute Health	AMMONIUM HYDROXIDE Ethanolamine	30 % 10 %		1336-21-6 141-43-5
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**CHEMTREAT CL-206** CAS No Map: 1 Grid: 4J	**Gallons** State: Liquid Storage Container: Other Type: Mixture Days on Site: 365	**20**	**5**	20 Pressue: Ambient Temperature: Ambient	Waste Code	- Acute Health				
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**CHEMTREAT CL-2875** CAS No Map: 1 Grid: 4J	**Gallons** State: Liquid Storage Container: Plastic/Non-metalic Drum, Other Type: Mixture Days on Site: 365	**60**	**55**	60 Pressue: Ambient Temperature: Ambient	Waste Code	- Acute Health				
DOT: 9 - Misc. Hazardous Materials	**CHEMTREAT P873L** CAS No Map: 1 Grid: 4J	**Gallons** State: Liquid Storage Container: Aboveground Tank, Other Type: Mixture Days on Site: 365	**250**	**400**	230 Pressue: Ambient Temperature: Ambient	Waste Code	- Acute Health	Poly(dimethyldiallylammonium chloride)	30 %		26062-79-3
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**CHEMTREAT RL1245** CAS No Map: 1 Grid: 4J	**Gallons** State: Liquid Storage Container: Tank Inside Building Type: Mixture Days on Site: 365	**300**	**400**	220 Pressue: Ambient Temperature: Ambient	Waste Code	- Acute Health	SODIUM BISULFITE			7631-90-5
DOT: 9 - Misc. Hazardous Materials	**CHEMTREAT RL9007** CAS No Map: 1 Grid: 4J	**Gallons** State: Liquid Storage Container: Tank Inside Building Type: Mixture Days on Site: 365	**330**	**400**	330 Pressue: Ambient Temperature: Ambient	Waste Code	- Acute Health	Diethylenetriamine penta methylene phosphonic acid	30 %		22042-96-2
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**CHEMTREAT-BL-1795** CAS No Map: 1 Grid: 4J	**Gallons** State: Liquid Storage Container: Plastic/Non-metalic Drum Type: Mixture Days on Site: 365	**110**	**55**	110 Pressue: Temperature: Ambient	Waste Code	- Acute Health	SODIUM PHOSPHATE, TRIBASTIC SODIUM HYDROXIDE	5 % 5 %		7601-54-9 1310-73-2

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **METCALF ENGERGY CENTER**
Facility Name **METCALF ENERGY CENTER**
1 BLANCHARD RD, SAN JOSE 95013

Chemical Location **WATER TREATMENT BUILDING**

CERS ID **10097278**
Facility ID **43-060-409545**
Status **Submitted** on 2/9/2015 3:40 PM

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: 9 - Misc. Hazardous Materials Irritant	**CONNTECT 6000** CAS No Map: 1 Grid: 4J	**Gallons** State: Liquid Type: Mixture	**110** Storage Container: Plastic/Non-metalic Drum Days on Site: 365	**55**	110 Pressue Temperature	Waste Code	- Acute Health	Ethylene Glycol Monobutyl Ether Ethoxylated Alcohols, C9 - C11	20 % 40 %		111-76-2 68439-46-3
DOT: 8 - Corrosives (Liquids and Solids)	**FERROQUEST FQ7101** CAS No Map: 1 Grid: 4J	**Gallons** State: Liquid Type: Mixture	**10** Storage Container: Carboy Days on Site: 365	**5**	10 Pressue: Ambient Temperature: Ambient	Waste Code	- Reactive - Acute Health				
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**FERROQUEST LP7200** CAS No Map: 1 Grid: 4J	**Gallons** State: Liquid Type: Mixture	**5** Storage Container: Carboy Days on Site: 365	**5**	5 Pressue: Ambient Temperature: Ambient	Waste Code	- Reactive - Acute Health				
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**MULTI-CHLOR** CAS No 7681-52-9 Map: 1 Grid: 4J	**Gallons** State: Liquid Type: Mixture	**55** Storage Container: Plastic/Non-metalic Drum Days on Site: 365	**55**	55 Pressue: Ambient Temperature: Ambient	Waste Code	- Acute Health	Sodium Hypochlorite SODIUM HYDROXIDE	13 % 0 %		7681-52-9 1310-73-2
DOT: 8 - Corrosives (Liquids and Solids) Corrosive	**SODIUM HYPOCHLORITE 12.5%** CAS No Map: 1 Grid: 4J	**Gallons** State: Liquid Type: Mixture	**300** Storage Container: Tank Inside Building Days on Site: 365	**400**	150 Pressue: Ambient Temperature: Ambient	Waste Code	- Fire - Reactive - Pressure Release - Acute Health - Chronic health	SODIUM HYDROXIDE 10-60% SODIUM HYPOCHLORITE >12.5%-15% SODIUM CHLORIDE WATER	1 % 13 %		1310-73-2 7681-52-9 7647-14-5 7732-18-5

Appendix 6

Marley

Cooling Tower Inspection Checklist

Tower Location METCALF
Owner / Company
Company Contact
Signature
Owner's Tower Designation
Tower Manufacturer MARLEY
Process Served by Tower
Design Conditions: m^3/hr 133.400 GPM HW 89.8 °F °C CW 72.1 °F °C WB 59 °F °C
Cell No. 1 Number of Fan Cells 10 Tower Type: Crossflow ☐ Counterflow ☒
Date Tower was Installed 2005

Date Inspected 3/19/15
Inspected by HENRY AVIS
Inspector
Signature
Model No. F488A-40-10PPWD Serial No. 223647
Operation: Continuous ☒ Intermittent ☐ Seasonal ☐

This checklist is intended to be used as a guide only. This checklist may not cover all potential issues and should not be relied upon as a substitute for Authorized Service Provider's professional judgment. Authorized Service Provider should report on all issues. Any issues that are identified for which a space is not otherwise provided in the checklist, should be noted in the Other Component sections or in a supplementary document.

Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments
Structure				
Casing Material CORRUGATED	X			
Structural Material FIBERGLASS	X			
Fan Deck Material FIBERGLASS	X			
Stairway ☐ Material FIBERGLASS	X			
Ladder ☐ Material FIBERGLASS	X			
Handrail ☐ Material FIBERGLASS	X			
Interior Walkway ☐ Material	X			
Cold Water Basin Material CONCRETE	X			
Silt, Debris Buildup		X		
Water Distribution System				
Open Basin System				
Distribution Basin Material CONCRETE	X			
Inlet Pipe Material CARBON STEEL	X			
Inlet Manifold Material FIBERGLASS	X			
Flow Control Valves BUTTERFLY VALVE Size	X			
Nozzles – Orifice Diameter 3" Size	X			
Silt, Algae, Debris	X			
Spray Type System				
Header Pipe Material ABS	X			Rust on pipes
Branch Pipe Material PVC	X			
Nozzles – Orifice Diameter 3" Size	X			Some pluged cleaned
Up spray ☐ Down spray ☒				
Heat Transfer System				
Fill – Type and Material PVC	X			
Eliminators – Type and Material PVC	X			
Louvers – Type and Material GALV.	X			
Biological Fouling	X			

Use this space to list specific items needing attention:

Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments

Mechanical Equipment

Speed Reducer Type: Belt ☐ Gear ☒ Direct Drive ☐

Belt Drive Unit

Belt Designation _____
Fan Sheave Designation _____
Motor Sheave Designation _____

Gear Drive Unit

Manufacturer MARLEY Model 4000 Ratio 15.84/1

Oil Level: Full ☒ Add Immediately ☐ Low, Check Again Soon ☐

Oil Condition: Good ☒ Contains Water ☐ Contains Metal ☐ Contains Sludge ☐

Oil Type Used 76 TURBINE 220

Seals — 2: X — Input seal leak
Backlash — 1: X
Fan Shaft Endplay — 1: X

Unusual Noises? No ☒ Yes ☐ Action Required _____

Drive Shaft

Manufacturer ADDAX LRC850.625 Material FIBERGLASS — 1: X

Fan

Fan Type: Propeller ☒ Blower ☐

Manufacturer MARLEY Fixed Pitch ☐ Adjustable Pitch ☐

Diameter 384" HP7000-10 Number of Blades 10

Blade Material FIBERGLASS — 1: X
Hub Material CARBON STEEL — 1: X
Hub Cover Material FIBERGLASS — 1: X
Blade Assembly Hardware S/S — 1: X
Tip Clearance _____mm min _____mm max — 1: X
Vibration Level _____ — 1: X
Fan Cylinder Height 14' — 1: X
Mechanical Equipment Support GALV. — 1: X
Oil Fill and Drain Line S/S — 1: X
Oil Level Sight Glass _____ — 1: X
Vibration Limit Switch METRIX-M#5550-121-01 — 2: X — Lifting Lug

Motor

Manufacturer TECO WESTINGHOUSE

Name Plate Data: kW 250 HP RPM 1780 Phase 3 Hz 60 Volts 4160

F L Amps 31.5 Frame 5009 S F 1.15 Special Info. M#AEHG-WT002

Last Lubrication – Date _____

Grease Used – Type 76 POLYTAC-2

Unusual Noises? No ☒ Yes ☐ Action Required _____

Unusual Vibration? No ☒ Yes ☐ Action Required _____

Unusual Heat Build-up? No ☒ Yes ☐ Action Required _____

Make-up Valve _____
Other Component _____
Other Component _____

Marley

Cooling Tower Inspection Checklist

Tower Location METCALF
Owner / Company
Company Contact
Signature
Owner's Tower Designation
Tower Manufacturer MARLEY
Process Served by Tower
Design Conditions: m^3/hr 133.400 GPM HW 89.8 °F °C CW 72.1 °F °C WB 59 °F °C
Cell No. 2 Number of Fan Cells 10 Tower Type: Crossflow ☐ Counterflow ☒
Date Tower was Installed 2005

Date Inspected 3/20/15
Inspected by HENRY AVIS
Inspector Henry Avis
Signature
Model No. F488A-40-10PPWD Serial No. 223647
Operation: Continuous ☑ Intermittent ☐ Seasonal ☐

This checklist is intended to be used as a guide only. This checklist may not cover all potential issues and should not be relied upon as a substitute for Authorized Service Provider's professional judgment. Authorized Service Provider should report on all issues. Any issues that are identified for which a space is not otherwise provided in the checklist, should be noted in the Other Component sections or in a supplementary document.

Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments
Structure				
Casing Material CORRUGATED	X			
Structural Material FIBERGLASS	X			
Fan Deck Material FIBERGLASS	X			
Stairway ☐ Material FIBERGLASS	X			
Ladder ☐ Material FIBERGLASS	X			
Handrail ☐ Material FIBERGLASS	X			
Interior Walkway ☐ Material	X			
Cold Water Basin Material CONCRETE	X			
Silt, Debris Buildup	X			
Water Distribution System				
Open Basin System				
Distribution Basin Material CONCRETE	X			
Inlet Pipe Material CARBON STEEL	X			
Inlet Manifold Material FIBERGLASS	X			
Flow Control Valves BUTTERFLY VALVE Size	X			
Nozzles – Orifice Diameter 3" Size	X			Need to Replace 3 Broken
Silt, Algae, Debris	X			
Spray Type System				
Header Pipe Material ABS	X			
Branch Pipe Material PVC	X			
Nozzles – Orifice Diameter 3" Size		X		Some Leaks / Replaced
Up spray ☐ Down spray ☐				
Heat Transfer System				
Fill – Type and Material PVC		/		Need to Replace A Few
Eliminators – Type and Material PVC	/			
Louvers – Type and Material GALV.	/			
Biological Fouling	/			

Use this space to list specific items needing attention:

Condition: 1-Good 2-Keep an eye on it 3-Needs immediate attention

V

	1	2	3	Comments

Mechanical Equipment

Speed Reducer Type: Belt ☐ Gear ☒ Direct Drive ☐

Belt Drive Unit

Belt Designation _____

Fan Sheave Designation _____

Motor Sheave Designation _____

Gear Drive Unit

Manufacturer MARLEY Model 4000 Ratio 15.84/1

Oil Level: Full ☒ Add Immediately ☐ Low, Check Again Soon ☐

Oil Condition: Good ☒ Contains Water ☐ Contains Metal ☐ Contains Sludge ☐

Oil Type Used 76 TURBINE 220

Seals		X	Seal Leak Gear box
Backlash	X		
Fan Shaft Endplay	X		

Unusual Noises? No ☒ Yes ☐ Action Required Added 5 qts of oil

Drive Shaft

Manufacturer ADDAX LRC850.625 Material FIBERGLASS

	X		

Fan

Fan Type: Propeller ☒ Blower ☐

Manufacturer MARLEY Fixed Pitch ☒ Adjustable Pitch ☐

Diameter 384" HP7000-10 Number of Blades 10

Blade Material FIBERGLASS	X		
Hub Material CARBON STEEL	X		
Hub Cover Material FIBERGLASS	X		
Blade Assembly Hardware S/S	X		
Tip Clearance _____mm min _____mm max	X		
Vibration Level _____	X		
Fan Cylinder Height 14'	X		
Mechanical Equipment Support GALV.	X		
Oil Fill and Drain Line S/S	X		
Oil Level Sight Glass _____	X		
Vibration Limit Switch METRIX-M#5550-121-01	X		

Motor

Manufacturer TECO WESTINGHOUSE

Name Plate Data: kW 250 HP RPM 1780 Phase 3 Hz 60 Volts 4160

F L Amps 31.5 Frame 5009 S F 1.15 Special Info. M#AEHG-WT002

Last Lubrication – Date _____

Grease Used – Type 76 POLYTAC-2

Unusual Noises? No ☒ Yes ☐ Action Required _____

Unusual Vibration? No ☒ Yes ☐ Action Required _____

Unusual Heat Build-up? No ☒ Yes ☐ Action Required _____

Make-up Valve _____				
Other Component _____				
Other Component _____				

Marley

Cooling Tower Inspection Checklist

Tower Location METCALF
Owner / Company
Company Contact
Signature
Owner's Tower Designation
Tower Manufacturer MARLEY
Process Served by Tower
Design Conditions: m^3/hr 133.400 GPM HW 89.8 °F °C CW 72.1 °F °C WB 59 °F °C
Cell No. 3 Number of Fan Cells 10 Tower Type: Crossflow ☐ Counterflow ☒
Date Tower was Installed 2005

Date Inspected 3/23/15
Inspected by HENRY AVIS
Inspector
Signature
Model No. F488A-40-10PPWD Serial No. 223647
Operation: Continuous ☒ Intermittent ☐ Seasonal ☐

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Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments
Structure				
Casing Material CORRUGATED	X			
Structural Material FIBERGLASS	X			
Fan Deck Material FIBERGLASS	X			
Stairway ☐ Material FIBERGLASS	X			
Ladder ☐ Material FIBERGLASS	X			
Handrail ☐ Material FIBERGLASS	X			
Interior Walkway ☐ Material	X			
Cold Water Basin Material CONCRETE	X			
Silt, Debris Buildup	X			
Water Distribution System				
Open Basin System				
Distribution Basin Material CONCRETE	X			
Inlet Pipe Material CARBON STEEL	X			
Inlet Manifold Material FIBERGLASS	X			
Flow Control Valves BUTTERFLY VALVE Size	X			
Nozzles – Orifice Diameter 3" Size	X			
Silt, Algae, Debris	X			
Spray Type System				
Header Pipe Material ABS	X			Rust on pipes
Branch Pipe Material PVC	X			
Nozzles – Orifice Diameter 3" Size	X			
Up spray ☐ Down spray ☒				
Heat Transfer System				
Fill – Type and Material PVC	X			
Eliminators – Type and Material PVC	X			
Louvers – Type and Material GALV.	X			
Biological Fouling	X			

Use this space to list specific items needing attention:

Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

4

	1	2	3	Comments

Mechanical Equipment

Speed Reducer Type: Belt ☐ Gear ☐ Direct Drive ☒

Belt Drive Unit

Belt Designation _____

Fan Sheave Designation _____

Motor Sheave Designation _____

Gear Drive Unit

Manufacturer MARLEY Model 4000 Ratio 15.84/1

Oil Level: Full ☒ Add Immediately ☐ Low, Check Again Soon ☐

Oil Condition: Good ☒ Contains Water ☐ Contains Metal ☐ Contains Sludge ☐

Oil Type Used 76 TURBINE 220

Seals	•	X		Hose Leak Fixed
Backlash	X			
Fan Shaft Endplay	X			

Unusual Noises? No ☒ Yes ☐ Action Required Added 5 Quarts

Drive Shaft

Manufacturer ADDAX LRC850.625 Material FIBERGLASS

Fan

Fan Type: Propeller ☒ Blower ☐

Manufacturer MARLEY Fixed Pitch ☒ Adjustable Pitch ☐

Diameter 384" HP7000-10 Number of Blades 10

Blade Material FIBERGLASS	X			
Hub Material CARBON STEEL	X			
Hub Cover Material FIBERGLASS	X			
Blade Assembly Hardware S/S	X			
Tip Clearance _____mm min _____mm max	X			
Vibration Level _____	X			
Fan Cylinder Height 14'	X			
Mechanical Equipment Support GALV.	X			
Oil Fill and Drain Line S/S	X			
Oil Level Sight Glass _____	X			
Vibration Limit Switch METRIX-M#5550-121-01	X			

Motor

Manufacturer TECO WESTINGHOUSE

Name Plate Data: kW 250 HP RPM 1780 Phase 3 Hz 60 Volts 4160

F L Amps 31.5 Frame 5009 S F 1.15 Special Info. M#AEHG-WT002

Last Lubrication – Date _____

Grease Used – Type 76 POLYTAC-2

Unusual Noises? No ☒ Yes ☐ Action Required _____

Unusual Vibration? No ☒ Yes ☐ Action Required _____

Unusual Heat Build-up? No ☒ Yes ☐ Action Required _____

Make-up Valve _____				
Other Component _____				
Other Component _____				

Marley

Cooling Tower Inspection Checklist

Tower Location METCALF
Owner / Company
Company Contact
Signature
Owner's Tower Designation
Tower Manufacturer MARLEY
Process Served by Tower
Design Conditions: m^3/hr 133.400 GPM HW 89.8 °F °C CW 72.1 °F °C WB 59 °F °C
Cell No. 4 Number of Fan Cells 10 Tower Type: Crossflow ☐ Counterflow ☒
Date Tower was Installed 2005

Date Inspected 3/24/15
Inspected by HENRY AVIS
Inspector
Signature
Model No. F488A-40-10PPWD Serial No. 223647
Operation: Continuous ☒ Intermittent ☐ Seasonal ☐

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Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments
Structure				
Casing Material CORRUGATED	X			
Structural Material FIBERGLASS	X			
Fan Deck Material FIBERGLASS	X			
Stairway ☐ Material FIBERGLASS	X			
Ladder ☐ Material FIBERGLASS	X			
Handrail ☐ Material FIBERGLASS	X			
Interior Walkway ☐ Material	X			
Cold Water Basin Material CONCRETE	X			
Silt, Debris Buildup	X			
Water Distribution System				
Open Basin System				
Distribution Basin Material CONCRETE	X			
Inlet Pipe Material CARBON STEEL	X			
Inlet Manifold Material FIBERGLASS	X			
Flow Control Valves BUTTERFLY VALVE Size	X			
Nozzles – Orifice Diameter 3" Size	X			
Silt, Algae, Debris		X		
Spray Type System				
Header Pipe Material ABS	X			
Branch Pipe Material PVC	X			
Nozzles – Orifice Diameter 3" Size	X			Repaired 3 Nozzles
Up spray ☐ Down spray ☒				
Heat Transfer System				
Fill – Type and Material PVC	X	X		Hole in Fill Repair Nozzle
Eliminators – Type and Material PVC	X			
Louvers – Type and Material GALV.	X			
Biological Fouling		X		

Use this space to list specific items needing attention:

Condition: 1-Good 2-Keep an eye on it 3-Needs immediate attention

	1	2	3	Comments

Mechanical Equipment

Speed Reducer Type: Belt ☐ Gear ☒ Direct Drive ☐

Belt Drive Unit

Belt Designation				
Fan Sheave Designation				
Motor Sheave Designation				

Gear Drive Unit

Manufacturer MARLEY Model 4000 Ratio 15.84/1

Oil Level: Full ☐ Add Immediately ☐ Low, Check Again Soon ☐

Oil Condition: Good ☒ Contains Water ☐ Contains Metal ☐ Contains Sludge ☐

Oil Type Used 76 TURBINE 220

Seals	X			Added 3 gpots
Backlash	X	X		Leak
Fan Shaft Endplay	X			

Unusual Noises? No ☒ Yes ☐ Action Required

Drive Shaft

Manufacturer ADDAX LRC850.625 Material FIBERGLASS

	X			

Fan

Fan Type: Propeller ☒ Blower ☐

Manufacturer MARLEY Fixed Pitch ☐ Adjustable Pitch ☐

Diameter 384" HP7000-10 Number of Blades 10

Blade Material FIBERGLASS	X			
Hub Material CARBON STEEL	X			
Hub Cover Material FIBERGLASS	X			
Blade Assembly Hardware S/S	X			
Tip Clearance ____mm min ____mm max	X			
Vibration Level	X			
Fan Cylinder Height 14'	X			
Mechanical Equipment Support GALV.	X			
Oil Fill and Drain Line S/S	X			
Oil Level Sight Glass	X			
Vibration Limit Switch METRIX-M#5550-121-01	X			

Motor

Manufacturer TECO WESTINGHOUSE

Name Plate Data: kW 250 HP RPM 1780 Phase 3 Hz 60 Volts 4160

F L Amps 31.5 Frame 5009 S F 1.15 Special Info. M#AEHG-WT002

Last Lubrication – Date

Grease Used – Type 76 POLYTAC-2

Unusual Noises? No ☒ Yes ☐ Action Required

Unusual Vibration? No ☒ Yes ☐ Action Required

Unusual Heat Build-up? No ☒ Yes ☐ Action Required

Make-up Valve				
Other Component				
Other Component				

Marley®

Cooling Tower Inspection Checklist

Tower Location METCALF
Owner / Company
Company Contact
Signature
Owner's Tower Designation
Tower Manufacturer MARLEY
Process Served by Tower
Design Conditions: m^3/hr 133.400 GPM HW 89.8 °F °C CW 72.1 °F °C WB 59 °F °C
Cell No. 5 Number of Fan Cells 10 Tower Type: Crossflow ☐ Counterflow ☐
Date Tower was Installed 2005

Date Inspected 3/24/15
Inspected by HENRY AVIS
Inspector
Signature
Model No. F488A-40-10PPWD Serial No. 223647
Operation: Continuous ☐ Intermittent ☐ Seasonal ☐

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Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments
Structure				
Casing Material CORRUGATED	X			
Structural Material FIBERGLASS	X			
Fan Deck Material FIBERGLASS	X			
Stairway ☐ Material FIBERGLASS	X			
Ladder ☐ Material FIBERGLASS	X			
Handrail ☐ Material FIBERGLASS	X			
Interior Walkway ☐ Material	X			
Cold Water Basin Material CONCRETE	X			
Silt, Debris Buildup		X		
Water Distribution System				
Open Basin System				
Distribution Basin Material CONCRETE	X			
Inlet Pipe Material CARBON STEEL	X			
Inlet Manifold Material FIBERGLASS	X			
Flow Control Valves BUTTERFLY VALVE Size	X			
Nozzles – Orifice Diameter 3" Size	X			
Silt, Algae, Debris	X			
Spray Type System				
Header Pipe Material ABS		X		
Branch Pipe Material PVC	X			
Nozzles – Orifice Diameter 3" Size		X		Repaired 3 Nozzles
Up spray ☐ Down spray ☒				
Heat Transfer System				
Fill – Type and Material PVC		X		Hole in Fill
Eliminators – Type and Material PVC	X			
Louvers – Type and Material GALV.	X			
Biological Fouling		X		

Use this space to list specific items needing attention:

5

Condition: 1-Good 2-Keep an eye on it 3-Needs immediate attention

	1	2	3	Comments

Mechanical Equipment

Speed Reducer Type: Belt ☐ Gear ☒ Direct Drive ☐

Belt Drive Unit

Belt Designation _____

Fan Sheave Designation _____

Motor Sheave Designation _____

Gear Drive Unit

Manufacturer MARLEY Model 4000 Ratio 15.84/1

Oil Level: Full ☐ Add Immediately ☐ Low, Check Again Soon ☐

Oil Condition: Good ☒ Contains Water ☐ Contains Metal ☐ Contains Sludge ☐

Oil Type Used 76 TURBINE 220

Seals _____ | X | X | | Leaks Add Oil 2 qt

Backlash _____ | X |

Fan Shaft Endplay _____ | X |

Unusual Noises? No ☐ Yes ☐ Action Required _____

Drive Shaft

Manufacturer ADDAX LRC850.625 Material FIBERGLASS | X |

Fan

Fan Type: Propeller ☐ Blower ☐

Manufacturer MARLEY Fixed Pitch ☐ Adjustable Pitch ☐

Diameter 384" HP7000-10 Number of Blades 10

Blade Material FIBERGLASS | X |

Hub Material CARBON STEEL | X |

Hub Cover Material FIBERGLASS | X |

Blade Assembly Hardware S/S | X |

Tip Clearance _____ mm min _____ mm max | X |

Vibration Level _____ | X |

Fan Cylinder Height 14' | X |

Mechanical Equipment Support GALV. | X |

Oil Fill and Drain Line S/S | X |

Oil Level Sight Glass _____ | X |

Vibration Limit Switch METRIX-M#5550-121-01 | X |

Motor

Manufacturer TECO WESTINGHOUSE

Name Plate Data: kW 250 HP RPM 1780 Phase 3 Hz 60 Volts 4160

F L Amps 31.5 Frame 5009 S F 1.15 Special Info. M#AEHG-WT002

Last Lubrication – Date _____

Grease Used – Type 76 POLYTAC-2

Unusual Noises? No ☒ Yes ☐ Action Required _____

Unusual Vibration? No ☒ Yes ☐ Action Required _____

Unusual Heat Build-up? No ☒ Yes ☐ Action Required _____

Make-up Valve _____

Other Component _____

Other Component _____

Marley

Cooling Tower Inspection Checklist

Tower Location METCALF
Owner / Company
Company Contact
Signature
Owner's Tower Designation
Tower Manufacturer MARLEY
Process Served by Tower
Design Conditions: m^3/hr 133.400 GPM HW 89.8 °F °C CW 72.1 °F °C WB 59 °F °C
Cell No. 6 Number of Fan Cells 10 Tower Type: Crossflow ☐ Counterflow ☐
Date Tower was Installed 2005

Date Inspected 3/25/15
Inspected by HENRY AVIS
Inspector
Signature
Model No. F488A-40-10PPWD Serial No. 223647
Operation: Continuous ☒ Intermittent ☐ Seasonal ☐

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Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments
Structure				
Casing Material CORRUGATED	X			
Structural Material FIBERGLASS	X			
Fan Deck Material FIBERGLASS	X			
Stairway ☐ Material FIBERGLASS	X			
Ladder ☐ Material FIBERGLASS	X			
Handrail ☐ Material FIBERGLASS	X			
Interior Walkway ☐ Material	X			
Cold Water Basin Material CONCRETE	X			
Silt, Debris Buildup	X			
Water Distribution System				
Open Basin System				
Distribution Basin Material CONCRETE	X			
Inlet Pipe Material CARBON STEEL	X			
Inlet Manifold Material FIBERGLASS	X			
Flow Control Valves BUTTERFLY VALVE Size	X			
Nozzles – Orifice Diameter 3" Size	X			
Silt, Algae, Debris	X			
Spray Type System				
Header Pipe Material ABS	X			Rust
Branch Pipe Material PVC	X			Need Bolts Replaced
Nozzles – Orifice Diameter 3" Size	X			Repair 5 Nozzles
Up spray ☐ Down spray ☐				
Heat Transfer System				
Fill – Type and Material PVC		X		Hole in fill
Eliminators – Type and Material PVC	X			
Louvers – Type and Material GALV.	X			
Biological Fouling	X			

Use this space to list specific items needing attention:

4

Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments

Mechanical Equipment

Speed Reducer Type: Belt ☐ Gear ☒ Direct Drive ☐

Belt Drive Unit

Belt Designation _____
Fan Sheave Designation _____
Motor Sheave Designation _____

Gear Drive Unit

Manufacturer MARLEY Model 4000 Ratio 15.84/1

Oil Level: Full ☐ Add Immediately ☐ Low, Check Again Soon ☐

Oil Condition: Good ☒ Contains Water ☐ Contains Metal ☐ Contains Sludge ☐

Oil Type Used 76 TURBINE 220

Seals _____ | X | | | |
Backlash _____ | X | | | |
Fan Shaft Endplay _____ | X | | | |

Unusual Noises? No ☒ Yes ☐ Action Required _____

Drive Shaft

Manufacturer ADDAX LRC850.625 Material FIBERGLASS | X | | | |

Fan

Fan Type: Propeller ☐ Blower ☐

Manufacturer MARLEY Fixed Pitch ☒ Adjustable Pitch ☐

Diameter 384" HP7000-10 Number of Blades 10

Blade Material FIBERGLASS	X			
Hub Material CARBON STEEL	X			
Hub Cover Material FIBERGLASS	X			
Blade Assembly Hardware S/S	X			
Tip Clearance _____mm min _____mm max	X			
Vibration Level _____	X			
Fan Cylinder Height 14'	X			
Mechanical Equipment Support GALV.	X			
Oil Fill and Drain Line S/S	X			
Oil Level Sight Glass _____	X			
Vibration Limit Switch METRIX-M#5550-121-01	X			

Motor

Manufacturer TECO WESTINGHOUSE

Name Plate Data: kW 250 HP RPM 1780 Phase 3 Hz 60 Volts 4160

F L Amps 31.5 Frame 5009 S F 1.15 Special Info. M#AEHG-WT002

Last Lubrication – Date _____

Grease Used – Type 76 POLYTAC-2

Unusual Noises? No ☒ Yes ☐ Action Required _____

Unusual Vibration? No ☒ Yes ☐ Action Required _____

Unusual Heat Build-up? No ☒ Yes ☐ Action Required _____

Make-up Valve _____				
Other Component _____				
Other Component _____				

Marley®

Cooling Tower Inspection Checklist

Tower Location METCALF
Owner / Company
Company Contact
Signature
Owner's Tower Designation
Tower Manufacturer MARLEY
Process Served by Tower
Design Conditions: m^3/hr 133.400 GPM HW 89.8 °F °C CW 72.1 °F °C WB 59 °F °C
Cell No. 7 Number of Fan Cells 10 Tower Type: Crossflow ☐ Counterflow ☒
Date Tower was Installed 2005

Date Inspected 03/25/15
Inspected by HENRY AVIS
Inspector
Signature
Model No. F488A-40-10PPWD Serial No. 223647
Operation: Continuous ☒ Intermittent ☐ Seasonal ☐

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Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments
Structure				
Casing Material CORRUGATED	X			
Structural Material FIBERGLASS	X			
Fan Deck Material FIBERGLASS	X			
Stairway ☐ Material FIBERGLASS	X			
Ladder ☐ Material FIBERGLASS	X			
Handrail ☐ Material FIBERGLASS	X			
Interior Walkway ☐ Material	X			
Cold Water Basin Material CONCRETE	X			
Silt, Debris Buildup	X			
Water Distribution System				
Open Basin System				
Distribution Basin Material CONCRETE	X			
Inlet Pipe Material CARBON STEEL	X			
Inlet Manifold Material FIBERGLASS	X			
Flow Control Valves BUTTERFLY VALVE Size	X			
Nozzles – Orifice Diameter 3" Size	X			
Silt, Algae, Debris	X			
Spray Type System				
Header Pipe Material ABS	X			
Branch Pipe Material PVC	X			
Nozzles – Orifice Diameter 3" Size		X		Cleaned 5 Nozzles
Up spray ☐ Down spray ☐				
Heat Transfer System				
Fill – Type and Material PVC	X			
Eliminators – Type and Material PVC	X			
Louvers – Type and Material GALV.	X			
Biological Fouling	X			

Use this space to list specific items needing attention:

7

Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments

Mechanical Equipment

Speed Reducer Type: Belt ☐ Gear ☒ Direct Drive ☐

Belt Drive Unit

Belt Designation _____

Fan Sheave Designation _____

Motor Sheave Designation _____

Gear Drive Unit

Manufacturer MARLEY Model 4000 Ratio 15.84/1

Oil Level: Full ☑ Add Immediately ☐ Low, Check Again Soon ☐

Oil Condition: Good ☒ Contains Water ☐ Contains Metal ☐ Contains Sludge ☐

Oil Type Used 76 TURBINE 220

Seals _____ — X — added 3 qts

Backlash _____ — X

Fan Shaft Endplay _____ — X

Unusual Noises? No ☒ Yes ☐ Action Required _____

Drive Shaft

Manufacturer ADDAX LRC850.625 Material FIBERGLASS — X

Fan

Fan Type: Propeller ☒ Blower ☐

Manufacturer MARLEY Fixed Pitch ☐ Adjustable Pitch ☒

Diameter 384" HP7000-10 Number of Blades 10

Blade Material FIBERGLASS — X

Hub Material CARBON STEEL — X

Hub Cover Material FIBERGLASS — X

Blade Assembly Hardware S/S — X

Tip Clearance _____mm min _____mm max — X

Vibration Level _____ — X

Fan Cylinder Height 14' — X

Mechanical Equipment Support GALV. — X

Oil Fill and Drain Line S/S — X

Oil Level Sight Glass _____ — X

Vibration Limit Switch METRIX-M#5550-121-01 — X

Motor

Manufacturer TECO WESTINGHOUSE

Name Plate Data: kW 250 HP RPM 1780 Phase 3 Hz 60 Volts 4160

F L Amps 31.5 Frame 5009 S F 1.15 Special Info. M#AEHG-WT002

Last Lubrication – Date _____

Grease Used – Type 76 POLYTAC-2

Unusual Noises? No ☑ Yes ☐ Action Required _____

Unusual Vibration? No ☒ Yes ☐ Action Required _____

Unusual Heat Build-up? No ☒ Yes ☐ Action Required _____

Make-up Valve _____

Other Component _____

Other Component _____

Marley

Cooling Tower Inspection Checklist

Tower Location METCALF
Owner / Company
Company Contact
Signature
Owner's Tower Designation
Tower Manufacturer MARLEY
Process Served by Tower
Design Conditions: m^3/hr 133.400 GPM HW 89.8 °F °C CW 72.1 °F °C WB 59 °F °C
Cell No. 8 Number of Fan Cells 10 Tower Type: Crossflow ☐ Counterflow ☒
Date Tower was Installed 2005

Date Inspected 3/25/15
Inspected by HENRY AVIS
Inspector
Signature
Model No. F488A-40-10PPWD Serial No. 223647
Operation: Continuous ☒ Intermittent ☐ Seasonal ☐

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Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments
Structure				
Casing Material CORRUGATED	X			
Structural Material FIBERGLASS	X			
Fan Deck Material FIBERGLASS	X			
Stairway ☐ Material FIBERGLASS	X			
Ladder ☐ Material FIBERGLASS	X			
Handrail ☐ Material FIBERGLASS	X			
Interior Walkway ☐ Material	X			
Cold Water Basin Material CONCRETE	X			
Silt, Debris Buildup	X			
Water Distribution System				
Open Basin System				
Distribution Basin Material CONCRETE	X			
Inlet Pipe Material CARBON STEEL	X			
Inlet Manifold Material FIBERGLASS	X			
Flow Control Valves BUTTERFLY VALVE Size	X			
Nozzles – Orifice Diameter 3" Size	X			
Silt, Algae, Debris	X			
Spray Type System				
Header Pipe Material ABS	X			
Branch Pipe Material PVC	X			
Nozzles – Orifice Diameter 3" Size	X			
Up spray ☐ Down spray ☒				
Heat Transfer System				
Fill – Type and Material PVC	X			
Eliminators – Type and Material PVC	X			
Louvers – Type and Material GALV.	X			
Biological Fouling	X			

Use this space to list specific items needing attention:

Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments

Mechanical Equipment

Speed Reducer Type: Belt ☐ Gear ☒ Direct Drive ☐

Belt Drive Unit

Belt Designation _____

Fan Sheave Designation _____

Motor Sheave Designation _____

Gear Drive Unit

Manufacturer MARLEY Model 4000 Ratio 15.84/1

Oil Level: Full ☒ Add Immediately ☐ Low, Check Again Soon ☐

Oil Condition: Good ☒ Contains Water ☐ Contains Metal ☐ Contains Sludge ☐

Oil Type Used 76 TURBINE 220

Seals	X			Added Oil 3 gal
Backlash	X			
Fan Shaft Endplay	X			

Unusual Noises? No ☐ Yes ☐ Action Required _____

Drive Shaft

Manufacturer ADDAX LRC850.625 Material FIBERGLASS

	X			

Fan

Fan Type: Propeller ☐ Blower ☐

Manufacturer MARLEY Fixed Pitch ☐ Adjustable Pitch ☐

Diameter 384" HP7000-10 Number of Blades 10

Blade Material FIBERGLASS	X			
Hub Material CARBON STEEL	X			
Hub Cover Material FIBERGLASS	X			
Blade Assembly Hardware S/S	X			
Tip Clearance _____mm min _____mm max	X			
Vibration Level _____	X			
Fan Cylinder Height 14'	X			
Mechanical Equipment Support GALV.	X			
Oil Fill and Drain Line S/S	X			
Oil Level Sight Glass _____	X			
Vibration Limit Switch METRIX-M#5550-121-01	X			

Motor

Manufacturer TECO WESTINGHOUSE

Name Plate Data: kW 250 HP RPM 1780 Phase 3 Hz 60 Volts 4160

F L Amps 31.5 Frame 5009 S F 1.15 Special Info. M#AEHG-WT002

Last Lubrication – Date _____

Grease Used – Type 76 POLYTAC-2

Unusual Noises? No ☒ Yes ☐ Action Required _____

Unusual Vibration? No ☒ Yes ☐ Action Required _____

Unusual Heat Build-up? No ☒ Yes ☐ Action Required _____

Make-up Valve _____				
Other Component _____				
Other Component _____				

Marley

Cooling Tower Inspection Checklist

Tower Location METCALF
Owner / Company
Company Contact
Signature
Owner's Tower Designation
Tower Manufacturer MARLEY
Process Served by Tower
Design Conditions: m^3/hr 133,400 GPM HW 89.8 °F °C CW 72.1 °F °C WB 59 °F °C
Cell No. 9 Number of Fan Cells 10 Tower Type: Crossflow ☐ Counterflow ☒
Date Tower was Installed 2005

Date Inspected 3/26/15
Inspected by HENRY AVIS
Inspector
Signature
Model No. F488A-40-10PPWD Serial No. 223647
Operation: Continuous ☒ Intermittent ☐ Seasonal ☐

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Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments
Structure				
Casing Material CORRUGATED	X			
Structural Material FIBERGLASS	X			
Fan Deck Material FIBERGLASS	X			
Stairway ☐ Material FIBERGLASS	X			
Ladder ☐ Material FIBERGLASS	X			
Handrail ☐ Material FIBERGLASS	X			
Interior Walkway ☐ Material	X			
Cold Water Basin Material CONCRETE	X			
Silt, Debris Buildup	X			
Water Distribution System				
Open Basin System				
Distribution Basin Material CONCRETE	X			
Inlet Pipe Material CARBON STEEL	X			
Inlet Manifold Material FIBERGLASS	X			
Flow Control Valves BUTTERFLY VALVE Size	X			
Nozzles – Orifice Diameter 3" Size	X			
Silt, Algae, Debris	X			
Spray Type System				
Header Pipe Material ABS	X			
Branch Pipe Material PVC	X			
Nozzles – Orifice Diameter 3" Size	X			Cleand and Repaired by Nozzles
Up spray ☐ Down spray ☒				
Heat Transfer System				
Fill – Type and Material PVC	X			
Eliminators - Type and Material PVC	X			
Louvers – Type and Material GALV.	X			
Biological Fouling	X			

Use this space to list specific items needing attention:

Condition: 1-Good 2-Keep an eye on it 3-Needs immediate attention

9

1	2	3	Comments

Mechanical Equipment

Speed Reducer Type: Belt ☐ Gear ☒ Direct Drive ☐

Belt Drive Unit

Belt Designation _____

Fan Sheave Designation _____

Motor Sheave Designation _____

Gear Drive Unit

Manufacturer MARLEY Model 4000 Ratio 15.84/1

Oil Level: Full ☒ Add Immediately ☐ Low, Check Again Soon ☐

Oil Condition: Good ☒ Contains Water ☐ Contains Metal ☐ Contains Sludge ☐

Oil Type Used 76 TURBINE 220

Seals _____ — 2

Backlash _____ — 1

Fan Shaft Endplay _____ — 1

Unusual Noises? No ☒ Yes ☐ Action Required _____

Drive Shaft

Manufacturer ADDAX LRC850.625 Material FIBERGLASS — 1

Fan

Fan Type: Propeller ☒ Blower ☐

Manufacturer MARLEY Fixed Pitch ☐ Adjustable Pitch ☒

Diameter 384" HP7000-10 Number of Blades 10

Blade Material FIBERGLASS — 1

Hub Material CARBON STEEL — 1

Hub Cover Material FIBERGLASS — 1

Blade Assembly Hardware S/S — 1

Tip Clearance _____mm min _____mm max — 1

Vibration Level _____ — 1

Fan Cylinder Height 14' — 1

Mechanical Equipment Support GALV. — 1

Oil Fill and Drain Line S/S — 1

Oil Level Sight Glass _____ — 1

Vibration Limit Switch METRIX-M#5550-121-01 — 1

Motor

Manufacturer TECO WESTINGHOUSE

Name Plate Data: kW 250 HP RPM 1780 Phase 3 Hz 60 Volts 4160

F L Amps 31.5 Frame 5009 S F 1.15 Special Info. M#AEHG-WT002

Last Lubrication – Date _____

Grease Used – Type 76 POLYTAC-2

Unusual Noises? No ☒ Yes ☐ Action Required _____

Unusual Vibration? No ☒ Yes ☐ Action Required _____

Unusual Heat Build-up? No ☒ Yes ☐ Action Required _____

Make-up Valve _____

Other Component _____

Other Component _____

Marley

Cooling Tower Inspection Checklist

Tower Location METCALF
Owner / Company
Company Contact
Signature
Owner's Tower Designation
Tower Manufacturer MARLEY
Process Served by Tower
Design Conditions: m^3/hr 133.400 GPM HW 89.8 °F °C CW 72.1 °F °C WB 59 °F °C
Cell No. 10 Number of Fan Cells 10 Tower Type: Crossflow ☐ Counterflow ☐
Date Tower was Installed 2005

Date Inspected 3/26/15
Inspected by HENRY AVIS
Inspector
Signature
Model No. F488A-40-10PPWD Serial No. 223647
Operation: Continuous ☐ Intermittent ☐ Seasonal ☐

This checklist is intended to be used as a guide only. This checklist may not cover all potential issues and should not be relied upon as a substitute for Authorized Service Provider's professional judgment. Authorized Service Provider should report on all issues. Any issues that are identified for which a space is not otherwise provided in the checklist, should be noted in the Other Component sections or in a supplementary document.

Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments
Structure				
Casing Material CORRUGATED	X			
Structural Material FIBERGLASS	X			
Fan Deck Material FIBERGLASS	X			
Stairway ☐ Material FIBERGLASS	X			
Ladder ☐ Material FIBERGLASS	X			
Handrail ☐ Material FIBERGLASS	X			
Interior Walkway ☐ Material	X			
Cold Water Basin Material CONCRETE	X			
Silt, Debris Buildup	X			
Water Distribution System				
Open Basin System				
Distribution Basin Material CONCRETE	X			
Inlet Pipe Material CARBON STEEL	X			Rust
Inlet Manifold Material FIBERGLASS	X			
Flow Control Valves BUTTERFLY VALVE Size	X			
Nozzles – Orifice Diameter 3" Size	X			
Silt, Algae, Debris	X			
Spray Type System				
Header Pipe Material ABS	X			
Branch Pipe Material PVC	X			
Nozzles – Orifice Diameter 3" Size	X			Cleaned 8 Nozzles
Up spray ☐ Down spray ☐				
Heat Transfer System				
Fill – Type and Material PVC	X			
Eliminators – Type and Material PVC	X			
Louvers – Type and Material GALV.	X			
Biological Fouling	X			

Use this space to list specific items needing attention:

10

Condition: 1–Good 2–Keep an eye on it 3–Needs immediate attention

	1	2	3	Comments

Mechanical Equipment

Speed Reducer Type: Belt ☐ Gear ☒ Direct Drive ☐

Belt Drive Unit

Belt Designation _____

Fan Sheave Designation _____

Motor Sheave Designation _____

Gear Drive Unit

Manufacturer MARLEY Model 4000 Ratio 15.84/1

Oil Level: Full ☐ Add Immediately ☐ Low, Check Again Soon ☐

Oil Condition: Good ☒ Contains Water ☐ Contains Metal ☐ Contains Sludge ☐

Oil Type Used 76 TURBINE 220

Seals _____ ✓

Backlash _____ ✓

Fan Shaft Endplay _____ ✓

Unusual Noises? No ☒ Yes ☐ Action Required _____

Drive Shaft

Manufacturer ADDAX LRC850.625 Material FIBERGLASS ✓

Fan

Fan Type: Propeller ☒ Blower ☐

Manufacturer MARLEY Fixed Pitch ☐ Adjustable Pitch ☒

Diameter 384" HP7000-10 Number of Blades 10

Blade Material FIBERGLASS ✓

Hub Material CARBON STEEL ✓

Hub Cover Material FIBERGLASS ✓

Blade Assembly Hardware S/S ✓

Tip Clearance _____mm min _____mm max ✓

Vibration Level _____ ✓

Fan Cylinder Height 14' ✓

Mechanical Equipment Support GALV. ✓

Oil Fill and Drain Line S/S ✓

Oil Level Sight Glass _____ ✓

Vibration Limit Switch METRIX-M#5550-121-01 ✓

Motor

Manufacturer TECO WESTINGHOUSE

Name Plate Data: kW 250 HP RPM 1780 Phase 3 Hz 60 Volts 4160

F L Amps 31.5 Frame 5009 S F 1.15 Special Info. M#AEHG-WT002

Last Lubrication – Date _____

Grease Used – Type 76 POLYTAC-2

Unusual Noises? No ☒ Yes ☐ Action Required _____

Unusual Vibration? No ☒ Yes ☐ Action Required _____

Unusual Heat Build-up? No ☒ Yes ☐ Action Required _____

Make-up Valve _____

Other Component _____

Other Component _____

Appendix 7

Metcalf Energy Center

Annual Compliance Report 2014

Water Usage Summary

Recycled Water

month	consumption (gal)
January	27,672,260
February	6,814,280
March	46,420,132
April	40,514,672
May	47,071,640
June	35,028,840
July	46,168,804
August	49,163,048
September	48,495,084
October	50,605,192
November	61,044,280
December	67,599,752
Total	**526,597,984**

Potable Water

month	consumption (gal)
January	4,048,924
February	2,834,920
March	7,439,608
April	7,883,172
May	10,778,680
June	11,312,004
July	8,854,824
August	10,092,764
September	9,940,172
October	7,192,020
November	7,040,924
December	6,034,864
Total	**93,452,876**

Metcalf Energy Center

Annual Compliance Report 2014

Water Usage Summary

Condition of Certification S&W-1

Recycled Water	
Cooling Tower for Steam Cycle Cooling	526,597,984
Totai Gallons 2014	**526,597,984**
Potable Water	
Condenser Make-Up	33,878,602
Steam Attemperation	32,042,263
Inlet Air Cooling	8,691,264
Domestic	720,680
RO Reject	14,344,058
Filter Backwash	2,868,812
CT Wash Water	462,307
Plant Wash Down	660,439
Total Gallons 2014	**93,452,876**

Appendix 8

METCALF ENERGY CENTER
2014 ANNUAL COMPLIANCE REPORT
WASTE-3

In accordance with **Waste-3**, the Metcalf Energy Facility is required to document actual waste management methods used during the year compared to planned management methods. The facility is currently using the planned waste management methods for all of the waste streams generated within the facility, as listed in the table below.

Waste Stream	Type	Planned	Actual
Non-hazardous Solid Waste	Recyclables	Recycle (Off-site)	Recycle (Off-site)
	Non-Recyclables	Landfill	Landfill
Non-hazardous Liquid Waste	Sanitary Waste	Sewage Treatment Plant	Sewage Treatment Plant
	Process Waste Water	Sewage Treatment Plant	Sewage Treatment Plant
Hazardous Liquid Waste	Used Oil	Recycle (Off-site)	Recycle (Off-site)
	Oily Water	Off-site disposal company	Off-site disposal company
	Corrosive Liquid	Off-site disposal company	Off-site disposal company
Hazardous Solid Waste	Used Oil Filters	Recycle (Off-site)	Recycle (Off-site)
	Oily Rags	Off-site disposal company	Off-site disposal company
	Universal Waste	Recycle (Off-site)	Recycle (Off-site)

Appendix 9

submitted 5/12/14 @ 942am PS.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

COMPLIANCE & ENFORCEMENT DIVISION

Notification Form
Reportable Compliance Activity (RCA)

See back of form for instructions →

1. ☐ **FACILITY IS REQUESTING BREAKDOWN RELIEF (Regulation 1-431 and 1-432)**
District Use Only **BREAKDOWN REFERENCE #:**

2. ☒ **MONITOR INDICATES EXCESS EMISSION or EXCURSION** (Regulation 1-522.7, 1-523.3, 1-542)
District Use Only **EXCESS or EXCURSION REFERENCE #:**

3. ☐ **MONITOR IS INOPERATIVE (Regulation 1-522.4, 1-523.2, 1-530)**
District Use Only **INOPERATIVE MONITOR REFERENCE #:**

4. ☐ **PRESSURE IS RELEASED FROM RELIEF DEVICE (PRD) (Regulation 8-28-401)**
District Use Only **PRD REFERENCE #:**

SITE INFORMATION AND DESCRIPTION INFORMATION (REQUIRED)			
Company	METCALF ENERGY CENTER	Site #	B2183
Address	1 BLANCHARD ROAD, COYOTE	Source #	S1
Reported by	ROSEMARY SILVA	Phone #	408-361-4954
Indicated Excess	2682.1 LBS OF CO	Fax #	408-361-4949
Allowable Limit	2514 LBS OF CO DURING STARTUP	Averaging Time	3-HR
Start Time/Date	5/12/14 @ 3:01AM	Clear Time	5/12/14 @ 4:17AM
Monitor/device type(s)	☒ ▶CEM ☐ ▶GLM ☐ ▶Parametric ☐ ▶PRD ☐ ▶Non-monitor		
Monitor description(s)			

Parameter(s) exceeded or not functioning due to inoperation

☐ ▶NO_x ☐ ▶SO_2 ☒ ▶CO ☐ ▶CO_2 ☐ ▶H_2S ☐ ▶TRS ☐ ▶NH_3
☐ ▶O_2 ☐ ▶H_2O ☐ ▶Opacity ☐ ▶Lead ☐ ▶Gauge Pressure ☐ ▶Flow
☐ ▶Hydrocarbon Breakthrough (VOC) ☐ ▶Temperature ☐ ▶Wind Speed
☐ ▶Wind Direction ☐ ▶Steam ☐ ▶Other (describe)

Unit(s) of Measurement

☐ ▶ppm ☐ ▶ppb ☐ ▶min/hr > 20% ☐ ▶inches H_2O ☐ ▶mmHg
☐ ▶psig ☐ ▶pH ☐ ▶^{0}Fahrenheit ☒ ▶Other (describe) LBS.

Event Description:
The CEMS indicated that, on 5/12/14, the CO mass emissions during start-up were exceeded by 168.1 lbs. Investigation is underway.

District Use Only		
Received by	Date	Time

METCALF ENERGY CENTER, LLC

1 Blanchard Rd.
Coyote, CA 95013

June 11, 2014

Mr. Wayne Kino (wkino@baaqmd.gov)
Director, Enforcement and Compliance Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

RE: **Metcalf Energy Center, LLC Permit No. B2183**
Major Facility Review Permit (Title V Permit)
30-Day Title V Non-Compliance Report – RCA No. 06P87

Dear Mr. Kino:

In accordance with the Major Facility Review Permit (Title V Permit) for the Metcalf Energy Center (the "Facility"), this letter is intended to satisfy the 30-day follow-up reporting requirement as required by Section I.F of the Title V Permit. The Title V Permit initial 10-day notification for this event was previously submitted to the District on May 14, 2014.

On May 12, 2014 at 02:12, CEMS time, the Facility initiated a hot start on Combustion Turbine #1 (CT-1). CO emissions during the startup were 2682.1 lbs., which exceeded the Title V Permit Condition 21 limit of 2514 lbs/startup by 162.1 lbs (6%).

The startup of CT-1 on May 12, 2014, was initiated after CT-1 and the steam turbine (ST-1) had been shut down for approximately 51 hours. Per the definition of Gas Turbine Cold-Startup period contained in the Title V Permit, a startup at the Facility can only be considered "cold" when the Facility has been shut down for 72 hours. Therefore, this startup was considered a "hot" start, imposing the lower limits allowed for a hot start. The prolonged shut down period, however, resulted in significant cooling of the Steam Turbine. As a result, an extended thermal loading period was necessary to allow the Steam Turbine to heat up within the Original Equipment Manufacturer (OEM) requirements before the CT-1 load could be raised to a level to effectively reduce CO emissions.

Further, the event on May 12, 2014, followed a major outage to perform maintenance required by the OEM. This maintenance led to cooler exhaust, which coupled with the cooling that occurred as a result of the 51-hour down time of the Steam Turbine, led to the exceedance.

In order to avoid this event from occurring again, the Facility has revised the startup procedures to further reduce CO. The Facility has also adjusted the alarm warning set point to give the operator additional time to react in the event that an extended thermal loading period is causing the mass emissions limit to be approached.

If you have any questions or require additional information, please contact Rosemary Silva, EHS Specialist, at 408-361-4954.

Based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate and complete.

Sincerely,

Terry Mahoney
Authorized Representative and General Manager
Metcalf Energy Center, LLC

CC: David Williams, Calpine
Barbara McBride, Calpine
Katherine Piper, Calpine

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

COMPLIANCE & ENFORCEMENT DIVISION

06Q02

Notification Form
Reportable Compliance Activity (RCA)

See back of form for instructions →

1. ☐ **FACILITY IS REQUESTING BREAKDOWN RELIEF (Regulation 1-431 and 1-432)**
District Use Only **BREAKDOWN REFERENCE #:**

2. ☒ **MONITOR INDICATES EXCESS EMISSION or EXCURSION** (Regulation 1-522.7, 1-523.3, 1-542)
District Use Only **EXCESS or EXCURSION REFERENCE #:**

3. ☐ **MONITOR IS INOPERATIVE (Regulation 1-522.4, 1-523.2, 1-530)**
District Use Only **INOPERATIVE MONITOR REFERENCE #:**

4. ☐ **PRESSURE IS RELEASED FROM RELIEF DEVICE (PRD) (Regulation 8-28-401)**
District Use Only **PRD REFERENCE #:**

SITE INFORMATION AND DESCRIPTION INFORMATION (REQUIRED)

Company	METCALF ENERGY CENTER	Site #	B2183
Address	1 BLANCHARD ROAD, COYOTE	Source #	S1
Reported by	ROSEMARY SILVA	Phone #	408-361-4954
Indicated Excess	5.93 ppm NH3	Fax #	408-361-4949
Allowable Limit	5.00 ppm 3-HR ROLLING AVERAGE	Averaging Time	3-HR
Start Time/Date	6/1/2014 05:00AM	Clear Time	6/1/2014 7:00AM

Monitor/device type(s): ☐ ▶CEM ☐ ▶GLM ☒ ▶Parametric ☐ ▶PRD ☐ ▶Non-monitor

Monitor description(s):

Parameter(s) exceeded or not functioning due to inoperation

☐ ▶NO_x ☐ ▶SO_2 ☐ ▶CO ☐ ▶CO_2 ☐ ▶H_2S ☐ ▶TRS ☒ ▶NH_3
☐ ▶O_2 ☐ ▶H_2O ☐ ▶Opacity ☐ ▶Lead ☐ ▶Gauge Pressure ☐ ▶Flow
☐ ▶Hydrocarbon Breakthrough (VOC) ☐ ▶Temperature ☐ ▶Wind Speed
☐ ▶Wind Direction ☐ ▶Steam ☐ ▶Other (describe)

Unit(s) of Measurement

☒ ▶ppm ☐ ▶ppb ☐ ▶min/hr > 20% ☐ ▶inches H_2O ☐ ▶mmHg
☐ ▶psig ☐ ▶pH ☐ ▶^{0}Fahrenheit ☐ ▶Other (describe)

Event Description:
Indicated excess of NH3 slip concentrations due to NOx inlet analyzer sampling system malfunction. Investigation underway; preliminary conclusion that NOx sample system developed a leak, resulting in lower inlet NOx concentration and high slip values. Leak believed to now be corrected.

District Use Only

Received by	Date	Time

METCALF ENERGY CENTER, LLC

1 Blanchard Rd.
Coyote, CA 95013

July 1, 2014

Mr. Wayne Kino (wkino@baaqmd.gov)
Director, Enforcement and Compliance Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

RE: **Metcalf Energy Center, LLC Permit No. B2183**
Major Facility Review Permit (Title V Permit)
30-Day Title V Non-Compliance Report – RCA No. 06Q02

Dear Mr. Kino:

In accordance with the Major Facility Review Permit (Title V Permit) for the Metcalf Energy Center (the "Facility"), this letter is intended to satisfy the 30-day follow-up reporting requirement as required by Section I.F of the Title V Permit. The Title V Permit initial 10-day notification for this event was previously submitted to the District on June 2, 2014.

On June 1, 2014, the Facility experienced an indicated excess of the NH3 Slip 3-hour rolling average emission limit of 5 ppm on Combustion Turbine #1, as stated in Condition 20e of the Title V Permit. After reviewing operating data such as the ammonia injection rate, stack and inlet NOx concentrations, and unit megawatt load, it was determined that the NH3 slip data reported from 0500 to 0700 hours was not accurate because the inlet NOx data was unrealistically low. Based on comparable runs, the Facility has concluded that the actual 3-hour average was not exceeded.

The following is a summary of the investigation into the incident upon discovery:

- 0554: The operator noticed an unusually low inlet NO_x value with respect to Combustion Turbine #1.
- 0558: The operator took manual control of the unit's ammonia injection system in an effort to decrease indicated NH_3 Slip values.
- 0654: The Combustion Turbine #1 CEMS was placed in to maintenance mode and a Technician was called in to the site.
- 0736: Combustion Turbine #1 was taken off-line
- 0921: The Maintenance Technician discovered a cracked, plastic elbow in the sample line for the inlet NO_x analyzer. This crack allowed ambient air to contaminate the sample line and resulted in a lower than actual inlet NO_x value. The unrealistically low inlet NOx concentrations caused the calculated NH3 slip values to be too high and resulted in the indicated excess.
- 1040: The cracked elbow was replaced and the Combustion Turbine #1 analyzers passed calibration.
- 1104: Combustion Turbine #1 was back on-line.

In order to prevent this event in the future, the Facility will continue its robust maintenance program with respect to the CEMS and will inspect, and if necessary, replace all similar plastic components in both CEMs sample lines.

If you have any questions or require additional information, please contact Rosemary Silva, EHS Specialist, at 408-361-4954.

Based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate and complete.

Sincerely,

Terry Mahoney
Authorized Representative and General Manager
Metcalf Energy Center, LLC

CC: David Williams, Calpine
Barbara McBride, Calpine
Katherine Piper, Calpine

METCALF ENERGY CENTER, LLC

1 Blanchard Rd.
Coyote, CA 95013

July 10, 2014

Mr. Wayne Kino (wkino@baaqmd.gov)
Director, Enforcement and Compliance Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

RE: **Metcalf Energy Center, LLC Permit No. B2183**
Major Facility Review Permit (Title V Permit)
30-Day Supplemental -Title V Non-Compliance Report – RCA No. 06Q02

Dear Mr. Kino:

In accordance with the Major Facility Review Permit (Title V Permit) for the Metcalf Energy Center (the "Facility"), on July 1, 2014, the Facility previously submitted the 30-day follow-up report for RCA No. 06Q02, as required by Section I.F of the Title V Permit, . This letter is intended to provide supplemental information for this event.

As reported in the 30-day follow-up report, on June 1, 2014, the Facility experienced an indicated excess of the NH3 Slip 3-hour rolling average emission limit of 5 ppm on Combustion Turbine #1. It was concluded, however, that no actual excess occurred and instead, that the NH3 Slip data reported from 0500 to 0700 hours was not accurate because the inlet NOx data was measuring abnormally low.

Based on comparable operational data, the actual inlet NOx concentration during the applicable time period should have been approximately 27.5 ppm compared to the measured values that ranged from 6.4 ppm to 11.7 ppm. The measured values of 6.4 ppm to 11.7 ppm are inconsistent with the operational experience of the Facility and are not realistic values based on historical data for the megawatt load at which the unit was operating. Based on historical runs at the applicable megawatt load, a more typical average SCR NOx value for Combustion Turbine #1 is 27.5 ppm.

Using data substitution, when a more accurate measurement of 27.5 ppm inlet NOx was used to recalculate the NH3 Slip 3-hour rolling average, the value was 2.38 ppm for the 0500 and 0700 hours, instead of the DAHS calculated value of 5.93 ppm. The attached tables include a summary of the inlet NOx and NH3 slip data recorded and calculated by the DAHS, as well as the substituted inlet NOx data and recalculated NH3 slip values based on the foregoing substitution methodology. The recalculated NH3 slip data, which is more representative of the actual emissions than the data initially reported by the DAHS and that was based on erroneous inlet NOx data, indicates that no actual exceedence of the NH3 slip limit occured.

If you have any questions or require additional information, please contact Rosemary Silva, EHS Specialist, at 408-361-4954.

Based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate and complete.

Sincerely,

Robert Parker
Vice President
Metcalf Energy Center, LLC

CC: David Williams, Calpine
Barbara McBride, Calpine
Katherine Piper, Calpine

Timestamp	Measured SCR NOx ppm	Substituted SCR NOx ppm	Measured NH3 ppm @15% O2 1-Hr	Substituted NH3 ppm @15% O2 1-Hr	Measured NH3 ppm @15% O2 3-Hr Rollilng	Substituted NH3 ppm @15% O2 3-Hr
6/1/2014 4:00	12.2	-	2.6	-	0.00	-
6/1/2014 5:00	7.1	27.5	15.2	4.55	5.93	2.38
6/1/2014 6:00	8.5	27.5	0.0	0.00	5.93	2.38

CeDAR 1-Minute Data
Data for 6/1/2014 4:00 AM thru 6/1/2014 8:00 AM

Timestamp	(Turbine - 1) Process Code 1-Min	(Turbine - 1) NOx ppm @15% O2 1-Min	Updated SCR NOx ppm	(Turbine - 1) SCR NOx ppm 1-Min	(Turbine - 1) NH3 Slip Correction Factor 1-Min	(Turbine - 1) NH3 ppm @15% O2 1-Min	(Turbine - 1) 75-O2% 1-Min	(Turbine - 1) Total Heat Input mmBtu/hr 1-Min	(Turbine - 1) Megawatts 1-Min	(Turbine - 1) NH3 Flow 1-Min lb/hr	NH3 Inlet	NH3 Slip
6/1/2014 4:55	8	1.32	-	7.8	0.84	32.53	14.04	1339.5	117.1	287.14	-	-
6/1/2014 4:56	8	1.19	-	7.6	0.84	32.09	14.05	1339.5	117.4	283.58	-	-
6/1/2014 4:57	8	1.1	-	7.5	0.84	31.59	14.06	1339.5	117.3	279.69	-	-
6/1/2014 4:58	8	1.04	-	7.3	0.84	30.8	14.06	1339.5	117.2	272.8	-	-
6/1/2014 4:59	8	1.02	-	7.2	0.84	30.16	14.07	1339.5	117.4	267.44	-	-
						2.6						
6/1/2014 5:00	8	1	27.5	7	0.84	29.64	14.08	1339.5	117.2	262.33	46.6	14.60
6/1/2014 5:01	8	1	27.5	7	0.84	28.31	14.07	1350.8	118.6	254.23	44.8	13.31
6/1/2014 5:02	8	1.01	27.5	6.9	0.84	26.84	14.05	1384.7	122.8	248.36	42.9	11.84
6/1/2014 5:03	8	1	27.5	6.8	0.84	26.16	14.05	1382.5	122.3	241.61	41.8	11.04
6/1/2014 5:04	8	0.97	27.5	6.8	0.84	25.33	14.05	1380.2	122.3	234.83	40.7	10.22
6/1/2014 5:05	8	1.03	27.5	6.8	0.84	24.46	14.02	1384.7	122.4	228.13	39.5	9.41
6/1/2014 5:06	8	1.09	27.5	6.8	0.84	23.69	14.04	1384.7	122.5	221.73	38.3	8.60
6/1/2014 5:07	8	1.13	27.5	6.8	0.84	21.19	14.03	1384.7	122.7	201.35	34.8	6.11
6/1/2014 5:08	8	1.19	27.5	6.8	0.84	17.88	14.03	1402.8	123.5	176.85	30.2	2.81
6/1/2014 5:09	8	1.33	27.5	6.8	0.84	15.99	14.04	1382.5	123.2	158.24	27.4	0.88
6/1/2014 5:10	8	1.51	27.5	6.8	0.84	14.59	14.01	1396	123.6	147.26	25.4	0.46
6/1/2014 5:11	8	1.75	27.5	6.9	0.84	12.97	14.03	1393.8	123.4	132.95	22.9	2.09
6/1/2014 5:12	8	1.93	27.5	7	0.84	11.46	14.04	1396	123.6	120.42	20.6	3.56
6/1/2014 5:13	8	2.21	27.5	7.2	0.84	10.92	14.02	1430	127	117.76	19.8	3.98
6/1/2014 5:14	8	2.41	27.5	7.4	0.84	10.94	14.03	1420.9	126.6	117.19	19.8	3.84
6/1/2014 5:15	8	2.5	27.5	7.5	0.84	11.11	14.01	1423.2	127.4	118.63	20.0	3.57
6/1/2014 5:16	8	2.76	27.5	7.6	0.84	11.84	14	1425.5	127	123.55	20.9	2.79
6/1/2014 5:17	8	2.83	27.5	7.7	0.84	12.47	14.03	1432.2	127.1	129.52	21.7	2.16
6/1/2014 5:18	8	2.9	27.5	7.8	0.84	13.6	14	1420.9	127.5	137.85	23.3	0.90
6/1/2014 5:19	8	2.87	27.5	7.8	0.84	14.25	14	1459.4	130.7	147.04	24.2	0.27
6/1/2014 5:20	8	2.91	27.5	7.8	0.84	15.36	14.01	1466.2	132.4	157.17	25.8	0.84
6/1/2014 5:21	8	2.74	27.5	7.8	0.84	16.04	13.99	1491.1	135.6	166.83	27.0	1.58
6/1/2014 5:22	8	2.69	27.5	7.6	0.45	8.89	13.98	1538.6	140.7	175.98	27.6	1.07
6/1/2014 5:23	8	2.55	27.5	7.6	0.45	9.1	13.96	1574.8	145.3	184.69	28.4	1.32
6/1/2014 5:24	8	2.47	27.5	7.5	0.45	9.29	13.93	1615.5	150.3	192.67	29.0	1.51
6/1/2014 5:25	8	2.48	27.5	7.4	0.45	9.4	13.85	1667.6	155.8	199.32	29.4	1.65
6/1/2014 5:26	8	2.74	27.5	7.4	0.45	9.71	13.77	1701.5	159.5	206.56	30.2	2.02
6/1/2014 5:27	8	2.88	27.5	7.5	0.45	10.25	13.82	1703.8	159.4	216.37	31.4	2.53
6/1/2014 5:28	8	2.71	27.5	7.6	0.45	10.66	13.8	1699.2	159	225.37	32.8	3.01
6/1/2014 5:29	8	2.6	27.5	7.6	0.45	11.13	13.81	1690.2	158.1	233.56	34.2	3.47
6/1/2014 5:30	8	2.49	27.5	7.5	0.45	11.61	13.81	1672.1	155.9	239.99	35.5	3.93
6/1/2014 5:31	8	2.35	27.5	7.4	0.45	12.03	13.84	1647.2	153.5	244.81	36.6	4.31
6/1/2014 5:32	8	2.1	27.5	7.6	0.45	12.15	13.87	1642.7	152.7	249.69	37.3	4.48
6/1/2014 5:33	8	1.93	27.5	7.4	0.45	12.5	13.87	1620	149.8	252.52	38.2	4.78
6/1/2014 5:34	8	1.72	27.5	7.3	0.45	12.78	13.92	1583.8	145.1	252.7	38.8	4.97
6/1/2014 5:35	8	1.49	27.5	7.2	0.84	24.33	13.95	1540.9	139.6	251.33	39.5	9.65
6/1/2014 5:36	8	1.39	27.5	7	0.84	24.81	13.97	1500.1	135.2	248.6	40.1	9.98
6/1/2014 5:37	8	1.34	27.5	6.9	0.84	25.29	13.99	1454.9	129.9	244.83	40.6	10.33
6/1/2014 5:38	8	1.28	27.5	6.8	0.84	25.57	14.01	1411.9	124.7	240.07	40.9	10.53
6/1/2014 5:39	8	1.32	27.5	6.6	0.84	25.93	14.03	1373.4	120.2	235.13	41.0	10.71
6/1/2014 5:40	8	1.4	27.5	6.6	0.84	25.35	14.04	1387	122.7	232.11	40.0	10.07
6/1/2014 5:41	8	1.5	27.5	6.6	0.84	23.8	14.02	1457.1	130.5	229.94	37.9	8.55
6/1/2014 5:42	8	1.41	27.5	6.6	0.84	22.49	14.02	1518.2	137.9	228.8	36.2	7.26
6/1/2014 5:43	8	1.34	27.5	6.6	0.45	11.57	14	1545.4	141.1	225.42	35.1	3.44
6/1/2014 5:44	8	1.36	27.5	6.6	0.45	11.4	13.99	1554.4	141.7	223.58	34.7	3.28
6/1/2014 5:45	8	1.38	27.5	6.7	0.45	9.41	14	1545.4	140.9	189.7	29.5	1.32
6/1/2014 5:46	8	1.42	27.5	6.8	0.45	7.8	14.01	1538.6	140.2	162.4	25.4	0.27
6/1/2014 5:47	8	1.65	27.5	6.8	0.45	7.38	13.99	1536.3	140.4	153.23	24.0	0.69
6/1/2014 5:48	8	1.94	27.5	6.8	0.45	7.19	13.98	1534.1	140.3	147.9	23.3	0.88
6/1/2014 5:49	8	2.22	27.5	6.9	0.45	7.13	13.98	1534.1	140	145.42	22.9	0.92
6/1/2014 5:50	8	2.44	27.5	7	0.45	7.02	13.98	1534.1	140	142.48	22.4	1.01
6/1/2014 5:51	8	2.65	27.5	7.2	0.45	7.02	13.99	1531.8	140	142.11	22.4	0.96
6/1/2014 5:52	8	2.83	27.5	7.3	0.45	6.98	13.99	1534.1	140.3	140.97	22.1	0.97

ORIGINAL 3-HR ROLLING AVERAGE	
0	2.6
2.6	15.2
15.2	0
5.93	5.93

RECALCULATED 3-HR ROLLING AVERAGE	
0	2.6
2.6	4.55
4.55	0
2.38	2.38

6/1/2014 5:53	8	2.97	27.5	7.4	0.45	6.98	13.99	1538.6	140.6	141.06	22.1	0.93	
6/1/2014 5:54	8	2.97	27.5	-	0.45	-	13.99	1534.1	140.3	140.83	22.1	-	
6/1/2014 5:55	8	2.97	27.5	-	0.45	-	13.99	1531.8	140.1	139.92	22.0	-	
6/1/2014 5:56	8	2.97	27.5	-	0.84	-	13.99	1534.1	139.8	140.45	22.1	-	
6/1/2014 5:57	8	2.97	27.5	-	0.84	-	13.99	1534.1	139.7	140.82	22.1	-	
6/1/2014 5:58	8	2.97	27.5	-	0.45	-	13.99	1543.1	141.1	140.25	21.9	-	
6/1/2014 5:59	8	2.97	27.5	-	0.45	-	13.99	1547.6	141.3	139.69	21.8	-	
						15.2						4.55	
6/1/2014 6:00	8	2.97	-	-	0.45	-	13.99	1547.6	141.1	139.21	21.7	-	
6/1/2014 6:01	8	2.97	-	-	0.45	-	13.99	1545.4	141.3	139.41	21.7	-	
6/1/2014 6:02	8	2.97	-	-	0.45	-	13.99	1540.9	140.7	140.12	21.9	-	
6/1/2014 6:03	8	2.97	-	-	0.45	-	13.99	1543.1	141	139.8	21.8	-	
6/1/2014 6:04	8	2.97	-	-	0.45	-	13.99	1536.3	140.2	140.09	22.0	-	
6/1/2014 6:05	8	2.97	-	-	0.45	-	13.99	1540.9	140.8	138.52	21.7	-	
6/1/2014 6:06	8	2.97	-	-	0.45	-	13.99	1540.9	140.6	139.13	21.8	-	
6/1/2014 6:07	8	2.97	-	-	0.45	-	13.99	1536.3	140.1	138.92	21.8	-	
6/1/2014 6:08	8	2.97	-	-	0.45	-	13.99	1540.9	140.5	138.34	21.6	-	
6/1/2014 6:09	8	2.97	-	-	0.45	-	13.99	1543.1	140.4	139.74	21.8	-	
6/1/2014 6:10	8	2.97	-	-	0.45	-	13.99	1547.6	140.9	139.75	21.8	-	
6/1/2014 6:11	8	2.97	-	-	0.45	-	13.99	1538.6	140.7	139.69	21.9	-	
6/1/2014 6:12	8	2.97	-	-	0.45	-	13.99	1538.6	140.4	139.61	21.9	-	
6/1/2014 6:13	4	4.59	-	8.8	0.84	0	14.01	1513.7	136.1	129.78	20.6	0.00	
6/1/2014 6:14	4	4.59	-	8.7	0.84	0	13.99	1463.9	130.5	82.78	13.6	0.00	
6/1/2014 6:15	4	5.76	-	8.8	0.84	0	14	1400.6	122.7	62.9	10.8	0.00	
6/1/2014 6:16	4	7.82	-	9.2	0.84	0	14.03	1325.9	114	66.83	12.1	0.00	
6/1/2014 6:17	4	9.23	-	10.5	0.84	0	14.13	1255.8	106.2	90.01	16.9	0.00	
6/1/2014 6:18	4	9.17	-	11.7	0.84	0	14.28	1187.9	98	131.78	25.6	0.00	
6/1/2014 6:19	4	7.84	-	12	0.84	0	14.5	1126.8	90.2	191.82	38.0	0.00	
6/1/2014 6:20	4	5.78	-	11.1	0.84	0	14.88	1068	82.7	248.17	48.8	0.00	
6/1/2014 6:21	4	3.84	-	9.8	0.84	0	15.24	1000.1	74.8	282.2	55.7	0.00	
6/1/2014 6:22	4	2.92	-	8.4	0.84	0	15.62	939	66.8	301.17	59.1	0.00	
6/1/2014 6:23	4	2.43	-	7.6	0.84	0	15.97	886.9	58.3	312.03	60.5	0.00	
6/1/2014 6:24	4	2.47	-	7	0.84	0	16.32	855.3	52.6	323.24	60.4	0.00	
6/1/2014 6:25	4	3.22	-	6.6	0.84	0	16.61	805.5	43.5	335.71	62.4	0.00	
6/1/2014 6:26	4	4.47	-	6.4	0.84	0	16.98	753.5	34.6	354.48	64.3	0.00	
6/1/2014 6:27	4	6.33	-	6.5	0.84	0	17.31	708.2	26.2	389.66	68.9	0.00	
6/1/2014 6:28	4	9.12	-	6.8	0.84	0	17.68	635.8	15.9	448.72	79.3	0.00	
6/1/2014 6:29	4	13.09	-	7.3	0.84	0	18.15	524.9	3.9	164.97	30.1	0.00	
6/1/2014 6:30	4	18.67	-	7.9	0.84	0	18.77	527.2	0.4	0	0.0	0.00	
6/1/2014 6:31	4	15.47	-	8.3	0.84	0	18.78	538.5	0.3	0	0.0	0.00	
6/1/2014 6:32	4	13.16	-	8	0.84	0	18.86	545.3	0.3	0	0.0	0.00	
6/1/2014 6:33	4	11.56	-	7.5	0.84	0	18.95	552.1	0.4	0	0.0	0.00	
6/1/2014 6:34	4	10.39	-	7	0.84	0	19.02	540.8	0.4	0	0.0	0.00	
6/1/2014 6:35	4	8.37 <13>	-	6.6 <13>	0.84	0	19.02	172.1	0	0	0.0	0.00	
						0.0						0.00	

Faxed 1:42 am

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

COMPLIANCE & ENFORCEMENT DIVISION

Notification Form
Reportable Compliance Activity (RCA)

See back of form for instructions →

1. ☐ **FACILITY IS REQUESTING BREAKDOWN RELIEF (Regulation 1-431 and 1-432)**
***District Use Only* BREAKDOWN REFERENCE #:**

2. ☒ **MONITOR INDICATES EXCESS EMISSION or EXCURSION** (Regulation 1-522.7, 1-523.3, 1-542)
***District Use Only* EXCESS or EXCURSION REFERENCE #:**

3. ☐ **MONITOR IS INOPERATIVE (Regulation 1-522.4, 1-523.2, 1-530)**
***District Use Only* INOPERATIVE MONITOR REFERENCE #:**

4. ☐ **PRESSURE IS RELEASED FROM RELIEF DEVICE (PRD) (Regulation 8-28-401)**
***District Use Only* PRD REFERENCE #:**

SITE INFORMATION AND DESCRIPTION INFORMATION (REQUIRED)

Company	METCALF ENERGY CENTER	Site #	B2183
Address	1 BLANCHARD ROAD, COYOTE	Source #	S2
Reported by	ROSEMARY SILVA	Phone #	408-361-4954
Indicated Excess	2653 lbs. during Start-up	Fax #	408-361-4949
Allowable Limit	2514 lbs. per Start-up	Averaging Time	3-HR
Start Time/Date	11:50 7/22/2014	Clear Time	12:43 7/22/2014

Monitor/device type(s): ☐ ▶CEM ☐ ▶GLM ☒ ▶Parametric ☐ ▶PRD ☐ ▶Non-monitor

Monitor description(s):

Parameter(s) exceeded or not functioning due to inoperation

☐ ▶NO_x ☐ ▶SO_2 ☒ ▶CO ☐ ▶CO_2 ☐ ▶H_2S ☐ ▶TRS ☐ ▶NH_3
☐ ▶O_2 ☐ ▶H_2O ☐ ▶Opacity ☐ ▶Lead ☐ ▶Gauge Pressure ☐ ▶Flow
☐ ▶Hydrocarbon Breakthrough (VOC) ☐ ▶Temperature ☐ ▶Wind Speed
☐ ▶Wind Direction ☐ ▶Steam ☐ ▶Other (describe)

Unit(s) of Measurement

☐ ▶ppm ☐ ▶ppb ☐ ▶min/hr > 20% ☐ ▶inches H_2O ☐ ▶mmHg
☐ ▶psig ☐ ▶pH ☐ ▶^{0}Fahrenheit ☒ ▶Other (describe) lbs

Event Description:
During an attempted start-up on Unit 2, we realized that we were unlikely to be able to complete the startup and maintain compliance with the CO mass emissions limit. Therefore, prior to reaching the CO start-up emission limit, a unit shutdown was commenced. Once the shutdown command was initiated, it took the unit 12 minutes before fuel flow ceased. During this run, the unit never reached normal operations and transitioned straight from startup mode to shutdown mode.

District Use Only

Received by	Date	Time

METCALF ENERGY CENTER, LLC

1 Blanchard Rd.
Coyote, CA 95013

August 8, 2014

Mr. Wayne Kino (wkino@baaqmd.gov)
Director, Enforcement and Compliance Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

RE: Metcalf Energy Center, LLC Permit No. B2183
Major Facility Review Permit (Title V Permit)
30-Day Title V Non-Compliance Report – RCA No. 06R33

Dear Mr. Kino:

In accordance with the Major Facility Review Permit (Title V Permit) for the Metcalf Energy Center (the "Facility"), this letter is submitted pursuant to Section I.F. of the Title V Permit, which requires submission of a written report within 30 calendar days of the discovery of any instance of potential non-compliance. In an abundance of caution, the Facility previously reported the event described in this report pursuant to the 96-hour and 10-day reporting requirements imposed by its Title V Permit and District rules and, through submission of this report, is seeking the District's concurrence that such an event does not constitute a violation of the Facility's Title V Permit.

On July 22, 2014, during an attempted start-up on Unit 2 that began at 1150 hours, the Facility concluded that it was unlikely to be able to complete the startup and maintain compliance with the CO mass emissions limit of 2,514 pounds (lb.) CO per start-up event contained in Condition #18310, Part 21. Therefore, prior to exceeding this limit, at 1232 hours, the shutdown sequence was commenced for Unit 2. Once the shutdown command was initiated, it took the unit 12 minutes before fuel flow ceased to the unit. During this run, the unit never reached normal operations and transitioned straight from start-up mode to shutdown mode. Mass emissions from the time the unit was started-up until initiation of the shutdown sequence did not exceed the relevant start-up limit. Nor did emissions from the time the shutdown sequence was initiated until operation of the unit ceased exceed the corresponding shutdown limit of 902 lb. CO.

However, the definitions of start-up and shutdown appearing in the permit do not account for the scenario described above; instead they assume that the unit transitions from start-up mode to normal operations and from normal operations into shutdown mode. "Gas Turbine Start-up Mode" is defined as, "[t]he lesser of the first 180 minutes of continuous fuel flow to the Gas Turbine after fuel flow is initiated or the period of time from Gas Turbine fuel flow initiation until the Gas Turbine achieves two consecutive data points in compliance with the emission concentration limits of conditions 20(b) and 20(d)" (NOx and CO). (Cond. #18310, Definitions, Part 20(b) and (d)). Thus, unless and until the CEMS records two consecutive data points in compliance with the NOx and CO concentration limits, the Facility's data acquisition and handling system (DAHS) assumes that the unit remains in start-up mode and records all emissions as such. Likewise, the definition of "Gas Turbine Shutdown Mode" assumes that a shutdown does not commence until non-compliance with the same concentration limits.

Accordingly, in a situation as was experienced on July 22, 2014, the DAHS programming defaulted to an assumption that all the run minutes occurred during start-up mode and that the unit never entered shutdown mode – despite the fact that the shutdown sequence had been commenced and completed. As a consequence, the DAHS over-estimated the total mass emissions for the event and indicated an exceedance of the start-up limit of 2,514 lb CO, even though the total emissions from the time the unit was started-up until the shutdown sequence was initiated remained in compliance. Further, the DAHS underestimated the shutdown emissions (i.e., the DAHS treated some of the shutdown

minutes as start-up minutes), even though the emissions from the time shutdown commenced likewise remained in compliance (below the corresponding shutdown limit of 902 lb. CO per shutdown event). In light of this DAHS indication and in an abundance of caution, the Facility reported an indicated exceedance of the start-up mass emissions limit.

The Facility submits that here the most practical and logical application of the permit terms, and the separate mass emissions limits applicable to each of start-up and shutdown modes, is to conclude that the unit was in start-up mode only until such time as the shutdown sequence was initiated. Thereafter, the unit operated in shutdown mode until cessation of fuel flow (for 12 minutes) and the emissions are properly classified as in "shutdown". As indicated above, when applied in this manner, no exceedance of either the start-up or the shutdown limits occurred. Attached hereto as Appendix 1 is what the errant DAHS report would reflect were the entire event on July 22, 2014 treated as a start-up event. Further, attached hereto as Appendix 2 is an exemplar of what the DAHS report should reflect, given the facts of the event (i.e., representing the commencement of the shutdown sequence).

Accordingly, as a corrective action with respect to this event, the Facility has modified the DAHS process codes for this particular event to accurately reflect the commencement and completion of the shutdown sequence, as is reflected on the attached Appendix 2.

The DAHS process codes will be managed similarly during any future events when the startup and shutdown periods, as defined by the permit, overlap.

If you have any questions or require additional information, please contact Rosemary Silva, EHS Specialist, at 408-361-4954.

Based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate and complete.

Sincerely,

Terry Mahoney
Authorized Representative and General Manager
Metcalf Energy Center, LLC

CC: David Williams, Calpine
Barbara McBride, Calpine
Katherine Piper, Calpine
Region IX, EPA
Eric Veerkemp, CEC AQ-36

APPENDIX 1

Metcalf

San Jose, CA

Turbine-2 Hourly Emissions Report

July 22, 2014 - Hour 11

1-Hr Emission Limits
NOx ppm @15% O2 - 2.5 *
NOx lb/mmBtu - 0.00904 *
NOx lb/hr - 19.2 *

3-Hr Rolling Emission Limits
CO ppm @15% O2 - 4 *
CO lb/mmBtu - 0.0088 *
CO lb/hr - 18.7 *
NH3 Slip ppm @15% O2 - 5 *

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm Slip @15% O2	SCR NOx ppm	Process Status
11:00	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:01	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:02	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:03	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:04	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:05	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:06	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:07	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:08	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:09	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:10	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:11	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:12	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:13	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:14	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:15	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:16	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:17	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:18	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:19	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:20	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:21	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:22	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:23	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:24	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:25	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:26	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:27	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:28	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:29	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm Slip @15% O2	SCR NOx ppm	Process Status
11:30	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:31	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:32	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:33	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:34	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:35	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:36	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:37	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:38	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:39	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:40	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:41	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:42	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:43	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:44	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:45	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:46	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:47	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:48	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:49	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:50	20.95	0.00	Inval	Inval	Inval	0.00	Inval	Inval	Inval	Down	0.0	Hot S/U
11:51	20.77	0.00	Inval	Inval	Inval	0.23	Inval	Inval	Inval	Down	0.4	Hot S/U
11:52	18.21	3.33	7.30	0.02685	4.93	258.93	567.91	1.2707	233.35	Down	1.0	Hot S/U
11:53	18.20	4.87	10.64	0.03912	8.60	799.88	1747.89	3.9110	860.06	Down	1.0	Hot S/U
11:54	18.00	5.80	11.80	0.04338	11.41	909.07	1849.49	4.1383	1088.29	Down	1.1	Hot S/U
11:55	17.99	7.33	14.86	0.05463	16.72	939.70	1905.23	4.2630	1304.74	Down	1.4	Hot S/U
11:56	17.99	8.78	17.80	0.06544	24.92	960.68	1947.77	4.3582	1659.93	Down	1.6	Hot S/U
11:57	17.99	9.87	20.01	0.07356	31.85	998.72	2024.90	4.5308	1961.91	Down	1.8	Hot S/U
11:58	18.15	10.39	22.29	0.08194	39.01	1103.10	2366.65	5.2955	2521.12	Down	2.1	Hot S/U
11:59	18.13	11.66	24.84	0.09129	48.01	1181.42	2516.38	5.6305	2961.42	Down	2.5	Hot S/U
Average Total 3-Hr Rlng	18.6	6.2	0.0 *	DCal *	DCal *	715.2	1834.6 NSD *	4.1051 Down *	213.59 Down *	Down *	1.3	Hot S/U

* - Excluding Startup and Shutdown

Metcalf

San Jose, CA

Turbine-2 Hourly Emissions Report

July 22, 2014 - Hour 12

1-Hr Emission Limits		3-Hr Rolling Emission Limits	
NOx ppm @15% O2 - 2.5 *	NOx lb/hr - 19.2 *	CO ppm @15% O2 - 4 *	CO lb/hr - 18.7 *
NOx lb/mmBtu - 0.00904 *		CO lb/mmBtu - 0.0088 *	NH3 Slip ppm @15% O2 - 5 *

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm Slip @15% O2	SCR NOx ppm	Process Status
12:00	18.53	12.05	30.00	0.11027	60.25	1090.65	2715.12	6.0752	3319.31	Down	2.4	Hot S/U
12:01	18.62	12.74	32.97	0.12119	67.31	920.95	2383.16	5.3324	2961.83	Down	2.6	Hot S/U
12:02	18.58	14.33	36.44	0.13396	74.10	953.62	2425.15	5.4264	3001.73	Down	3.1	Hot S/U
12:03	18.59	15.31	39.10	0.14374	79.19	970.00	2477.49	5.5435	3053.92	Down	3.5	Hot S/U
12:04	18.59	16.02	40.92	0.15041	85.59	979.17	2500.91	5.5959	3164.30	Down	3.8	Hot S/U
12:05	18.58	16.35	41.58	0.15285	86.63	983.12	2500.18	5.5942	3170.63	Down	4.2	Hot S/U
12:06	18.52	17.00	42.14	0.15492	89.91	1034.92	2565.56	5.7405	3331.63	Down	4.6	Hot S/U
12:07	18.44	17.82	42.74	0.15711	92.96	1102.98	2645.36	5.9191	3502.41	Down	5.1	Hot S/U
12:08	18.37	18.66	43.52	0.15996	96.83	1180.75	2753.53	6.1611	3729.39	Down	5.6	Hot S/U
12:09	18.29	19.37	43.79	0.16096	98.89	1248.33	2821.90	6.3141	3879.28	Down	6.2	Hot S/U
12:10	18.22	20.15	44.36	0.16307	102.04	1316.02	2897.21	6.4826	4056.25	Down	6.7	Hot S/U
12:11	18.14	20.86	44.59	0.16392	104.43	1381.48	2953.16	6.6078	4209.53	Down	7.2	Hot S/U
12:12	18.06	21.50	44.67	0.16419	106.83	1445.60	3003.18	6.7197	4372.21	Down	7.7	Hot S/U
12:13	17.98	22.18	44.82	0.16474	109.43	1518.15	3067.49	6.8636	4559.18	Down	8.3	Hot S/U
12:14	17.89	22.48	44.06	0.16198	109.80	1593.92	3124.29	6.9907	4738.69	Down	8.9	Hot S/U
12:15	17.80	22.82	43.43	0.15965	110.03	1660.08	3159.51	7.0695	4872.27	Down	9.3	Hot S/U
12:16	17.71	23.13	42.78	0.15726	110.88	1710.28	3163.21	7.0778	4990.32	Down	9.8	Hot S/U
12:17	17.63	23.27	41.99	0.15434	110.57	1755.00	3166.51	7.0852	5075.82	Down	10.1	Hot S/U
12:18	17.55	23.40	41.21	0.15149	110.59	1780.80	3136.33	7.0177	5122.91	Down	10.1	Hot S/U
12:19	17.46	23.56	40.41	0.14854	110.46	1785.70	3062.68	6.8529	5095.87	Down	10.0	Hot S/U
12:20	17.37	23.67	39.56	0.14543	109.79	1777.23	2970.44	6.6465	5017.70	Down	9.8	Hot S/U
12:21	17.28	23.80	38.79	0.14259	109.26	1749.15	2850.83	6.3788	4887.94	Down	9.5	Hot S/U
12:22	17.20	23.73	37.84	0.13910	108.48	1715.75	2735.93	6.1217	4774.19	Down	9.1	Hot S/U
12:23	17.11	23.57	36.69	0.13488	106.72	1670.07	2599.85	5.8173	4602.71	Down	8.7	Hot S/U
12:24	17.02	23.26	35.37	0.13002	104.35	1614.47	2454.99	5.4931	4408.49	Down	8.3	Hot S/U
12:25	16.93	23.06	34.27	0.12598	102.53	1557.40	2314.52	5.1788	4214.93	Down	8.1	Hot S/U
12:26	16.84	23.39	33.99	0.12495	103.11	1501.35	2181.77	4.8818	4028.57	Down	7.9	Hot S/U
12:27	16.75	23.80	33.84	0.12438	103.49	1416.55	2013.89	4.5062	3749.26	Down	7.9	Hot S/U
12:28	16.66	24.03	33.44	0.12292	103.94	1301.07	1810.45	4.0510	3425.62	Down	8.0	Hot S/U
12:29	16.62	23.36	32.20	0.11837	101.97	1247.53	1719.73	3.8480	3315.02	Down	8.1	Hot S/U

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm Slip @15% O2	SCR NOx ppm	Process Status
12:30	16.47	22.78	30.34	0.11152	96.83	1371.12	1826.10	4.0860	3547.85	Down	8.1	Hot S/U
12:31	16.44	22.18	29.34	0.10786	90.96	1147.82	1518.42	3.3975	2865.29	Down	8.1	Hot S/U
12:32	16.71	20.01	28.18	0.10358	82.42	1265.45	1781.90	3.9871	3172.74	Down	8.2	Hot S/U
12:33	17.04	17.89	27.34	0.10052	74.29	1124.62	1718.98	3.8463	2842.68	Down	8.1	Hot S/U
12:34	17.41	16.71	28.25	0.10384	71.33	1054.90	1783.36	3.9903	2741.04	Down	8.5	Hot S/U
12:35	17.76	15.49	29.11	0.10699	67.19	967.02	1817.01	4.0656	2553.13	Down	8.5	Hot S/U
12:36	18.11	13.65	28.87	0.10611	61.34	683.55	1445.50	3.2344	1869.85	Down	8.0	Hot S/U
12:37	18.48	11.16	27.21	0.10002	52.61	409.95	999.46	2.2363	1176.20	Down	7.0	Hot S/U
12:38	18.71	9.00	24.25	0.08913	47.49	221.68	597.22	1.3363	711.94	Down	6.6	Hot S/U
12:39	18.78	8.96	24.94	0.09166	49.46	188.55	524.74	1.1741	633.51	Down	6.4	Hot S/U
12:40	18.85	9.08	26.13	0.09606	52.92	173.93	500.58	1.1201	617.06	Down	6.4	Hot S/U
12:41	18.91	8.94	26.51	0.09743	54.34	165.83	491.66	1.1001	613.53	Down	6.4	Hot S/U
12:42	18.96	8.86	26.95	0.09905	52.99	162.30	493.59	1.1044	590.89	Down	6.6	Hot S/U
12:43	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down — SD
12:44	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:45	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:46	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:47	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:48	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:49	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:50	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:51	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:52	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:53	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:54	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:55	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:56	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:57	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:58	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:59	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
Average Total 3-Hr Rlng	17.8	18.7	0.0 *	Down *	Down *	1183.7	2252.8 NSD *	5.0408 Down *	2451.99 Down *	Down *	7.2	Hot S/U

** - Excluding Startup and Shutdown*

APPENDIX 2

REVISED REPORT

Metcalf

San Jose, CA

Turbine-2 Hourly Emissions Report

July 22, 2014 - Hour 11

1-Hr Emission Limits
NOx ppm @15% O2 - 2.5 *
NOx lb/hr - 19.2 *
NOx lb/mmBtu - 0.00904 *

3-Hr Rolling Emission Limits
CO ppm @15% O2 - 4 *
CO lb/hr - 18.7 *
CO lb/mmBtu - 0.0088 *
NH3 Slip ppm @15% O2 - 5 *

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm Slip @15% O2	SCR NOx ppm	Process Status
11:00	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:01	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:02	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:03	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:04	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:05	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:06	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:07	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:08	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:09	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:10	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:11	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:12	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:13	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:14	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:15	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:16	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:17	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:18	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:19	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:20	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:21	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:22	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:23	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:24	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:25	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:26	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:27	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down
11:28	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:29	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm Slip @15% O2	SCR NOx ppm	Process Status
11:30	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:31	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:32	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:33	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:34	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:35	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:36	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:37	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	DCal	Down	Down
11:38	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:39	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:40	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:41	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:42	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:43	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:44	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:45	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:46	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:47	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:48	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:49	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
11:50	20.95	0.00	Inval	Inval	Inval	0.00	Inval	Inval	Inval	Down	0.0	Hot S/U
11:51	20.77	0.00	Inval	Inval	Inval	0.23	Inval	Inval	Inval	Down	0.4	Hot S/U
11:52	18.21	3.33	7.30	0.02685	4.93	258.93	567.91	1.2707	233.35	Down	1.0	Hot S/U
11:53	18.20	4.87	10.64	0.03912	8.60	799.88	1747.89	3.9110	860.06	Down	1.0	Hot S/U
11:54	18.00	5.80	11.80	0.04338	11.41	909.07	1849.49	4.1383	1088.29	Down	1.1	Hot S/U
11:55	17.99	7.33	14.86	0.05463	16.72	939.70	1905.23	4.2630	1304.74	Down	1.4	Hot S/U
11:56	17.99	8.78	17.80	0.06544	24.92	960.68	1947.77	4.3582	1659.93	Down	1.6	Hot S/U
11:57	17.99	9.87	20.01	0.07356	31.85	998.72	2024.90	4.5308	1961.91	Down	1.8	Hot S/U
11:58	18.15	10.39	22.29	0.08194	39.01	1103.10	2366.65	5.2955	2521.12	Down	2.1	Hot S/U
11:59	18.13	11.66	24.84	0.09129	48.01	1181.42	2516.38	5.6305	2961.42	Down	2.5	Hot S/U
Average Total 3-Hr Rlng	18.6	6.2	0.0 *	DCal *	DCal *	715.2	1834.6 NSD *	4.1051 Down *	213.59 Down *	Down *	1.3	Hot S/U

* - *Excluding Startup and Shutdown*

Metcalf

San Jose, CA

Turbine-2 Hourly Emissions Report

July 22, 2014 - Hour 12

1-Hr Emission Limits

NOx ppm @15% O2 - 2.5 * NOx lb/hr - 19.2 *
NOx lb/mmBtu - 0.00904 *

3-Hr Rolling Emission Limits

CO ppm @15% O2 - 4 * CO lb/hr - 18.7 *
CO lb/mmBtu - 0.0088 * NH3 Slip ppm @15% O2 - 5 *

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm Slip @15% O2	SCR NOx ppm	Process Status
12:00	18.53	12.05	30.00	0.11027	60.25	1090.65	2715.12	6.0752	3319.31	Down	2.4	Hot S/U
12:01	18.62	12.74	32.97	0.12119	67.31	920.95	2383.16	5.3324	2961.83	Down	2.6	Hot S/U
12:02	18.58	14.33	36.44	0.13396	74.10	953.62	2425.15	5.4264	3001.73	Down	3.1	Hot S/U
12:03	18.59	15.31	39.10	0.14374	79.19	970.00	2477.49	5.5435	3053.92	Down	3.5	Hot S/U
12:04	18.59	16.02	40.92	0.15041	85.59	979.17	2500.91	5.5959	3184.30	Down	3.8	Hot S/U
12:05	18.58	16.35	41.58	0.15285	86.63	983.12	2500.18	5.5942	3170.63	Down	4.2	Hot S/U
12:06	18.52	17.00	42.14	0.15492	89.91	1034.92	2565.56	5.7405	3331.63	Down	4.6	Hot S/U
12:07	18.44	17.82	42.74	0.15711	92.96	1102.98	2645.36	5.9191	3502.41	Down	5.1	Hot S/U
12:08	18.37	18.66	43.52	0.15996	96.83	1180.75	2753.53	6.1611	3729.39	Down	5.6	Hot S/U
12:09	18.29	19.37	43.79	0.16096	98.89	1248.33	2821.90	6.3141	3879.28	Down	6.2	Hot S/U
12:10	18.22	20.15	44.36	0.16307	102.04	1316.02	2897.21	6.4826	4056.25	Down	6.7	Hot S/U
12:11	18.14	20.86	44.59	0.16392	104.43	1381.48	2953.16	6.6078	4209.53	Down	7.2	Hot S/U
12:12	18.06	21.50	44.67	0.16419	106.83	1445.60	3003.18	6.7197	4372.21	Down	7.7	Hot S/U
12:13	17.98	22.18	44.82	0.16474	109.43	1518.15	3067.49	6.8636	4559.18	Down	8.3	Hot S/U
12:14	17.89	22.48	44.06	0.16198	109.80	1593.92	3124.29	6.9907	4738.69	Down	8.9	Hot S/U
12:15	17.80	22.82	43.43	0.15965	110.03	1660.08	3159.51	7.0695	4872.27	Down	9.3	Hot S/U
12:16	17.71	23.13	42.78	0.15726	110.88	1710.28	3163.21	7.0778	4990.32	Down	9.8	Hot S/U
12:17	17.63	23.27	41.99	0.15434	110.57	1755.00	3166.51	7.0852	5075.82	Down	10.1	Hot S/U
12:18	17.55	23.40	41.21	0.15149	110.59	1780.80	3136.33	7.0177	5122.91	Down	10.1	Hot S/U
12:19	17.46	23.56	40.41	0.14854	110.46	1785.70	3062.68	6.8529	5095.87	Down	10.0	Hot S/U
12:20	17.37	23.67	39.56	0.14543	109.79	1777.23	2970.44	6.6465	5017.70	Down	9.8	Hot S/U
12:21	17.28	23.80	38.79	0.14259	109.26	1749.15	2850.83	6.3788	4887.94	Down	9.5	Hot S/U
12:22	17.20	23.73	37.84	0.13910	108.48	1715.75	2735.93	6.1217	4774.19	Down	9.1	Hot S/U
12:23	17.11	23.57	36.69	0.13488	106.72	1670.07	2599.85	5.8173	4602.71	Down	8.7	Hot S/U
12:24	17.02	23.26	35.37	0.13002	104.35	1614.47	2454.99	5.4931	4408.49	Down	8.3	Hot S/U
12:25	16.93	23.06	34.27	0.12598	102.53	1557.40	2314.52	5.1788	4214.93	Down	8.1	Hot S/U
12:26	16.84	23.39	33.99	0.12495	103.11	1501.35	2181.77	4.8818	4028.57	Down	7.9	Hot S/U
12:27	16.75	23.80	33.84	0.12438	103.49	1416.55	2013.89	4.5062	3749.26	Down	7.9	Hot S/U
12:28	16.66	24.03	33.44	0.12292	103.94	1301.07	1810.45	4.0510	3425.62	Down	8.0	Hot S/U
12:29	16.62	23.36	32.20	0.11837	101.97	1247.53	1719.73	3.8480	3315.02	Down	8.1	Hot S/U

Minute	O2%	NOx ppm	NOx ppm @15% O2	NOx lb/mmBtu	NOx lb/hr	CO ppm	CO ppm @15% O2	CO lb/mmBtu	CO lb/hr	NH3 ppm Slip @15% O2	SCR NOx ppm	Process Status
12:30	16.47	22.78	30.34	0.11152	96.83	1371.12	1826.10	4.0860	3547.85	Down	8.1	Hot S/U
12:31	16.44	22.18	29.34	0.10786	90.96	1147.82	1518.42	3.3975	2865.29	Down	8.1	Hot S/U
12:32	16.71	20.01	28.18	0.10358	82.42	1265.45	1781.90	3.9871	3172.74	Down	8.2	Shutdown
12:33	17.04	17.89	27.34	0.10052	74.29	1124.62	1718.98	3.8463	2842.68	Down	8.1	Shutdown
12:34	17.41	16.71	28.25	0.10384	71.33	1054.90	1783.36	3.9903	2741.04	Down	8.5	Shutdown
12:35	17.76	15.49	29.11	0.10699	67.19	967.02	1817.01	4.0656	2553.13	Down	8.5	Shutdown
12:36	18.11	13.65	28.87	0.10611	61.34	683.55	1445.50	3.2344	1869.85	Down	8.0	Shutdown
12:37	18.48	11.16	27.21	0.10002	52.61	409.95	999.46	2.2363	1176.20	Down	7.0	Shutdown
12:38	18.71	9.00	24.25	0.08913	47.49	221.68	597.22	1.3363	711.94	Down	6.6	Shutdown
12:39	18.78	8.96	24.94	0.09166	49.46	188.55	524.74	1.1741	633.51	Down	6.4	Shutdown
12:40	18.85	9.08	26.13	0.09606	52.92	173.93	500.58	1.1201	617.06	Down	6.4	Shutdown
12:41	18.91	8.94	26.51	0.09743	54.34	165.83	491.66	1.1001	613.53	Down	6.4	Shutdown
12:42	18.96	8.86	26.95	0.09905	52.99	162.30	493.59	1.1044	590.89	Down	6.6	Shutdown
12:43	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Shutdown
12:44	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:45	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:46	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:47	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:48	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:49	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:50	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:51	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:52	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:53	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:54	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:55	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:56	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:57	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:58	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
12:59	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down	Down
Average Total 3-Hr Rlng	17.8	18.7	0.0 *	Down *	Down *	1183.7	2252.8 NSD *	5.0408 Down *	2451.99 Down *	Down *	7.2	Hot S/U

*- *Excluding Startup and Shutdown*

Faxed 8/07/14 1509 PT

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

COMPLIANCE & ENFORCEMENT DIVISION

RCA No 06R50

Notification Form
Reportable Compliance Activity (RCA)

See back of form for instructions →

1. ☐ **FACILITY IS REQUESTING BREAKDOWN RELIEF (Regulation 1-431 and 1-432)**
***District Use Only* BREAKDOWN REFERENCE #:**

2. ☒ **MONITOR INDICATES EXCESS EMISSION or EXCURSION** (Regulation 1-522.7, 1-523.3, 1-542)
***District Use Only* EXCESS or EXCURSION REFERENCE #:**

3. ☐ **MONITOR IS INOPERATIVE (Regulation 1-522.4, 1-523.2, 1-530)**
***District Use Only* INOPERATIVE MONITOR REFERENCE #:**

4. ☐ **PRESSURE IS RELEASED FROM RELIEF DEVICE (PRD) (Regulation 8-28-401)**
***District Use Only* PRD REFERENCE #:**

SITE INFORMATION AND DESCRIPTION INFORMATION (REQUIRED)

Company	METCALF ENERGY CENTER	Site #	B2183
Address	1 BLANCHARD ROAD, COYOTE	Source #	S2
Reported by	ROSEMARY SILVA	Phone #	408-361-4954
Indicated Excess	2.6 NOx ppm and 0.0094 lb./mmBTU	Fax #	408-361-4949
Allowable Limit	2.5 NOx ppm and 0.00904 lb./mmBTU	Averaging Time	1-HR
Start Time/Date	8/7/2014 12:00pm	Clear Time	1:00pm
Monitor/device type(s)	☒ ►CEM ☐ ►GLM ☐ ►Parametric ☐ ►PRD ☐ ►Non-monitor		
Monitor description(s)			

Parameter(s) exceeded or not functioning due to inoperation

☒ ►NO_x ☐ ►SO_2 ☐ ►CO ☐ ►CO_2 ☐ ►H_2S ☐ ►TRS ☐ ►NH_3
☐ ►O_2 ☐ ►H_2O ☐ ►Opacity ☐ ►Lead ☐ ►Gauge Pressure ☐ ►Flow
☐ ►Hydrocarbon Breakthrough (VOC) ☐ ►Temperature ☐ ►Wind Speed
☐ ►Wind Direction ☐ ►Steam ☒ ►Other (describe) lb./mmBTU

Unit(s) of Measurement

☒ ►ppm ☐ ►ppb ☐ ►min/hr > 20% ☐ ►inches H_2O ☐ ►mmHg
☐ ►psig ☐ ►pH ☐ ►^{0}Fahrenheit ☒ ►Other (describe) lb./mmBTU

Event Description:
The DAHS indicated that, on 8/7/2014 from 1200-1300 CEMS time, the NOx ppm and NOx lb. /mmBTU one-hour emissions limits were exceeded. Investigation is underway.

District Use Only

Received by	Date	Time

METCALF ENERGY CENTER, LLC

1 Blanchard Rd.
Coyote, CA 95013

September 5, 2014

Mr. Wayne Kino (wkino@baaqmd.gov)
Director, Enforcement and Compliance Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

RE: **Metcalf Energy Center, LLC Permit No. B2183**
Major Facility Review Permit (Title V Permit)
30-Day Title V Non-Compliance Report – RCA No. 06R50

Dear Mr. Kino:

In accordance with the Major Facility Review Permit (Title V Permit) for the Metcalf Energy Center (the "Facility"), this letter is intended to satisfy the 30-day follow-up reporting requirement as required by Section I.F of the Title V Permit. The Title V Permit initial 10-day notification for this event was previously submitted to the District on August 8, 2014.

On August 7, 2014, Combustion Turbine #2 experienced an indicated excess of the NO_x 1-hour rolling average emission limit of 2.5 ppm and the NOx lb./mmBTU 1-hour rolling average emission limit of 0.00904, as stated in Condition 20a of the Title V Permit. At 1119 hours (CEMS time), Unit 2 began a daily calibration. However, during the calibration the NOx inlet analyzer pump failed and caused the calibration to fail. The CEMS was placed into maintenance to replace the failed pump at 1137 hours and remained in maintenance until 1221 hours, at which time a manual calibration was performed. The CEMS returned to normal operations at 1245 hours and was well in compliance with permit limits until 1247 hours. As the emissions control system attempted to balance itself after coming out of maintenance, the emissions increased above permit limits from 1247 to 1254 hours before finally stabilizing in compliance at 1255 hours. As presented in Table 1, the CEMS was in operation for a total of 15 minutes during hour 1200, and the reported NOx emissions were 2.6 ppm and 0.0094 lb./MMBtu.

During normal CEMS operation periods, the NOx emissions are managed by adjusting the ammonia flow based on the NOx emission concentration exiting the stack. However, during CEMS maintenance periods, when the NOx emissions are not known, the ammonia flow is controlled by a predictive methodology that is based on the combustion turbine fuel valve position. This predictive methodology helps ensure that the NOx emissions do not spike if the unit load changes substantially during the CEMS maintenance period.

During the event on August 7, 2014, the emissions control system took several minutes to stabilize the NOx emissions after coming out of CEMS maintenance. During the last few minutes of the system's calibration, the unit load, and correspondingly the heat input, was decreasing. As designed, the predictive control system began to decrease ammonia injection. Then, immediately after the CEMS completed calibration, unit load and heat input began to ramp up. Because the ammonia valve had already received a signal to decrease flow, the system took several minutes to adjust and to begin increasing ammonia flow in accordance with the load change. This period resulted in eight minutes of higher than 2.5 ppm NOx emissions.

The predictive methodology worked as designed during the event, however, because the hour only consisted of 15 data points, the few minutes of high emissions data resulted in an indicated excess emissions event that was not accurately representative of an average for the entire hour. Had the hourly average emissions been calculated for the entire hour (as opposed to only 15 minutes of data), based on data substitution for a similar operating hour, the average emissions for hour 1200 would have been 1.9 ppm and 0.00697 lb/MMBtu – well within the permit limits as presented in Table 2. Based on inlet NOx, heat input and ammonia flow, the NOx emissions during hour 1000 on April 14, 2014 were used to substitute stack NOx data for the periods of maintenance and calibration observed on August 7, 2014 during hour 1200. As presented in the attached Table 2, the average NOx emissions during this similar operating period were 1.7 ppm and 0.00697 lb./MMBtu. As shown in the attached Table 3, when these emissions are substituted for the maintenance and calibration periods during hour 1200 on August 7, 2014, the average NOx emissions are actually 1.9 ppm and 0.00616 lb./mmBTU, which are below the permit limits.

In sum, the fifteen data points collected during the event do not provide an accurate assessment of the hourly emissions during hour 1200 on August 7, 2014. This is further supported by the Federal CEMS regulations contained in 40 CFR Parts 60 and 75, which require the collection of a minimum of 2 data points separated by at least 15 minutes in time to validate a clock hour of data. For example, had the CEMS been in operation for only one more minute during the subject hour 1200 and included the value of 0.71 ppm and 0.00261 lb./mmBTU (note these values were taken from the first data point in the following 1300 hour), the hourly average as calculated by the

DAHS would have been 2.4 ppm and 0.00897 lb./mmBTU, in compliance with the permit limits. By utilizing data substitution during the hour 1200 maintenance period, the facility has demonstrated that the actual NOx emissions during hour 1200 were well below the 2.5-ppm and 0.0094 lb./mmBTU permit limit, and that no actual excess emissions occurred.

To help ensure that indicated excess emissions do not occur during similar operating scenarios in the future, the facility is in the process of further tuning the predictive NOx control methodology, so that emissions remain more stable when the system is transitioning between the predictive and normal NOx control methodologies.

If you have any questions or require additional information, please contact Rosemary Silva, EHS Specialist, at 408-361-4954.

Based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate and complete.

Sincerely,

Terry Mahoney
Authorized Representative and General Manager
Metcalf Energy Center, LLC

Attachments

CC: Bruce Carlson, Calpine
David Williams, Calpine
Barbara McBride, Calpine
Katherine Piper, Calpine

Table 1: MEASURED DATA

Timestamp	(Turbine - 2) Process Code 1-Min	(Turbine - 2) NOx ppm @15% O2 1-Min	(Turbine - 2) Normal Ops NOx lb/mmBtu 1-Min	(Turbine - 2) SCR NOx ppm 1-Min	(Turbine - 2) Total Heat Input mmBtu/hr 1-Min	(Turbine - 2) Megawatts 1-Min	(Turbine - 2) NH3 Flow 1-Min lb/hr
8/7/2014 12:00	8	MAINT	MAINT	MAINT	1629.3	147	220.46
8/7/2014 12:01	8	MAINT	MAINT	MAINT	1622.4	146.7	216.59
8/7/2014 12:02	8	MAINT	MAINT	MAINT	1622.4	146.7	217.25
8/7/2014 12:03	8	MAINT	MAINT	MAINT	1624.7	146.5	216.36
8/7/2014 12:04	8	MAINT	MAINT	MAINT	1624.7	146.5	216.55
8/7/2014 12:05	8	MAINT	MAINT	MAINT	1627	146.7	216.22
8/7/2014 12:06	8	MAINT	MAINT	MAINT	1624.7	146.7	216.07
8/7/2014 12:07	8	MAINT	MAINT	MAINT	1640.8	148.8	216.19
8/7/2014 12:08	8	MAINT	MAINT	MAINT	1686.6	153.5	223.84
8/7/2014 12:09	8	MAINT	MAINT	MAINT	1730.2	158.3	233.92
8/7/2014 12:10	8	MAINT	MAINT	MAINT	1750.8	160.6	240.91
8/7/2014 12:11	8	MAINT	MAINT	MAINT	1759.9	161.4	246.1
8/7/2014 12:12	8	MAINT	MAINT	MAINT	1759.9	161.5	246.22
8/7/2014 12:13	8	MAINT	MAINT	MAINT	1759.9	161.2	246.81
8/7/2014 12:14	8	MAINT	MAINT	MAINT	1755.4	160.8	247.71
8/7/2014 12:15	8	MAINT	MAINT	MAINT	1750.8	160.1	245.77
8/7/2014 12:16	8	MAINT	MAINT	MAINT	1716.4	156.6	244.26
8/7/2014 12:17	8	MAINT	MAINT	MAINT	1670.6	151.2	239.72
8/7/2014 12:18	8	MAINT	MAINT	MAINT	1636.2	148.8	229.77
8/7/2014 12:19	8	MAINT	MAINT	MAINT	1640.8	148.7	222.92
8/7/2014 12:20	8	MAINT	MAINT	MAINT	1638.5	148.7	220.69
8/7/2014 12:21	8	MAINT	MAINT	MAINT	1640.8	148.8	218.66
8/7/2014 12:22	8	CAL	CAL	CAL	1640.8	149	218.17
8/7/2014 12:23	8	CAL	CAL	CAL	1640.8	149.1	218.27
8/7/2014 12:24	8	CAL	CAL	CAL	1640.8	149.3	217.89
8/7/2014 12:25	8	CAL	CAL	CAL	1645.4	149.6	217.32
8/7/2014 12:26	8	CAL	CAL	CAL	1647.6	149.4	217.61
8/7/2014 12:27	8	CAL	CAL	CAL	1645.4	149.2	218.57
8/7/2014 12:28	8	CAL	CAL	CAL	1656.8	151.1	221.62
8/7/2014 12:29	8	CAL	CAL	CAL	1702.6	155.5	229.92
8/7/2014 12:30	8	CAL	CAL	CAL	1737	159.2	237.61
8/7/2014 12:31	8	CAL	CAL	CAL	1741.6	159.7	241.79
8/7/2014 12:32	8	CAL	CAL	CAL	1746.2	159.7	244.33
8/7/2014 12:33	8	CAL	CAL	CAL	1748.5	159.8	245.2
8/7/2014 12:34	8	CAL	CAL	CAL	1727.9	157.6	243.99
8/7/2014 12:35	8	CAL	CAL	20.9	1700.4	155.2	240.69
8/7/2014 12:36	8	CAL	CAL	20.9	1695.8	154.5	238.67
8/7/2014 12:37	8	CAL	CAL	21.3	1691.2	154.6	237.55
8/7/2014 12:38	8	CAL	CAL	20.3	1688.9	154.1	238.71
8/7/2014 12:39	8	CAL	CAL	20.8	1688.9	153.7	237.89
8/7/2014 12:40	8	CAL	CAL	21.2	1686.6	154.2	237.31
8/7/2014 12:41	8	CAL	CAL	21.2	1686.6	153.8	237.84
8/7/2014 12:42	8	CAL	CAL	20.9	1688.9	153.8	236.62
8/7/2014 12:43	8	CAL	CAL	21	1672.9	152	236.56
8/7/2014 12:44	8	CAL	CAL	20.9	1652.2	150.1	230.98
8/7/2014 12:45	8	1.60	0.0059	21.1	1684.3	153.9	201.46
8/7/2014 12:46	8	1.86	0.0068	21.4	1718.7	157.6	160.87
8/7/2014 12:47	8	2.64	0.0097	22	1730.2	158	151.9
8/7/2014 12:48	8	3.36	0.0124	22.3	1730.2	158.1	152.05
8/7/2014 12:49	8	3.64	0.0134	21.5	1725.6	158.2	157.25
8/7/2014 12:50	8	3.65	0.0134	21.6	1723.3	157.6	165.19
8/7/2014 12:51	8	3.70	0.0136	21.7	1739.3	159.2	175.64
8/7/2014 12:52	8	3.65	0.0134	21.9	1759.9	161.2	209.32
8/7/2014 12:53	8	3.46	0.0127	22.2	1764.5	161.5	250.49
8/7/2014 12:54	8	2.84	0.0104	22.5	1766.8	161.5	285.26
8/7/2014 12:55	8	2.19	0.0080	22.9	1764.5	161.6	291.41
8/7/2014 12:56	8	1.86	0.0069	22.3	1764.5	161.9	304.48
8/7/2014 12:57	8	1.49	0.0055	22.4	1764.5	161.9	316.34
8/7/2014 12:58	8	1.32	0.0048	22.8	1741.6	159.1	318.44
8/7/2014 12:59	8	1.10	0.0040	20.8	1663.7	150.6	330.91
		2.6	0.00939	22	1695	155	231

Table 2: CeDAR 1-Minute Data

Timestamp	(Turbine - 2) Process Code 1-Min	(Turbine - 2) NOx ppm @15% O2 1-Min	(Turbine - 2) Normal Ops NOx lb/mmBtu 1-Min	(Turbine - 2) SCR NOx ppm 1-Min	(Turbine - 2) Total Heat Input mmBtu/hr 1-Min	(Turbine - 2) Megawatts 1-Min	(Turbine - 2) NH3 Flow 1-Min lb/hr
4/14/2014 10:00	8	1.89	0.0069	24.5	1613	146.8	197.78
4/14/2014 10:01	8	2.06	0.0076	25.2	1660.8	151.6	205.15
4/14/2014 10:02	8	2.17	0.008	25.4	1704.1	157	214.94
4/14/2014 10:03	8	1.79	0.0066	23.5	1708.7	157.6	218.21
4/14/2014 10:04	8	1.34	0.0049	22	1692.7	155.6	210.47
4/14/2014 10:05	8	1.42	0.0052	23.7	1676.8	153.8	205.2
4/14/2014 10:06	8	1.76	0.0065	25.6	1663.1	151.7	207.07
4/14/2014 10:07	8	1.91	0.007	26	1640.3	149.4	213.27
4/14/2014 10:08	8	1.89	0.0069	26	1617.5	146.3	215.31
4/14/2014 10:09	8	1.82	0.0067	25.8	1585.6	143	217.44
4/14/2014 10:10	8	1.69	0.0062	25.8	1556	139.5	216.77
4/14/2014 10:11	8	1.63	0.006	25.8	1531	136.1	214.64
4/14/2014 10:12	8	1.59	0.0058	25.8	1503.6	133.4	212.56
4/14/2014 10:13	8	1.51	0.0055	25.4	1528.7	136.5	209.42
4/14/2014 10:14	8	1.52	0.0056	25.1	1565.1	140.9	209.08
4/14/2014 10:15	8	1.56	0.0057	25	1603.9	145.5	209.1
4/14/2014 10:16	8	1.64	0.006	25.1	1647.2	150.2	209.7
4/14/2014 10:17	8	1.79	0.0066	25.7	1688.2	154.5	213.77
4/14/2014 10:18	8	1.71	0.0063	24.6	1690.4	155.2	215.79
4/14/2014 10:19	8	1.65	0.006	24.4	1688.2	154.8	213.3
4/14/2014 10:20	8	1.61	0.0059	24.4	1681.3	154.1	209.01
4/14/2014 10:21	8	1.73	0.0064	25.3	1676.8	153.1	208.46
4/14/2014 10:22	8	1.81	0.0066	25.4	1667.7	152.2	210.72
4/14/2014 10:23	8	1.82	0.0067	25.8	1667.7	152.3	213.39
4/14/2014 10:24	8	1.86	0.0068	25.8	1672.2	152.5	216.11
4/14/2014 10:25	8	1.8	0.0066	25.8	1676.8	153	218.19
4/14/2014 10:26	8	1.81	0.0067	25.3	1681.3	153.4	218.93
4/14/2014 10:27	8	1.73	0.0064	25.8	1685.9	154.2	219.38
4/14/2014 10:28	8	1.75	0.0064	25.7	1683.6	154.1	219.4
4/14/2014 10:29	8	1.71	0.0063	25.6	1683.6	153.9	218.73
4/14/2014 10:30	8	1.68	0.0062	25.4	1683.6	153.8	219.08
4/14/2014 10:31	8	1.68	0.0062	25.6	1683.6	154	219.73
4/14/2014 10:32	8	1.76	0.0065	26	1683.6	153.9	219.95
4/14/2014 10:33	8	1.7	0.0062	25.5	1683.6	153.6	221.52
4/14/2014 10:34	8	1.67	0.0062	25.4	1681.3	153.3	221.17
4/14/2014 10:35	8	1.59	0.0059	25	1679.1	153.5	218.39
4/14/2014 10:36	8	1.6	0.0059	25.5	1679.1	153.5	217.4
4/14/2014 10:37	8	1.72	0.0063	25.7	1679.1	153.4	216.84
4/14/2014 10:38	8	1.72	0.0063	25.7	1679.1	153.4	217.62
4/14/2014 10:39	8	1.74	0.0064	25.2	1679.1	153.4	218.94
4/14/2014 10:40	8	1.72	0.0063	25.4	1681.3	153.3	217.38
4/14/2014 10:41	8	1.8	0.0066	25.6	1681.3	153.5	217.91
4/14/2014 10:42	8	1.73	0.0064	24.9	1683.6	153.9	218.12
4/14/2014 10:43	8	1.66	0.0061	24.9	1708.7	157.3	217.88
4/14/2014 10:44	8	1.53	0.0056	23.4	1742.8	161.3	215.54
4/14/2014 10:45	8	1.36	0.005	22	1779.3	165.2	207.15
4/14/2014 10:46	8	1.32	0.0049	21.6	1829.4	170.4	200.34
4/14/2014 10:47	8	1.57	0.0058	22.9	1856.8	173.2	199.78
4/14/2014 10:48	8	2.25	0.0083	25.8	1865.9	173.9	209.19
4/14/2014 10:49	8	2.66	0.0098	26.9	1861.3	173.4	222.69
4/14/2014 10:50	8	2.6	0.0095	26.5	1852.2	172.4	236.47
4/14/2014 10:51	8	2.16	0.0079	25.3	1843.1	171.5	239.69
4/14/2014 10:52	8	1.81	0.0067	24.8	1849.9	172.4	236.48
4/14/2014 10:53	8	1.65	0.0061	24.1	1829.4	170.5	236.03
4/14/2014 10:54	8	1.21	0.0045	20.1	1811.2	168.8	225.3
4/14/2014 10:55	8	0.8	0.0029	19.1	1802.1	167.7	203.93
4/14/2014 10:56	8	0.8	0.003	18.7	1790.7	166.8	189.56
4/14/2014 10:57	8	0.86	0.0032	18.5	1783.8	165.8	178.58
4/14/2014 10:58	8	1.02	0.0037	18.9	1751.9	162.7	169.08
4/14/2014 10:59	8	1.23	0.0045	19.3	1706.4	157	162.04
		1.7	**0.00616**	**24.5**	**1697.7**	**155.7**	**212.9**

Table3: SUBSTITUTED DATA

Timestamp	(Turbine - 2) Process Code 1-Min	(Turbine - 2) NOx ppm @15% O2 1-Min	(Turbine - 2) Normal Ops NOx lb/mmBtu 1-Min	(Turbine - 2) SCR NOx ppm 1-Min	(Turbine - 2) Total Heat Input mmBtu/hr 1-Min	(Turbine - 2) Megawatts 1-Min	(Turbine - 2) NH3 Flow 1-Min lb/hr
8/7/2014 12:00	8	1.7	0.00616	MAINT	1629.3	147	220.46
8/7/2014 12:01	8	1.7	0.00616	MAINT	1622.4	146.7	216.59
8/7/2014 12:02	8	1.7	0.00616	MAINT	1622.4	146.7	217.25
8/7/2014 12:03	8	1.7	0.00616	MAINT	1624.7	146.5	216.36
8/7/2014 12:04	8	1.7	0.00616	MAINT	1624.7	146.5	216.55
8/7/2014 12:05	8	1.7	0.00616	MAINT	1627	146.7	216.22
8/7/2014 12:06	8	1.7	0.00616	MAINT	1624.7	146.7	216.07
8/7/2014 12:07	8	1.7	0.00616	MAINT	1640.8	148.8	216.19
8/7/2014 12:08	8	1.7	0.00616	MAINT	1686.6	153.5	223.84
8/7/2014 12:09	8	1.7	0.00616	MAINT	1730.2	158.3	233.92
8/7/2014 12:10	8	1.7	0.00616	MAINT	1750.8	160.6	240.91
8/7/2014 12:11	8	1.7	0.00616	MAINT	1759.9	161.4	246.1
8/7/2014 12:12	8	1.7	0.00616	MAINT	1759.9	161.5	246.22
8/7/2014 12:13	8	1.7	0.00616	MAINT	1759.9	161.2	246.81
8/7/2014 12:14	8	1.7	0.00616	MAINT	1755.4	160.8	247.71
8/7/2014 12:15	8	1.7	0.00616	MAINT	1750.8	160.1	245.77
8/7/2014 12:16	8	1.7	0.00616	MAINT	1716.4	156.6	244.26
8/7/2014 12:17	8	1.7	0.00616	MAINT	1670.6	151.2	239.72
8/7/2014 12:18	8	1.7	0.00616	MAINT	1636.2	148.8	229.77
8/7/2014 12:19	8	1.7	0.00616	MAINT	1640.8	148.7	222.92
8/7/2014 12:20	8	1.7	0.00616	MAINT	1638.5	148.7	220.69
8/7/2014 12:21	8	1.7	0.00616	MAINT	1640.8	148.8	218.66
8/7/2014 12:22	8	1.7	0.00616	CAL	1640.8	149	218.17
8/7/2014 12:23	8	1.7	0.00616	CAL	1640.8	149.1	218.27
8/7/2014 12:24	8	1.7	0.00616	CAL	1640.8	149.3	217.89
8/7/2014 12:25	8	1.7	0.00616	CAL	1645.4	149.6	217.32
8/7/2014 12:26	8	1.7	0.00616	CAL	1647.6	149.4	217.61
8/7/2014 12:27	8	1.7	0.00616	CAL	1645.4	149.2	218.57
8/7/2014 12:28	8	1.7	0.00616	CAL	1656.8	151.1	221.62
8/7/2014 12:29	8	1.7	0.00616	CAL	1702.6	155.5	229.92
8/7/2014 12:30	8	1.7	0.00616	CAL	1737	159.2	237.61
8/7/2014 12:31	8	1.7	0.00616	CAL	1741.6	159.7	241.79
8/7/2014 12:32	8	1.7	0.00616	CAL	1746.2	159.7	244.33
8/7/2014 12:33	8	1.7	0.00616	CAL	1748.5	159.8	245.2
8/7/2014 12:34	8	1.7	0.00616	CAL	1727.9	157.6	243.99
8/7/2014 12:35	8	1.7	0.00616	20.9	1700.4	155.2	240.69
8/7/2014 12:36	8	1.7	0.00616	20.9	1695.8	154.5	238.67
8/7/2014 12:37	8	1.7	0.00616	21.3	1691.2	154.6	237.55
8/7/2014 12:38	8	1.7	0.00616	20.3	1688.9	154.1	238.71
8/7/2014 12:39	8	1.7	0.00616	20.8	1688.9	153.7	237.89
8/7/2014 12:40	8	1.7	0.00616	21.2	1686.6	154.2	237.31
8/7/2014 12:41	8	1.7	0.00616	21.2	1686.6	153.8	237.84
8/7/2014 12:42	8	1.7	0.00616	20.9	1688.9	153.8	236.62
8/7/2014 12:43	8	1.7	0.00616	21	1672.9	152	236.56
8/7/2014 12:44	8	1.7	0.00616	20.9	1652.2	150.1	230.98
8/7/2014 12:45	8	1.6	0.0059	21.1	1684.3	153.9	201.46
8/7/2014 12:46	8	1.86	0.0068	21.4	1718.7	157.6	160.87
8/7/2014 12:47	8	2.64	0.0097	22	1730.2	158	151.9
8/7/2014 12:48	8	3.36	0.0124	22.3	1730.2	158.1	152.05
8/7/2014 12:49	8	3.64	0.0134	21.5	1725.6	158.2	157.25
8/7/2014 12:50	8	3.65	0.0134	21.6	1723.3	157.6	165.19
8/7/2014 12:51	8	3.7	0.0136	21.7	1739.3	159.2	175.64
8/7/2014 12:52	8	3.65	0.0134	21.9	1759.9	161.2	209.32
8/7/2014 12:53	8	3.46	0.0127	22.2	1764.5	161.5	250.49
8/7/2014 12:54	8	2.84	0.0104	22.5	1766.8	161.5	285.26
8/7/2014 12:55	8	2.19	0.008	22.9	1764.5	161.6	291.41
8/7/2014 12:56	8	1.86	0.0069	22.3	1764.5	161.9	304.48
8/7/2014 12:57	8	1.49	0.0055	22.4	1764.5	161.9	316.34
8/7/2014 12:58	8	1.32	0.0048	22.8	1741.6	159.1	318.44
8/7/2014 12:59	8	1.1	0.004	20.8	1663.7	150.6	330.91
	119	1.7	0.00697	21.6	16955	154.5	2810

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

COMPLIANCE & ENFORCEMENT DIVISION

BD# 067000 EE# 067001

Notification Form
Reportable Compliance Activity (RCA)

See back of form for instructions →

1. [X] **FACILITY IS REQUESTING BREAKDOWN RELIEF (Regulation 1-431 and 1-432)**
***District Use Only* BREAKDOWN REFERENCE #:**

2. [X] **MONITOR INDICATES EXCESS EMISSION or EXCURSION** (Regulation 1-522.7, 1-523.3, 1-542)
***District Use Only* EXCESS or EXCURSION REFERENCE #:**

3. [ ] **MONITOR IS INOPERATIVE (Regulation 1-522.4, 1-523.2, 1-530)**
***District Use Only* INOPERATIVE MONITOR REFERENCE #:**

4. [ ] **PRESSURE IS RELEASED FROM RELIEF DEVICE (PRD) (Regulation 8-28-401)**
***District Use Only* PRD REFERENCE #:**

SITE INFORMATION AND DESCRIPTION INFORMATION (REQUIRED)

Company	METCALF ENERGY CENTER	Site #	B2183
Address	1 BLANCHARD ROAD, COYOTE	Source #	S1
Reported by	ROSEMARY SILVA	Phone #	408-361-4954
Indicated Excess	14.23 NH3 Slip ppm @ 15% O2	Fax #	408-361-4949
Allowable Limit	5 NH3 Slip ppm @ 15% O2	Averaging Time	3-HR
Start Time/Date	12/30/2014 23:00	Clear Time	23:59

Monitor/device type(s): [ ] ►CEM [ ] ►GLM [X] ►Parametric [ ] ►PRD [ ] ►Non-monitor

Monitor description(s):

Parameter(s) exceeded or not functioning due to inoperation

[ ] ►NO_x [ ] ►SO_2 [ ] ►CO [ ] ►CO_2 [ ] ►H_2S [ ] ►TRS [X] ►NH_3
[ ] ►O_2 [ ] ►H_2O [ ] ►Opacity [ ] ►Lead [ ] ►Gauge Pressure [ ] ►Flow
[ ] ►Hydrocarbon Breakthrough (VOC) [ ] ►Temperature [ ] ►Wind Speed
[ ] ►Wind Direction [ ] ►Steam [ ] ►Other (describe)

Unit(s) of Measurement

[X] ►ppm [ ] ►ppb [ ] ►min/hr > 20% [ ] ►inches H_2O [ ] ►mmHg
[ ] ►psig [ ] ►pH [ ] ►^{0}Fahrenheit [ ] ►Other (describe)

Event Description:
The DAHS indicated that, on 12/30/2014 from 2300-2359, the NH3 Slip ppm @ 15% O2 three-hour emission limit was exceeded due to a breakdown of the SCR NOx pump. Investigation is underway.

District Use Only

Received by _____ Date _____ Time _____

METCALF ENERGY CENTER, LLC

1 Blanchard Rd.
Coyote, CA 95013

January 28, 2015

MAIL STOP: RCA 30-DAY REPORT
Compliance and Enforcement Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Mr. Wayne Kino (wkino@baaqmd.gov)
Director, Enforcement and Compliance Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

RE: Metcalf Energy Center, LLC Permit No. B2183
Major Facility Review Permit (Title V Permit)
30-Day Title V Non-Compliance Report and Breakdown Report –
RCA Nos. 06T00 and 06T01

To Whom It May Concern:

In accordance with the Major Facility Review Permit (Title V Permit) for the Metcalf Energy Center, LLC (the "Facility"), this letter is satisfies the 30-day follow-up reporting requirements required by Section I.F of the Title V Permit as well as Regulation 1-432 for Breakdown Requests. The breakdown report and the Title V Permit 10-day deviation notification were submitted to the District on December 31, 2014.

On December 30, 2014 during the 2300 hour, Combustion Turbine #1 experienced an indicated excess of the NH3 Slip 3-hour rolling average emission limit of 5 ppm, as stated in Condition 20e of the Title V Permit. The ammonia slip data recorded during this period was not representative of actual emissions, and the actual 3-hour rolling average ammonia slip emissions were within the permit limit.

At 22:48 the SCR NOx ppm values dropped to zero. The SCR NOx concentration is used to calculate NH3 Slip value. Therefore, when the SCR NOx emissions, which typically range from 26 ppm to 33 ppm during normal operations, were recorded as zero, the calculated ammonia slip concentrations dramatically increased. The initial reported SCR NOx and ammonia slip emissions are presented in Table 1.

Troubleshooting on the SCR NOx analyzer began immediately after the operator received a high ammonia slip alarm at 22:48 and determined that the analyzer's internal sample pump had failed. The CEMS was placed into maintenance at 23:04 and a technician was called to the site. Additional troubleshooting efforts identified the cause of the sample pump failure as the failure of the analyzer internal cooling fan. The internal cooling fan and sample pump were replaced, and the CEMS was placed back into service at 01:20.

An estimate of the actual ammonia slip emissions during this event was calculated using SCR NOx data from the most recent period of unit operations at similar process conditions. This data is represented in Table 2 and indicates that actual ammonia slip emissions never exceeded the permit limit.

In order to help prevent this event in the future, the Facility has implemented a new periodic preventative maintenance work order, to replace all the CEMS analyzers internal cooling fans.

If you have any questions or require additional information, please contact Rosemary Silva, EHS Specialist, at 408-361-4954.

Based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate and complete.

Sincerely,

Terry Mahoney
General Manager
Metcalf Energy Center, LLC

Cc: Katherine Piper — Calpine Corp.
Region IX — EPA
Eric Veerkamp — CEC, AQ-34

Table 1: REPORTED DATA

Timestamp	(Turbine - 1) NOx ppm @15% O2 1-Min	(Turbine - 1) SCR NOx ppm 1-Min	(Turbine - 1) Total Heat Input mmBtu/hr 1-Min	(Turbine - 1) NH3 ppm @15% O2 1-Min	(Turbine - 1) Megawatts 1-Min	(Turbine - 1) NH3 Flow 1-Min lb/hr
12/30/2014 22:00	2.14	27.2	1841.6	3.35	175	227.63
12/30/2014 22:01	2.12	27.3	1843.9	3.24	175	227.44
12/30/2014 22:02	2.16	27.5	1843.9	3.18	175	227.51
12/30/2014 22:03	2.2	27.4	1846.2	3.26	175	227.61
12/30/2014 22:04	2.18	27.6	1846.2	3.33	174.8	229.75
12/30/2014 22:05	2.24	27.8	1846.2	3.3	175	230.02
12/30/2014 22:06	2.25	28.1	1843.9	3.14	175	230.09
12/30/2014 22:07	2.34	28.4	1846.2	3.24	174.8	232.89
12/30/2014 22:08	2.23	28	1843.9	3.54	174.9	233.89
12/30/2014 22:09	2.17	27.7	1843.9	3.69	174.9	233.94
12/30/2014 22:10	2.04	27.3	1846.2	3.93	175.3	233.99
12/30/2014 22:11	2.02	27.1	1870.6	3.79	175	234.05
12/30/2014 22:12	1.85	26.7	1869.8	3.9	175.1	232.2
12/30/2014 22:13	1.86	26.8	1867.8	3.6	175	229.76
12/30/2014 22:14	1.94	27.2	1870	3.24	175.1	228.44
12/30/2014 22:15	2.09	27.8	1865.7	2.81	175.1	226.3
12/30/2014 22:16	2.19	27.9	1865.6	2.92	175	227.65
12/30/2014 22:17	2.25	28.2	1868	2.86	174.8	228.32
12/30/2014 22:18	2.31	28.4	1867.9	2.86	174.8	229.08
12/30/2014 22:19	2.19	27.6	1863.3	3.57	174.6	231.03
12/30/2014 22:20	2.07	27.1	1867.8	3.72	174.6	231.21
12/30/2014 22:21	2.11	28	1870.2	3.1	174.8	231.17
12/30/2014 22:22	2.25	28.7	1867.9	2.76	174.8	231.12
12/30/2014 22:23	2.22	28	1863.3	3.31	174.5	232.19
12/30/2014 22:24	2.11	27.6	1863.3	3.66	174.4	234.08
12/30/2014 22:25	2.16	28.3	1867.8	3.04	174.7	232.27
12/30/2014 22:26	2.22	28.1	1843.9	3.77	174.9	234.29
12/30/2014 22:27	2.23	27.7	1841.6	3.89	174.8	234.67
12/30/2014 22:28	2.12	27.4	1839.4	4.01	174.5	234.74
12/30/2014 22:29	2.17	27.9	1839.4	3.75	174.5	235.62
12/30/2014 22:30	2.07	27.4	1841.6	4.1	174.7	236.93
12/30/2014 22:31	2.04	27.9	1843.9	3.6	174.8	235.63
12/30/2014 22:32	2.1	27.9	1839.4	3.6	174.1	234.69
12/30/2014 22:33	2.13	27.7	1832.5	3.97	173.7	236.04
12/30/2014 22:34	2.17	28.4	1837.1	3.54	174	236.25
12/30/2014 22:35	2.22	28.5	1834.8	3.54	174	236.34
12/30/2014 22:36	2.19	28.3	1837.1	3.74	174	237.35
12/30/2014 22:37	2.15	28.1	1834.8	3.92	174.3	238.33
12/30/2014 22:38	2.16	28.4	1837.1	3.69	174.4	238.22
12/30/2014 22:39	2.2	28.6	1834.8	3.56	173.8	238.31
12/30/2014 22:40	2.21	28.5	1834.8	3.75	173.9	238.93
12/30/2014 22:41	2.13	28.1	1834.8	4.17	174	240.25
12/30/2014 22:42	2.06	27.9	1837.1	4.21	174	240.44
12/30/2014 22:43	2	27.9	1834.8	4.17	174.2	240.2
12/30/2014 22:44	2.01	27.8	1834.8	4.02	174	238.11
12/30/2014 22:45	1.97	27.6	1830.2	4.1	173.6	237.95
12/30/2014 22:46	2	27.7	1832.5	3.88	174.1	236.51
12/30/2014 22:47	2.11	25.7	1832.5	5.4	173.9	235.36
12/30/2014 22:48	2.16	1.8	1837.1	23.19	174.6	235.18
12/30/2014 22:49	2.22	0	1841.6	23.22	174.8	221.82
12/30/2014 22:50	2.32	0	1843.9	21.6	175.1	204.37
12/30/2014 22:51	2.71	0	1843.9	22.35	175.2	208.48
12/30/2014 22:52	2.74	0	1846.2	25.81	175	244.5
12/30/2014 22:53	2.18	0	1846.2	25.53	175	246.61

Table 1: REPORTED DATA

Timestamp	(Turbine - 1) NOx ppm @15% O2 1-Min	(Turbine - 1) SCR NOx ppm 1-Min	(Turbine - 1) Total Heat Input mmBtu/hr 1-Min	(Turbine - 1) NH3 ppm @15% O2 1-Min	(Turbine - 1) Megawatts 1-Min	(Turbine - 1) NH3 Flow 1-Min lb/hr
12/30/2014 22:54	1.92	0	1846.2	25.27	175	246.58
12/30/2014 22:55	1.83	0	1843.9	24.64	174.9	240.32
12/30/2014 22:56	1.81	0	1843.9	16.54	174.9	155.93
12/30/2014 22:57	2.88	0	1843.9	14.37	174.8	123.99
12/30/2014 22:58	4.4	0	1843.9	25.94	175	230.79
12/30/2014 22:59	3.23	0	1832.5	45.69	173.3	444.33
12/30/2014 23:00	0.9	0	1789.1	45.12	168.6	448.1
12/30/2014 23:01	0.42	0	1754.8	45.28	165.3	445.27
12/30/2014 23:02	0.35	0	1743.4	29.6	163.7	288.5
12/30/2014 23:03	0.51	0	1706.8	5.84	159.1	52.05
12/30/2014 23:04	MAINT	MAINT	1674.8	MAINT	155	66.56
12/30/2014 23:05	MAINT	MAINT	1670.3	MAINT	154.7	378.21
12/30/2014 23:06	MAINT	MAINT	1670.3	MAINT	154.7	474.45
12/30/2014 23:07	MAINT	MAINT	1674.8	MAINT	154.8	290.41
12/30/2014 23:08	MAINT	MAINT	1674.8	MAINT	154.9	245.72
12/30/2014 23:09	MAINT	MAINT	1674.8	MAINT	155	225.65
12/30/2014 23:10	MAINT	MAINT	1672.5	MAINT	155.1	223.56
12/30/2014 23:11	MAINT	MAINT	1674.8	MAINT	155.1	224.9
12/30/2014 23:12	MAINT	MAINT	1674.8	MAINT	155	234.55
12/30/2014 23:13	MAINT	MAINT	1672.5	MAINT	154.8	234.36
12/30/2014 23:14	MAINT	MAINT	1674.8	MAINT	154.7	235.49
12/30/2014 23:15	MAINT	MAINT	1684	MAINT	155.9	233.93
12/30/2014 23:16	MAINT	MAINT	1716	MAINT	160.5	241.89
12/30/2014 23:17	MAINT	MAINT	1752.5	MAINT	164.3	245.95
12/30/2014 23:18	MAINT	MAINT	1757.1	MAINT	165	255.85
12/30/2014 23:19	MAINT	MAINT	1757.1	MAINT	164.8	256.37
12/30/2014 23:20	MAINT	MAINT	1757.1	MAINT	165	256.58
12/30/2014 23:21	MAINT	MAINT	1757.1	MAINT	165	256.39
12/30/2014 23:22	MAINT	MAINT	1759.4	MAINT	164.8	256.49
12/30/2014 23:23	MAINT	MAINT	1761.7	MAINT	164.9	256.44
12/30/2014 23:24	MAINT	MAINT	1761.7	MAINT	165.1	256.34
12/30/2014 23:25	MAINT	MAINT	1759.4	MAINT	164.8	256.36
12/30/2014 23:26	MAINT	MAINT	1757.1	MAINT	164.8	256.37
12/30/2014 23:27	MAINT	MAINT	1754.8	MAINT	164.4	256.49
12/30/2014 23:28	MAINT	MAINT	1754.8	MAINT	164.6	256.42
12/30/2014 23:29	MAINT	MAINT	1752.5	MAINT	164.4	256.34
12/30/2014 23:30	MAINT	MAINT	1754.8	MAINT	164.7	256.4
12/30/2014 23:31	MAINT	MAINT	1754.8	MAINT	164.8	256.26
12/30/2014 23:32	MAINT	MAINT	1777.7	MAINT	167.2	256.5
12/30/2014 23:33	MAINT	MAINT	1798.2	MAINT	169.4	256.23
12/30/2014 23:34	MAINT	MAINT	1800.5	MAINT	169.8	256.13
12/30/2014 23:35	MAINT	MAINT	1800.5	MAINT	169.9	256.26
12/30/2014 23:36	MAINT	MAINT	1800.5	MAINT	169.9	256.27
12/30/2014 23:37	MAINT	MAINT	1793.7	MAINT	169.6	256.35
12/30/2014 23:38	MAINT	MAINT	1793.7	MAINT	169.5	256.42
12/30/2014 23:39	MAINT	MAINT	1793.7	MAINT	169.6	256.43
12/30/2014 23:40	MAINT	MAINT	1795.9	MAINT	170.1	256.27
12/30/2014 23:41	MAINT	MAINT	1800.5	MAINT	170.1	256.31
12/30/2014 23:42	MAINT	MAINT	1798.2	MAINT	170.1	256.35
12/30/2014 23:43	MAINT	MAINT	1798.2	MAINT	169.8	256.33
12/30/2014 23:44	MAINT	MAINT	1798.2	MAINT	170	256.46
12/30/2014 23:45	MAINT	MAINT	1795.9	MAINT	170	256.28
12/30/2014 23:46	MAINT	MAINT	1802.8	MAINT	170.5	256.2
12/30/2014 23:47	MAINT	MAINT	1814.2	MAINT	171.8	256.25

Table 1: REPORTED DATA

Timestamp	(Turbine - 1) NOx ppm @15% O2 1-Min	(Turbine - 1) SCR NOx ppm 1-Min	(Turbine - 1) Total Heat Input mmBtu/hr 1-Min	(Turbine - 1) NH3 ppm @15% O2 1-Min	(Turbine - 1) Megawatts 1-Min	(Turbine - 1) NH3 Flow 1-Min lb/hr
12/30/2014 23:48	MAINT	MAINT	1814.2	MAINT	171.8	256.3
12/30/2014 23:49	MAINT	MAINT	1814.2	MAINT	172	256.19
12/30/2014 23:50	MAINT	MAINT	1814.2	MAINT	172	256.21
12/30/2014 23:51	MAINT	MAINT	1816.5	MAINT	172.1	256.14
12/30/2014 23:52	MAINT	MAINT	1816.5	MAINT	171.9	256.33
12/30/2014 23:53	MAINT	MAINT	1816.5	MAINT	172	256.39
12/30/2014 23:54	MAINT	MAINT	1816.5	MAINT	172	256.1
12/30/2014 23:55	MAINT	MAINT	1816.5	MAINT	171.9	256.17
12/30/2014 23:56	MAINT	MAINT	1816.5	MAINT	171.9	256.34
12/30/2014 23:57	MAINT	MAINT	1814.2	MAINT	171.8	256.08
12/30/2014 23:58	MAINT	MAINT	1811.9	MAINT	172	256.31
12/30/2014 23:59	MAINT	MAINT	1814.2	MAINT	172	256.16
12/31/2014 0:00	MAINT	MAINT	1814.2	MAINT	171.8	256.05
12/31/2014 0:01	MAINT	MAINT	1816.5	MAINT	172	256.13
12/31/2014 0:02	MAINT	MAINT	1818.8	MAINT	172.2	256.38
12/31/2014 0:03	MAINT	MAINT	1818.8	MAINT	172.1	256.24
12/31/2014 0:04	MAINT	MAINT	1818.8	MAINT	172.1	256.33
12/31/2014 0:05	MAINT	MAINT	1816.5	MAINT	172.1	256.16
12/31/2014 0:06	MAINT	MAINT	1814.2	MAINT	172.1	256.13
12/31/2014 0:07	MAINT	MAINT	1814.2	MAINT	171.8	256.21
12/31/2014 0:08	MAINT	MAINT	1816.5	MAINT	172.2	256.11
12/31/2014 0:09	MAINT	MAINT	1816.5	MAINT	171.9	256.24
12/31/2014 0:10	MAINT	MAINT	1814.2	MAINT	172.1	256.12
12/31/2014 0:11	MAINT	MAINT	1816.5	MAINT	171.9	256.16
12/31/2014 0:12	MAINT	MAINT	1816.5	MAINT	171.8	256.16
12/31/2014 0:13	MAINT	MAINT	1816.5	MAINT	172	256.35
12/31/2014 0:14	MAINT	MAINT	1818.8	MAINT	172	256.28
12/31/2014 0:15	MAINT	MAINT	1816.5	MAINT	171.8	256.46
12/31/2014 0:16	MAINT	MAINT	1811.9	MAINT	171.8	256.29
12/31/2014 0:17	MAINT	MAINT	1814.2	MAINT	172.2	256.26
12/31/2014 0:18	MAINT	MAINT	1814.2	MAINT	171.9	256.12
12/31/2014 0:19	MAINT	MAINT	1816.5	MAINT	172	256.32
12/31/2014 0:20	MAINT	MAINT	1814.2	MAINT	172.1	256.04
12/31/2014 0:21	MAINT	MAINT	1816.5	MAINT	171.9	256.17
12/31/2014 0:22	MAINT	MAINT	1816.5	MAINT	171.9	256.2
12/31/2014 0:23	MAINT	MAINT	1816.5	MAINT	171.9	256.28
12/31/2014 0:24	MAINT	MAINT	1816.5	MAINT	171.8	256.14
12/31/2014 0:25	MAINT	MAINT	1814.2	MAINT	171.8	256.34
12/31/2014 0:26	MAINT	MAINT	1816.5	MAINT	172.1	256.31
12/31/2014 0:27	MAINT	MAINT	1814.2	MAINT	172	256.24
12/31/2014 0:28	MAINT	MAINT	1811.9	MAINT	171.8	256.25
12/31/2014 0:29	MAINT	MAINT	1816.5	MAINT	171.8	256.23
12/31/2014 0:30	MAINT	MAINT	1816.5	MAINT	172	256.34
12/31/2014 0:31	MAINT	MAINT	1816.5	MAINT	172.2	256.3
12/31/2014 0:32	MAINT	MAINT	1816.5	MAINT	172.1	256.32
12/31/2014 0:33	MAINT	MAINT	1816.5	MAINT	171.8	256.31
12/31/2014 0:34	MAINT	MAINT	1811.9	MAINT	171.8	256.28
12/31/2014 0:35	MAINT	MAINT	1811.9	MAINT	171.9	256.16
12/31/2014 0:36	MAINT	MAINT	1814.2	MAINT	171.8	256.33
12/31/2014 0:37	MAINT	MAINT	1816.5	MAINT	171.9	256.31
12/31/2014 0:38	MAINT	MAINT	1814.2	MAINT	171.8	256.27
12/31/2014 0:39	MAINT	MAINT	1816.5	MAINT	172.1	256.33
12/31/2014 0:40	MAINT	MAINT	1814.2	MAINT	172	256.22
12/31/2014 0:41	MAINT	MAINT	1814.2	MAINT	172.1	256.04

Table 1: REPORTED DATA

Timestamp	(Turbine - 1) NOx ppm @15% O2 1-Min	(Turbine - 1) SCR NOx ppm 1-Min	(Turbine - 1) Total Heat Input mmBtu/hr 1-Min	(Turbine - 1) NH3 ppm @15% O2 1-Min	(Turbine - 1) Megawatts 1-Min	(Turbine - 1) NH3 Flow 1-Min lb/hr
12/31/2014 0:42	MAINT	MAINT	1816.5	MAINT	172	256.28
12/31/2014 0:43	MAINT	MAINT	1816.5	MAINT	171.9	256
12/31/2014 0:44	MAINT	MAINT	1814.2	MAINT	172	256.21
12/31/2014 0:45	MAINT	MAINT	1814.2	MAINT	172.1	256.06
12/31/2014 0:46	MAINT	MAINT	1811.9	MAINT	171.8	256.25
12/31/2014 0:47	MAINT	MAINT	1814.2	MAINT	171.9	256.36
12/31/2014 0:48	MAINT	MAINT	1814.2	MAINT	172.1	256.29
12/31/2014 0:49	MAINT	MAINT	1811.9	MAINT	172	256.38
12/31/2014 0:50	MAINT	MAINT	1814.2	MAINT	172.1	256.14
12/31/2014 0:51	MAINT	MAINT	1816.5	MAINT	171.9	256.28
12/31/2014 0:52	MAINT	MAINT	1816.5	MAINT	172.1	256.3
12/31/2014 0:53	MAINT	MAINT	1814.2	MAINT	172.1	256.49
12/31/2014 0:54	MAINT	MAINT	1816.5	MAINT	171.9	256.37
12/31/2014 0:55	MAINT	MAINT	1811.9	MAINT	172	256.32
12/31/2014 0:56	MAINT	MAINT	1814.2	MAINT	172	256.19
12/31/2014 0:57	MAINT	MAINT	1814.2	MAINT	171.9	256.05
12/31/2014 0:58	MAINT	MAINT	1811.9	MAINT	172.2	256.31
12/31/2014 0:59	MAINT	MAINT	1814.2	MAINT	172.1	256.31
12/31/2014 1:00	MAINT	MAINT	1811.9	MAINT	172.1	256.2
12/31/2014 1:01	MAINT	MAINT	1814.2	MAINT	171.9	256.18
12/31/2014 1:02	MAINT	MAINT	1814.2	MAINT	171.9	256.24
12/31/2014 1:03	MAINT	MAINT	1816.5	MAINT	172	256.24
12/31/2014 1:04	MAINT	MAINT	1814.2	MAINT	172	255.85
12/31/2014 1:05	MAINT	MAINT	1814.2	MAINT	171.9	256.02
12/31/2014 1:06	MAINT	MAINT	1811.9	MAINT	171.9	255.92
12/31/2014 1:07	MAINT	MAINT	1814.2	MAINT	172	256.08
12/31/2014 1:08	MAINT	MAINT	1814.2	MAINT	171.9	256.21
12/31/2014 1:09	MAINT	MAINT	1814.2	MAINT	171.9	255.91
12/31/2014 1:10	MAINT	MAINT	1814.2	MAINT	171.9	255.9
12/31/2014 1:11	MAINT	MAINT	1814.2	MAINT	172	255.99
12/31/2014 1:12	MAINT	MAINT	1814.2	MAINT	171.9	255.84
12/31/2014 1:13	MAINT	MAINT	1811.9	MAINT	172	255.89
12/31/2014 1:14	MAINT	MAINT	1816.5	MAINT	172	256.08
12/31/2014 1:15	MAINT	MAINT	1814.2	MAINT	171.8	234.68
12/31/2014 1:16	MAINT	MAINT	1809.6	MAINT	172	211.73
12/31/2014 1:17	MAINT	MAINT	1811.9	MAINT	171.9	236.4
12/31/2014 1:18	MAINT	MAINT	1811.9	MAINT	172	237.55
12/31/2014 1:19	MAINT	MAINT	1814.2	MAINT	171.9	243.88
12/31/2014 1:20	2.47	30.8	1816.5	3.31	172	246.67
12/31/2014 1:21	2.4	30.7	1814.2	3.4	172	247.08
12/31/2014 1:22	2.38	30.7	1814.2	3.34	172	247
12/31/2014 1:23	2.34	30.7	1814.2	3.28	172	246.86
12/31/2014 1:24	2.41	30.8	1814.2	3.33	172	247.1
12/31/2014 1:25	2.39	30.7	1811.9	3.73	171.8	249.89
12/31/2014 1:26	2.29	30.7	1811.9	3.73	171.8	250.97
12/31/2014 1:27	2.33	31.1	1811.9	3.66	172.1	252.89
12/31/2014 1:28	2.29	31.2	1809.6	3.91	171.9	256.26
12/31/2014 1:29	2.22	30.9	1814.2	4.01	172	256.86
12/31/2014 1:30	2.14	30.7	1814.2	4.29	172	259.46
12/31/2014 1:31	2.11	30.9	1811.9	4.26	172	260.05
12/31/2014 1:32	2.08	31	1811.9	4.19	171.9	260.11
12/31/2014 1:33	2.08	31.1	1814.2	4.29	171.8	261.72
12/31/2014 1:34	2.04	31.2	1811.9	4.25	172	262.06
12/31/2014 1:35	2.02	31.2	1814.2	4.16	172	261.96

Table 1: REPORTED DATA

Timestamp	(Turbine - 1) NOx ppm @15% O2 1-Min	(Turbine - 1) SCR NOx ppm 1-Min	(Turbine - 1) Total Heat Input mmBtu/hr 1-Min	(Turbine - 1) NH3 ppm @15% O2 1-Min	(Turbine - 1) Megawatts 1-Min	(Turbine - 1) NH3 Flow 1-Min lb/hr
12/31/2014 1:36	2.02	31.2	1811.9	4.16	171.8	261.78
12/31/2014 1:37	2	31.3	1814.2	4.07	172	262.65
12/31/2014 1:38	1.97	31.1	1811.9	4.2	172	262.59
12/31/2014 1:39	1.94	31	1811.9	4.14	172	261.59
12/31/2014 1:40	1.95	30.9	1814.2	4.22	172.1	260.92
12/31/2014 1:41	1.95	31.1	1814.2	4	172.1	259.91
12/31/2014 1:42	1.95	31	1814.2	3.94	171.8	259
12/31/2014 1:43	1.96	31.1	1811.9	3.83	171.9	258.03
12/31/2014 1:44	2.03	31.3	1814.2	3.75	172	258.45
12/31/2014 1:45	2.05	31.3	1811.9	3.69	171.7	258.01
12/31/2014 1:46	2.06	31.6	1809.6	3.62	172.1	258.41
12/31/2014 1:47	2.16	31.7	1811.9	3.88	171.9	260.91
12/31/2014 1:48	2.14	31.8	1811.9	3.86	172	261.21
12/31/2014 1:49	2.14	31.8	1811.9	3.93	171.9	262.02
12/31/2014 1:50	2.06	31.4	1811.9	4.26	172.1	263.39
12/31/2014 1:51	2.02	31.5	1814.2	4.11	171.9	263.69
12/31/2014 1:52	2.01	31.4	1811.9	4.25	171.8	263.91
12/31/2014 1:53	2.03	31.6	1811.9	4.05	172.1	263.63
12/31/2014 1:54	1.99	31.4	1809.6	4.16	171.9	263.7
12/31/2014 1:55	1.97	31.3	1811.9	4.16	171.7	263.16
12/31/2014 1:56	2.03	31.7	1807.4	4.01	171.9	262.79
12/31/2014 1:57	2.02	31.5	1809.6	4.19	172	263.48
12/31/2014 1:58	2.01	31.6	1811.9	4.13	172	264.12
12/31/2014 1:59	1.99	31.5	1811.9	4.05	172	263.22

TABLE 2 - RECALCULATED DATA

Timestamp	(Turbine - 1) NOx ppm @15% O2 1-Min	Updated SCR NOx ppm	(Turbine - 1) SCR NOx ppm 1-Min	(Turbine - 1) Total Heat Input mmBtu/hr 1-Min	(Turbine - 1) NH3 ppm @15% O2 1-Min	(Turbine - 1) Megawatts 1-Min	(Turbine - 1) NH3 Flow 1-Min lb/hr	NH3 Inlet	NH3 Slip
12/30/2014 22:00	2.14	-	27.2	1841.6	3.35	175	227.63	-	3.35
12/30/2014 22:01	2.12	-	27.3	1843.9	3.24	175	227.44	-	3.24
12/30/2014 22:02	2.16	-	27.5	1843.9	3.18	175	227.51	-	3.18
12/30/2014 22:03	2.2	-	27.4	1846.2	3.26	175	227.61	-	3.26
12/30/2014 22:04	2.18	-	27.6	1846.2	3.33	174.8	229.75	-	3.33
12/30/2014 22:05	2.24	-	27.8	1846.2	3.3	175	230.02	-	3.3
12/30/2014 22:06	2.25	-	28.1	1843.9	3.14	175	230.09	-	3.14
12/30/2014 22:07	2.34	-	28.4	1846.2	3.24	174.8	232.89	-	3.24
12/30/2014 22:08	2.23	-	28	1843.9	3.54	174.9	233.89	-	3.54
12/30/2014 22:09	2.17	-	27.7	1843.9	3.69	174.9	233.94	-	3.69
12/30/2014 22:10	2.04	-	27.3	1846.2	3.93	175.3	233.99	-	3.93
12/30/2014 22:11	2.02	-	27.1	1870.6	3.79	175	234.05	-	3.79
12/30/2014 22:12	1.85	-	26.7	1869.8	3.9	175.1	232.2	-	3.9
12/30/2014 22:13	1.86	-	26.8	1867.8	3.6	175	229.76	-	3.6
12/30/2014 22:14	1.94	-	27.2	1870	3.24	175.1	228.44	-	3.24
12/30/2014 22:15	2.09	-	27.8	1865.7	2.81	175.1	226.3	-	2.81
12/30/2014 22:16	2.19	-	27.9	1865.6	2.92	175	227.65	-	2.92
12/30/2014 22:17	2.25	-	28.2	1868	2.86	174.8	228.32	-	2.86
12/30/2014 22:18	2.31	-	28.4	1867.9	2.86	174.8	229.08	-	2.86
12/30/2014 22:19	2.19	-	27.6	1863.3	3.57	174.6	231.03	-	3.57
12/30/2014 22:20	2.07	-	27.1	1867.8	3.72	174.6	231.21	-	3.72
12/30/2014 22:21	2.11	-	28	1870.2	3.1	174.8	231.17	-	3.1
12/30/2014 22:22	2.25	-	28.7	1867.9	2.76	174.8	231.12	-	2.76
12/30/2014 22:23	2.22	-	28	1863.3	3.31	174.5	232.19	-	3.31
12/30/2014 22:24	2.11	-	27.6	1863.3	3.66	174.4	234.08	-	3.66
12/30/2014 22:25	2.16	-	28.3	1867.8	3.04	174.7	232.27	-	3.04
12/30/2014 22:26	2.22	-	28.1	1843.9	3.77	174.9	234.29	-	3.77
12/30/2014 22:27	2.23	-	27.7	1841.6	3.89	174.8	234.67	-	3.89
12/30/2014 22:28	2.12	-	27.4	1839.4	4.01	174.5	234.74	-	4.01
12/30/2014 22:29	2.17	-	27.9	1839.4	3.75	174.5	235.62	-	3.75
12/30/2014 22:30	2.07	-	27.4	1841.6	4.1	174.7	236.93	-	4.1
12/30/2014 22:31	2.04	-	27.9	1843.9	3.6	174.8	235.63	-	3.6
12/30/2014 22:32	2.1	-	27.9	1839.4	3.6	174.1	234.69	-	3.6
12/30/2014 22:33	2.13	-	27.7	1832.5	3.97	173.7	236.04	-	3.97
12/30/2014 22:34	2.17	-	28.4	1837.1	3.54	174	236.25	-	3.54
12/30/2014 22:35	2.22	-	28.5	1834.8	3.54	174	236.34	-	3.54
12/30/2014 22:36	2.19	-	28.3	1837.1	3.74	174	237.35	-	3.74
12/30/2014 22:37	2.15	-	28.1	1834.8	3.92	174.3	238.33	-	3.92
12/30/2014 22:38	2.16	-	28.4	1837.1	3.69	174.4	238.22	-	3.69
12/30/2014 22:39	2.2	-	28.6	1834.8	3.56	173.8	238.31	-	3.56
12/30/2014 22:40	2.21	-	28.5	1834.8	3.75	173.9	238.93	-	3.75
12/30/2014 22:41	2.13	-	28.1	1834.8	4.17	174	240.25	-	4.17
12/30/2014 22:42	2.06	-	27.9	1837.1	4.21	174	240.44	-	4.21
12/30/2014 22:43	2	-	27.9	1834.8	4.17	174.2	240.2	-	4.17
12/30/2014 22:44	2.01	-	27.8	1834.8	4.02	174	238.11	-	4.02
12/30/2014 22:45	1.97	-	27.6	1830.2	4.1	173.6	237.95	-	4.1
12/30/2014 22:46	2	-	27.7	1832.5	3.88	174.1	236.51	-	3.88
12/30/2014 22:47	2.11	-	25.7	1832.5	5.4	173.9	235.36	-	5.4
12/30/2014 22:48	2.16	29.4	1.8	1837.1	23.19	174.6	235.18	30.5	2.4
12/30/2014 22:49	2.22	29.4	0	1841.6	23.22	174.8	221.82	28.8	1.0
12/30/2014 22:50	2.32	29.4	0	1843.9	21.6	175.1	204.37	26.4	2.7
12/30/2014 22:51	2.71	29.4	0	1843.9	22.35	175.2	208.48	27.0	2.0
12/30/2014 22:52	2.74	29.4	0	1846.2	25.81	175	244.5	31.5	3.6
12/30/2014 22:53	2.18	29.4	0	1846.2	25.53	175	246.61	31.7	3.4
12/30/2014 22:54	1.92	29.4	0	1846.2	25.27	175	246.58	31.7	3.1
12/30/2014 22:55	1.83	29.4	0	1843.9	24.64	174.9	240.32	30.9	2.5
12/30/2014 22:56	1.81	29.4	0	1843.9	16.54	174.9	155.93	20.1	7.8
12/30/2014 22:57	2.88	29.4	0	1843.9	14.37	174.8	123.99	16.0	10.1
12/30/2014 22:58	4.4	29.4	0	1843.9	25.94	175	230.79	29.8	3.6
12/30/2014 22:59	3.23	29.4	0	1832.5	45.69	173.3	444.33	57.6	23.4
					7.8				40
12/30/2014 23:00	0.9	29.4	0	1789.1	45.12	168.6	448.1	59.4	23.1
12/30/2014 23:01	0.42	29.4	0	1754.8	45.28	165.3	445.27	60.5	23.4
12/30/2014 23:02	0.35	29.4	0	1743.4	29.6	163.7	288.5	39.5	7.8
12/30/2014 23:03	0.51	29.4	0	1706.8	5.84	159.1	52.05	7.3	18.2
12/30/2014 23:04	2.1	29.4	MAINT	1674.8	MAINT	155	66.56	9.5	15.4
12/30/2014 23:05	2.1	29.4	MAINT	1670.3	MAINT	154.7	378.21	54.0	19.8
12/30/2014 23:06	2.1	29.4	MAINT	1670.3	MAINT	154.7	474.45	67.8	30.0
12/30/2014 23:07	2.1	29.4	MAINT	1674.8	MAINT	154.8	290.41	41.4	10.4
12/30/2014 23:08	2.1	29.4	MAINT	1674.8	MAINT	154.9	245.72	35.0	5.7
12/30/2014 23:09	2.1	29.4	MAINT	1674.8	MAINT	155	225.65	32.1	3.6
12/30/2014 23:10	2.1	29.4	MAINT	1672.5	MAINT	155.1	223.56	31.9	3.4
12/30/2014 23:11	2.1	29.4	MAINT	1674.8	MAINT	155.1	224.9	32.0	3.5
12/30/2014 23:12	2.1	29.4	MAINT	1674.8	MAINT	155	234.55	33.4	4.5
12/30/2014 23:13	2.1	29.4	MAINT	1672.5	MAINT	154.8	234.36	33.4	4.5

TABLE 2 - RECALCULATED DATA

Timestamp	(Turbine - 1) NOx ppm @15% O2 1-Min	Updated SCR NOx ppm	(Turbine - 1) SCR NOx ppm 1-Min	(Turbine - 1) Total Heat Input mmBtu/hr 1-Min	(Turbine - 1) NH3 ppm @15% O2 1-Min	(Turbine - 1) Megawatts 1-Min	(Turbine - 1) NH3 Flow 1-Min lb/hr	NH3 Inlet	NH3 Slip
12/30/2014 23:14	2.1	29.4	MAINT	1674.8	MAINT	154.7	235.49	33.5	4.6
12/30/2014 23:15	2.1	29.4	MAINT	1684	MAINT	155.9	233.93	33.1	4.3
12/30/2014 23:16	2.1	29.4	MAINT	1716	MAINT	160.5	241.89	33.6	4.7
12/30/2014 23:17	2.1	29.4	MAINT	1752.5	MAINT	164.3	245.95	33.5	4.6
12/30/2014 23:18	2.1	29.4	MAINT	1757.1	MAINT	165	255.85	34.7	5.5
12/30/2014 23:19	2.1	29.4	MAINT	1757.1	MAINT	164.8	256.37	34.8	5.6
12/30/2014 23:20	2.1	29.4	MAINT	1757.1	MAINT	165	256.58	34.8	5.6
12/30/2014 23:21	2.1	29.4	MAINT	1757.1	MAINT	165	256.39	34.8	5.6
12/30/2014 23:22	2.1	29.4	MAINT	1759.4	MAINT	164.8	256.49	34.8	5.6
12/30/2014 23:23	2.1	29.4	MAINT	1761.7	MAINT	164.9	256.44	34.7	5.5
12/30/2014 23:24	2.1	29.4	MAINT	1761.7	MAINT	165.1	256.34	34.7	5.5
12/30/2014 23:25	2.1	29.4	MAINT	1759.4	MAINT	164.8	256.36	34.8	5.5
12/30/2014 23:26	2.1	29.4	MAINT	1757.1	MAINT	164.8	256.37	34.8	5.6
12/30/2014 23:27	2.1	29.4	MAINT	1754.8	MAINT	164.4	256.49	34.9	5.6
12/30/2014 23:28	2.1	29.4	MAINT	1754.8	MAINT	164.6	256.42	34.9	5.6
12/30/2014 23:29	2.1	29.4	MAINT	1752.5	MAINT	164.4	256.34	34.9	5.6
12/30/2014 23:30	2.1	29.4	MAINT	1754.8	MAINT	164.7	256.4	34.9	5.6
12/30/2014 23:31	2.1	29.4	MAINT	1754.8	MAINT	164.8	256.26	34.8	5.6
12/30/2014 23:32	2.1	29.4	MAINT	1777.7	MAINT	167.2	256.5	34.4	5.3
12/30/2014 23:33	2.1	29.4	MAINT	1798.2	MAINT	169.4	256.23	34.0	5.0
12/30/2014 23:34	2.1	29.4	MAINT	1800.5	MAINT	169.8	256.13	33.9	4.9
12/30/2014 23:35	2.1	29.4	MAINT	1800.5	MAINT	169.9	256.26	34.0	4.9
12/30/2014 23:36	2.1	29.4	MAINT	1800.5	MAINT	169.9	256.27	34.0	4.9
12/30/2014 23:37	2.1	29.4	MAINT	1793.7	MAINT	169.6	256.35	34.1	5.0
12/30/2014 23:38	2.1	29.4	MAINT	1793.7	MAINT	169.5	256.42	34.1	5.1
12/30/2014 23:39	2.1	29.4	MAINT	1793.7	MAINT	169.6	256.43	34.1	5.1
12/30/2014 23:40	2.1	29.4	MAINT	1795.9	MAINT	170.1	256.27	34.0	5.0
12/30/2014 23:41	2.1	29.4	MAINT	1800.5	MAINT	170.1	256.31	34.0	4.9
12/30/2014 23:42	2.1	29.4	MAINT	1798.2	MAINT	170.1	256.35	34.0	5.0
12/30/2014 23:43	2.1	29.4	MAINT	1798.2	MAINT	169.8	256.33	34.0	5.0
12/30/2014 23:44	2.1	29.4	MAINT	1798.2	MAINT	170	256.46	34.0	5.0
12/30/2014 23:45	2.1	29.4	MAINT	1795.9	MAINT	170	256.28	34.0	5.0
12/30/2014 23:46	2.1	29.4	MAINT	1802.8	MAINT	170.5	256.2	33.9	4.9
12/30/2014 23:47	2.1	29.4	MAINT	1814.2	MAINT	171.8	256.25	33.7	4.7
12/30/2014 23:48	2.1	29.4	MAINT	1814.2	MAINT	171.8	256.3	33.7	4.8
12/30/2014 23:49	2.1	29.4	MAINT	1814.2	MAINT	172	256.19	33.7	4.7
12/30/2014 23:50	2.1	29.4	MAINT	1814.2	MAINT	172	256.21	33.7	4.7
12/30/2014 23:51	2.1	29.4	MAINT	1816.5	MAINT	172.1	256.14	33.6	4.7
12/30/2014 23:52	2.1	29.4	MAINT	1816.5	MAINT	171.9	256.33	33.7	4.7
12/30/2014 23:53	2.1	29.4	MAINT	1816.5	MAINT	172	256.39	33.7	4.7
12/30/2014 23:54	2.1	29.4	MAINT	1816.5	MAINT	172	256.1	33.6	4.7
12/30/2014 23:55	2.1	29.4	MAINT	1816.5	MAINT	171.9	256.17	33.6	4.7
12/30/2014 23:56	2.1	29.4	MAINT	1816.5	MAINT	171.9	256.34	33.7	4.7
12/30/2014 23:57	2.1	29.4	MAINT	1814.2	MAINT	171.8	256.08	33.7	4.7
12/30/2014 23:58	2.1	29.4	MAINT	1811.9	MAINT	172	256.31	33.8	4.8
12/30/2014 23:59	2.1	29.4	MAINT	1814.2	MAINT	172	256.16	33.7	4.7
					315				68
12/31/2014 0:00	2.1	29.4	MAINT	1814.2	MAINT	171.8	256.05	33.7	4.7
12/31/2014 0:01	2.1	29.4	MAINT	1816.5	MAINT	172	256.13	33.6	4.7
12/31/2014 0:02	2.1	29.4	MAINT	1818.8	MAINT	172.2	256.38	33.6	4.7
12/31/2014 0:03	2.1	29.4	MAINT	1818.8	MAINT	172.1	256.24	33.6	4.7
12/31/2014 0:04	2.1	29.4	MAINT	1818.8	MAINT	172.1	256.33	33.6	4.7
12/31/2014 0:05	2.1	29.4	MAINT	1816.5	MAINT	172.1	256.16	33.6	4.7
12/31/2014 0:06	2.1	29.4	MAINT	1814.2	MAINT	172.1	256.13	33.7	4.7
12/31/2014 0:07	2.1	29.4	MAINT	1814.2	MAINT	171.8	256.21	33.7	4.7
12/31/2014 0:08	2.1	29.4	MAINT	1816.5	MAINT	172.2	256.11	33.6	4.7
12/31/2014 0:09	2.1	29.4	MAINT	1816.5	MAINT	171.9	256.24	33.7	4.7
12/31/2014 0:10	2.1	29.4	MAINT	1814.2	MAINT	172.1	256.12	33.7	4.7
12/31/2014 0:11	2.1	29.4	MAINT	1816.5	MAINT	171.9	256.16	33.6	4.7
12/31/2014 0:12	2.1	29.4	MAINT	1816.5	MAINT	171.8	256.16	33.6	4.7
12/31/2014 0:13	2.1	29.4	MAINT	1816.5	MAINT	172	256.35	33.7	4.7
12/31/2014 0:14	2.1	29.4	MAINT	1818.8	MAINT	172	256.28	33.6	4.7
12/31/2014 0:15	2.1	29.4	MAINT	1816.5	MAINT	171.8	256.46	33.7	4.7
12/31/2014 0:16	2.1	29.4	MAINT	1811.9	MAINT	171.8	256.29	33.7	4.8
12/31/2014 0:17	2.1	29.4	MAINT	1814.2	MAINT	172.2	256.26	33.7	4.7
12/31/2014 0:18	2.1	29.4	MAINT	1814.2	MAINT	171.9	256.12	33.7	4.7
12/31/2014 0:19	2.1	29.4	MAINT	1816.5	MAINT	172	256.32	33.7	4.7
12/31/2014 0:20	2.1	29.4	MAINT	1814.2	MAINT	172.1	256.04	33.7	4.7
12/31/2014 0:21	2.1	29.4	MAINT	1816.5	MAINT	171.9	256.17	33.6	4.7
12/31/2014 0:22	2.1	29.4	MAINT	1816.5	MAINT	171.9	256.2	33.7	4.7
12/31/2014 0:23	2.1	29.4	MAINT	1816.5	MAINT	171.9	256.28	33.7	4.7
12/31/2014 0:24	2.1	29.4	MAINT	1816.5	MAINT	171.8	256.14	33.6	4.7
12/31/2014 0:25	2.1	29.4	MAINT	1814.2	MAINT	171.8	256.34	33.7	4.8
12/31/2014 0:26	2.1	29.4	MAINT	1816.5	MAINT	172.1	256.31	33.7	4.7
12/31/2014 0:27	2.1	29.4	MAINT	1814.2	MAINT	172	256.24	33.7	4.7

TABLE 2 - RECALCULATED DATA

Timestamp	(Turbine - 1) NOx ppm @15% O2 1-Min	Updated SCR NOx ppm	(Turbine - 1) SCR NOx ppm 1-Min	(Turbine - 1) Total Heat Input mmBtu/hr 1-Min	(Turbine - 1) NH3 ppm @15% O2 1-Min	(Turbine - 1) Megawatts 1-Min	(Turbine - 1) NH3 Flow 1-Min lb/hr	NH3 Inlet	NH3 Slip
12/31/2014 0:28	2.1	29.4	MAINT	1811.9	MAINT	171.8	256.25	33.7	4.8
12/31/2014 0:29	2.1	29.4	MAINT	1816.5	MAINT	171.8	256.23	33.7	4.7
12/31/2014 0:30	2.1	29.4	MAINT	1816.5	MAINT	172	256.34	33.7	4.7
12/31/2014 0:31	2.1	29.4	MAINT	1816.5	MAINT	172.2	256.3	33.7	4.7
12/31/2014 0:32	2.1	29.4	MAINT	1816.5	MAINT	172.1	256.32	33.7	4.7
12/31/2014 0:33	2.1	29.4	MAINT	1816.5	MAINT	171.8	256.31	33.7	4.7
12/31/2014 0:34	2.1	29.4	MAINT	1811.9	MAINT	171.8	256.28	33.7	4.8
12/31/2014 0:35	2.1	29.4	MAINT	1811.9	MAINT	171.9	256.16	33.7	4.8
12/31/2014 0:36	2.1	29.4	MAINT	1814.2	MAINT	171.8	256.33	33.7	4.8
12/31/2014 0:37	2.1	29.4	MAINT	1816.5	MAINT	171.9	256.31	33.7	4.7
12/31/2014 0:38	2.1	29.4	MAINT	1814.2	MAINT	171.8	256.27	33.7	4.7
12/31/2014 0:39	2.1	29.4	MAINT	1816.5	MAINT	172.1	256.33	33.7	4.7
12/31/2014 0:40	2.1	29.4	MAINT	1814.2	MAINT	172	256.22	33.7	4.7
12/31/2014 0:41	2.1	29.4	MAINT	1814.2	MAINT	172.1	256.04	33.7	4.7
12/31/2014 0:42	2.1	29.4	MAINT	1816.5	MAINT	172	256.28	33.7	4.7
12/31/2014 0:43	2.1	29.4	MAINT	1816.5	MAINT	171.9	256	33.6	4.7
12/31/2014 0:44	2.1	29.4	MAINT	1814.2	MAINT	172	256.21	33.7	4.7
12/31/2014 0:45	2.1	29.4	MAINT	1814.2	MAINT	172.1	256.06	33.7	4.7
12/31/2014 0:46	2.1	29.4	MAINT	1811.9	MAINT	171.8	256.25	33.7	4.8
12/31/2014 0:47	2.1	29.4	MAINT	1814.2	MAINT	171.9	256.36	33.7	4.8
12/31/2014 0:48	2.1	29.4	MAINT	1814.2	MAINT	172.1	256.29	33.7	4.8
12/31/2014 0:49	2.1	29.4	MAINT	1811.9	MAINT	172	256.38	33.8	4.8
12/31/2014 0:50	2.1	29.4	MAINT	1814.2	MAINT	172.1	256.14	33.7	4.7
12/31/2014 0:51	2.1	29.4	MAINT	1816.5	MAINT	171.9	256.28	33.7	4.7
12/31/2014 0:52	2.1	29.4	MAINT	1816.5	MAINT	172.1	256.3	33.7	4.7
12/31/2014 0:53	2.1	29.4	MAINT	1814.2	MAINT	172.1	256.49	33.7	4.8
12/31/2014 0:54	2.1	29.4	MAINT	1816.5	MAINT	171.9	256.37	33.7	4.7
12/31/2014 0:55	2.1	29.4	MAINT	1811.9	MAINT	172	256.32	33.8	4.8
12/31/2014 0:56	2.1	29.4	MAINT	1814.2	MAINT	172	256.19	33.7	4.7
12/31/2014 0:57	2.1	29.4	MAINT	1814.2	MAINT	171.9	256.05	33.7	4.7
12/31/2014 0:58	2.1	29.4	MAINT	1811.9	MAINT	172.2	256.31	33.8	4.8
12/31/2014 0:59	2.1	29.4	MAINT	1814.2	MAINT	172.1	256.31	33.7	4.8
					[illegible]				4.7
12/31/2014 1:00	2.1	29.4	MAINT	1811.9	MAINT	172.1	256.2	33.7	4.8
12/31/2014 1:01	2.1	29.4	MAINT	1814.2	MAINT	171.9	256.18	33.7	4.7
12/31/2014 1:02	2.1	29.4	MAINT	1814.2	MAINT	171.9	256.24	33.7	4.7
12/31/2014 1:03	2.1	29.4	MAINT	1816.5	MAINT	172	256.24	33.7	4.7
12/31/2014 1:04	2.1	29.4	MAINT	1814.2	MAINT	172	255.85	33.6	4.7
12/31/2014 1:05	2.1	29.4	MAINT	1814.2	MAINT	171.9	256.02	33.7	4.7
12/31/2014 1:06	2.1	29.4	MAINT	1811.9	MAINT	171.9	255.92	33.7	4.7
12/31/2014 1:07	2.1	29.4	MAINT	1814.2	MAINT	172	256.08	33.7	4.7
12/31/2014 1:08	2.1	29.4	MAINT	1814.2	MAINT	171.9	256.21	33.7	4.7
12/31/2014 1:09	2.1	29.4	MAINT	1814.2	MAINT	171.9	255.91	33.7	4.7
12/31/2014 1:10	2.1	29.4	MAINT	1814.2	MAINT	171.9	255.9	33.7	4.7
12/31/2014 1:11	2.1	29.4	MAINT	1814.2	MAINT	172	255.99	33.7	4.7
12/31/2014 1:12	2.1	29.4	MAINT	1814.2	MAINT	171.9	255.84	33.6	4.7
12/31/2014 1:13	2.1	29.4	MAINT	1811.9	MAINT	172	255.89	33.7	4.7
12/31/2014 1:14	2.1	29.4	MAINT	1816.5	MAINT	172	256.08	33.6	4.7
12/31/2014 1:15	2.1	29.4	MAINT	1814.2	MAINT	171.8	234.68	30.9	2.6
12/31/2014 1:16	2.1	29.4	MAINT	1809.6	MAINT	172	211.73	27.9	0.5
12/31/2014 1:17	2.1	29.4	MAINT	1811.9	MAINT	171.9	236.4	31.1	2.8
12/31/2014 1:18	2.1	29.4	MAINT	1811.9	MAINT	172	237.55	31.3	3.0
12/31/2014 1:19	2.1	29.4	MAINT	1814.2	MAINT	171.9	243.88	32.1	3.5
12/31/2014 1:20	2.47	-	30.8	1816.5	3.31	172	246.67	-	3.31
12/31/2014 1:21	2.4	-	30.7	1814.2	3.4	172	247.08	-	3.4
12/31/2014 1:22	2.38	-	30.7	1814.2	3.34	172	247	-	3.34
12/31/2014 1:23	2.34	-	30.7	1814.2	3.28	172	246.86	-	3.28
12/31/2014 1:24	2.41	-	30.8	1814.2	3.33	172	247.1	-	3.33
12/31/2014 1:25	2.39	-	30.7	1811.9	3.73	171.8	249.89	-	3.73
12/31/2014 1:26	2.29	-	30.7	1811.9	3.73	171.8	250.97	-	3.73
12/31/2014 1:27	2.33	-	31.1	1811.9	3.66	172.1	252.89	-	3.66
12/31/2014 1:28	2.29	-	31.2	1809.6	3.91	171.9	256.26	-	3.91
12/31/2014 1:29	2.22	-	30.9	1814.2	4.01	172	256.86	-	4.01
12/31/2014 1:30	2.14	-	30.7	1814.2	4.29	172	259.46	-	4.29
12/31/2014 1:31	2.11	-	30.9	1811.9	4.26	172	260.05	-	4.26
12/31/2014 1:32	2.08	-	31	1811.9	4.19	171.9	260.11	-	4.19
12/31/2014 1:33	2.08	-	31.1	1814.2	4.29	171.8	261.72	-	4.29
12/31/2014 1:34	2.04	-	31.2	1811.9	4.25	172	262.06	-	4.25
12/31/2014 1:35	2.02	-	31.2	1814.2	4.16	172	261.96	-	4.16
12/31/2014 1:36	2.02	-	31.2	1811.9	4.16	171.8	261.78	-	4.16
12/31/2014 1:37	2	-	31.3	1814.2	4.07	172	262.65	-	4.07
12/31/2014 1:38	1.97	-	31.1	1811.9	4.2	172	262.59	-	4.2
12/31/2014 1:39	1.94	-	31	1811.9	4.14	172	261.59	-	4.14
12/31/2014 1:40	1.95	-	30.9	1814.2	4.22	172.1	260.92	-	4.22
12/31/2014 1:41	1.95	-	31.1	1814.2	4	172.1	259.91	-	4

TABLE 2 - RECALCULATED DATA

Timestamp	(Turbine - 1) NOx ppm @15% O2 1-Min	Updated SCR NOx ppm	(Turbine - 1) SCR NOx ppm 1-Min	(Turbine - 1) Total Heat Input mmBtu/hr 1-Min	(Turbine - 1) NH3 ppm @15% O2 1-Min	(Turbine - 1) Megawatts 1-Min	(Turbine - 1) NH3 Flow 1-Min lb/hr	NH3 Inlet	NH3 Slip
12/31/2014 1:42	1.95	-	31	1814.2	3.94	171.8	259	-	3.94
12/31/2014 1:43	1.96	-	31.1	1811.9	3.83	171.9	258.03	-	3.83
12/31/2014 1:44	2.03	-	31.3	1814.2	3.75	172	258.45	-	3.75
12/31/2014 1:45	2.05	-	31.3	1811.9	3.69	171.7	258.01	-	3.69
12/31/2014 1:46	2.06	-	31.6	1809.6	3.62	172.1	258.41	-	3.62
12/31/2014 1:47	2.16	-	31.7	1811.9	3.88	171.9	260.91	-	3.88
12/31/2014 1:48	2.14	-	31.8	1811.9	3.86	172	261.21	-	3.86
12/31/2014 1:49	2.14	-	31.8	1811.9	3.93	171.9	262.02	-	3.93
12/31/2014 1:50	2.06	-	31.4	1811.9	4.26	172.1	263.39	-	4.26
12/31/2014 1:51	2.02	-	31.5	1814.2	4.11	171.9	263.69	-	4.11
12/31/2014 1:52	2.01	-	31.4	1811.9	4.25	171.8	263.91	-	4.25
12/31/2014 1:53	2.03	-	31.6	1811.9	4.05	172.1	263.63	-	4.05
12/31/2014 1:54	1.99	-	31.4	1809.6	4.16	171.9	263.7	-	4.16
12/31/2014 1:55	1.97	-	31.3	1811.9	4.16	171.7	263.16	-	4.16
12/31/2014 1:56	2.03	-	31.7	1807.4	4.01	171.9	262.79	-	4.01
12/31/2014 1:57	2.02	-	31.5	1809.6	4.19	172	263.48	-	4.19
12/31/2014 1:58	2.01	-	31.6	1811.9	4.13	172	264.12	-	4.13
12/31/2014 1:59	1.99	-	31.5	1811.9	4.05	172	263.22	-	4.05
					3.6				4.0

ORIGINAL 3-HR ROLLING AVERAGE	
HR 21	3.4
HR 22	7.8
HR 23	31.5
	14.23

RECALCULATED 3-HR ROLLING AVERAGE	
HR 21	3.4
HR 22	4
HR 23	6.8
	4.7

Appendix 10

Metcalf Energy Center Plume Log

Cooling Tower Plumes

Date	Start Time	End time	Total Time	Event	Relative Humidity	Temperature	Duct Burners	Plume Abatement
December 28, 2014	7:21	8:21	1:00	Plume	88%	37 deg F	Off	on

Total Cooling Tower Plume Hours: 1:00

Remedial Actions To Be Taken

1. The Operator will verify that the plume abatement was in service.
2. The Operator will verify that the louvers were completely opened.
3. Curtail supplementary firing in the HRSG.

Stack Plumes

Date	Start Time	End time	Total Time	Event	Relative Humidity	Temperature	Duct Burners	Plume Abatement

No Plume Events in November 2014

Total Stack Plume Hours: 0:00

Remedial Actions Taken

1. The Operator will operate the economizer bypass valve.
2. Curtail steam injection to the combustion turbine (called PAG steam).
3. Curtail supplementary firing in the HRSG.

Total Combined Plume Hours: 1:00

Metcalf Energy Center Plume Log

Cooling Tower Plumes

Date	Start Time	End time	Total Time	Event	Relative Humidity	Temperature	Duct Burners	Plume Abatement
No Plume Events in January 2014								
No Plume Events in February 2014								
No Plume Events in March 2014								
No Plume Events in April 2014								
No Plume Events in May 2014								
No Plume Events in June 2014								
No Plume Events in July 2014								
No Plume Events in August 2014								
No Plume Events in September 2014								
No Plume Events in October 2014								
November 23, 2014	7:30	9:30	2:00	Plume	69%	51 deg F	Off	On
December 28, 2014	7:21	8:21	1:00	Plume	88%	37 deg F	Off	On

Total Cooling Tower Plume Hours YTD: 3:00

Remedial Actions To Be Taken

1. The Operator will verify that the plume abatement was in service.
2. The Operator will verify that the louvers were completely opened.
3. Curtail supplementary firing in the HRSG.

Stack Plumes

Date	Start Time	End time	Total Time	Event	Relative Humidity	Temperature	Duct Burners	Plume Abatement
No Plume Events in January 2014								
No Plume Events in February 2014								
No Plume Events in March 2014								
No Plume Events in April 2014								
No Plume Events in May 2014								
No Plume Events in June 2014								
No Plume Events in July 2014								
No Plume Events in August 2014								
No Plume Events in September 2014								
No Plume Events in October 2014								
No Plume Events in November 2014								
No Plume Events in December 2014								

Total Stack Plume Hours YTD: 0:00

Remedial Actions Taken

1. The Operator will operate the economizer bypass valve.
2. Curtail steam injection to the combustion turbine (called PAG steam).
3. Curtail supplementary firing in the HRSG.

Total Combined Year-to-Date 3:00