DOCKETED	
Docket Number:	99-AFC-03C
Project Title:	METCALF Energy Center Compliance
TN #:	235099
Document Title:	Annual Compliance Report 2019
Description:	Annual Compliance Report- 2019
Filer:	Anwar Ali
Organization:	Calpine Energy Solutions
Submitter Role:	Applicant
Submission Date:	10/6/2020 3:08:26 PM
Docketed Date:	10/6/2020

Metcalf Energy Center, LLC

1 Blanchard Road Coyote, CA 95013

August 18, 2020

Mr. Anwar Ali 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 2019

Dear Mr. Ali:

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 2019 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,

12 au Terry Mahoney General Manager

Metcalf Energy Center, LLC.

Enclosures: Via Email

Appendix 1

California Energy Commission 2019 Annual Compliance Report Metcalf Energy Center – 99-AFC-3

Table of Contents

1.	Compliance Summary Appendix 1
2.	Conditions of Certification Matrix Appendix 2
3.	Operating Data SummaryAppendix 3
4.	40 CFR Part 75 Reports Appendix 4
5.	Hazardous Material InventoryAppendix 5
6.	TRANS-3 Hazardous Material Deliveries Appendix 6
7.	Cooling Tower Inspection Appendix 7
8.	Water Usage Summary Appendix 8
9.	Waste – 3 Report Appendix 9
10.	VIS-1 Inspection Appendix 10
11.	Plume Summary YTD Appendix 11

Metcalf Energy Center – 99-AFC-3 2019 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 2017 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 2017 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 2019 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 2019 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 2019 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 2019 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 2019 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 2019 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 2019 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.

No violation of this condition occurred for the 2019 reporting year.

- 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.
 - No violation of this condition occurred for the 2019 reporting year.

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

No violation of this condition occurred for the 2019 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 2019 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 2019 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 2019 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 2019 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 2019 reporting year.

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

No violations occurred during the 2019 reporting year.

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

No violation of this condition occurred for the 2019 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 2019 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 7.

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 8.

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 2017 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. A list of the hazardous materials deliveries received in 2019 is in Appendix 6.

VIS-1 Treat the project structures, buildings, and tanks visible to the public in a nonreflective 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. A copy of the inspection is in Appendix 10.

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

The total cooling tower plume hours for 2019 were 0 hours, as noted in the December 2019 Plume Summary Log. A copy of the submitted log is in Appendix 11.

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 9.

Appendix 2

		METCALF ENERGY CENTER - COMPLIANCE	MATRIX			Contract in the second	
START OF COME	RCIAL OPERATION	5/29/2005					
THROUGH YEAR	END OF 2019	12/31/2019					
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 NOx)	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

		METCALF ENERGY CENTER - COMPLIANCE	MATRIX				
START OF COMER	RCIAL OPERATION	5/29/2005				Statistics of the second	
THROUGH YEAR I	END OF 2019	12/31/2019					
Condition No.	Requirements & Task Summary	Action required	Event	Required Submittal Date	Date submitted to CPM	Date approved by CPM	Status/ Comments
AQ-20(e)	Ammonia (NH3) emission concentration shall not exceed 5 ppmvd 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
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 Ibs/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 = 480 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

METCALF ENERGY CENTER - COMPLIANCE MATRIX									
START OF COMER	RCIAL OPERATION	5/29/2005							
THROUGH YEAR	END OF 2019	12/31/2019							
Condition No.	Requirements & Task Summary	Action required	Event	Required Submittal Date	Date submitted to CPM	Date approved by CPM	Status/ Comments		
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		
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 GG.	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		

		METCALF ENERGY CENTER - COMPLIANCE	MATRIX	The second second	a second second second		
START OF COMER	RCIAL OPERATION	5/29/2005					
THROUGH YEAR	END OF 2019	12/31/2019					
Condition No.	Requirements & Task Summary	Action required	Event	Required Submittal Date	Date submitted to CPM	Date approved by CPM	Status/ Comments
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
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

		METCALF ENERGY CENTER - COMPLIANCE	MATRIX			C. C.	
START OF COME	RCIAL OPERATION	5/29/2005	an officer level of the second second				
THROUGH YEAR	END OF 2019	12/31/2019					
Condition No.	Requirements & Task Summary	Action required	Event	Required Submittal Date	Date submitted to CPM	Date approved by CPM	Status/ Comments
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
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

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 Secondary Fuel Quantity Burned (MMcf GG)	
January	107,612	1,223.6	January	110,217	1,260.4	January	139,710	115.26	
February	93,592	1,062.6	February	76,075	869.9	February	107,181	88.47	
March	33,752	38,869.0	March	45,752	527.9	March	48,878	26.59	
April	6,385	78.2	April	17,677	218.8	April	13,186	8.41	
May	12,637	160.6	May	6,874	87.6	May	10,571	5.00	
June	36,873	437.2	June	38,657	462.6	June	46,740	28.09	
July	66,077	769.8	July	65,197	760.3	July	78,989	26.93	
August	88,074	1,026.0	August	83,357	973.4	August	104,149	29.86	
September	82,799	959.1	September	78,850	915.5	September	97,602	24.82	
October	91,811	1,015.9	October	87,849	977.3	October	109.915	30 31	
November	66,158	762.1	November	68,639	791.3	November	80.242	23.96	
December	113,350	1,301.6	December	113,891	1,340.5	December	136,447	23.30	

Operating Data Summary January 2019 - December 2019

Appendix 4



April 3, 2019 01:46 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 "Feedback 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 Feedback 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 2019 QTR 1
Feedback Status Level:	No Errors
Submission Date/Time:	04/03/2019 1:46:10 PM
Submitter User ID:	rsilva
Submission ID:	1233251
Resubmission Required:	No
EPA Analyst:	Carlos R Martinez; (202) 343-9747; martinez.carlos@epa.gov

EXPLANATION OF YOUR FEEDBACK 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: https://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: https://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: https://www.epa.gov/airmarkets/clean-air-markets-ecmps-reporting-instructions.

Facility ID (ORISPL): 55393 State: CA

ECMPS Feedback

April 3, 2019 01:46 PM

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

We design the second states of the	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	1,533					1,533
Operating Time (hrs)	1,506.44					1,506.44
SO2 Mass (tons)	0.8					0.8
CO2 Mass (tons)	166,579.7					166,579.7
Heat Input (mmBtu)	2,803,012					2,803,012
NOx Emission Rate (lb/mmBtu)	0.008					0.008



April 3, 2019 01:46 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 "Feedback 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. Finally, a summary of ECMPS's Evaluation Results is included.

Table 1: Submission Receipt and Feedback 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 2019 QTR 1	
Feedback Status Level:	Informational Message	
Submission Date/Time:	04/03/2019 1:46:39 PM	
Submitter User ID:	rsilva	
Submission ID:	1233256	
Resubmission Required:	No	
EPA Analyst:	Carlos R Martinez; (202) 343-9747; martinez.carlos@epa.gov	

EXPLANATION OF YOUR FEEDBACK 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; however, the Evaluation Results at the end of this Feedback Report contain one or more Informational Messages. If any of the Informational Messages indicates a reporting problem, the EPA strongly encourages you to correct the problem(s) and resubmit the data. 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 e-mail 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: https://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: https://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 the EPA's website at: https://www.epa.gov/airmarkets/clean-air-markets-ecmps-reporting-instructions.

Facility ID (ORISPL): 55393 State: CA

ECMPS Feedback

April 3, 2019 01:46 PM

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

.

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	1,505					1,505
Operating Time (hrs)	1,483.11					1,483.11
SO2 Mass (tons)	0.8					0.8
CO2 Mass (tons)	165,036.3					165,036.3
Heat Input (mmBtu)	2,777,030					2,777,030
NOx Emission Rate (lb/mmBtu)	0.008					0.008



July 12, 2019 05:45 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 "Feedback 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 Feedback 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 2019 QTR 2	
Feedback Status Level:	No Errors	
Submission Date/Time:	07/12/2019 5:45:31 PM	
Submitter User ID:	rsilva	
Submission ID:	1257662	
Resubmission Required:	No	
EPA Analyst:	Carlos R Martinez; (202) 343-9747; martinez.carlos@epa.gov	

EXPLANATION OF YOUR FEEDBACK 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: https://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: https://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: https://www.epa.gov/airmarkets/clean-air-markets-ecmps-reporting-instructions.

Facility ID (ORISPL): 55393 State: CA

ECMPS Feedback

July 12, 2019 05:45 PM

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

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	1,533	486				2,019
Operating Time (hrs)	1,506.44	441.55				1,947.99
SO2 Mass (tons)	0.8	0.2				1.0
CO2 Mass (tons)	166,579.7	40,862.7				207,442.4
Heat Input (mmBtu)	2,803,012	687,608				3,490,620
NOx Emission Rate (Ib/mmBtu)	0.008	0.017				0.010



July 12, 2019 05:46 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 "Feedback 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 Feedback 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 2019 QTR 2
Feedback Status Level:	No Errors
Submission Date/Time:	07/12/2019 5:46:06 PM
Submitter User ID:	rsilva
Submission ID:	1257667
Resubmission Required:	No
EPA Analyst:	Carlos R Martinez; (202) 343-9747; martinez.carlos@epa.gov

EXPLANATION OF YOUR FEEDBACK 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: https://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: https://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: https://www.epa.gov/airmarkets/clean-air-markets-ecmps-reporting-instructions.

Facility ID (ORISPL): 55393 State: CA

ECMPS Feedback

July 12, 2019 05:46 PM

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

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	1,505	556				2,061
Operating Time (hrs)	1,483.11	500.26				1,983.37
SO2 Mass (tons)	0.8	0.2				1.0
CO2 Mass (tons)	165,036.3	46,906.3				211,942.6
Heat Input (mmBtu)	2,777,030	789,287				3,566,317
NOx Emission Rate (Ib/mmBtu)	0.008	0.020				0.011



October 15, 2019 12:11 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 "Feedback 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 Feedback 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 2019 QTR 3
Feedback Status Level:	No Errors
Submission Date/Time:	10/15/2019 12:11:29 PM
Submitter User ID:	rsilva
Submission ID:	1281117
Resubmission Required:	No
EPA Analyst:	Carlos R Martinez; (202) 343-9747; martinez.carlos@epa.gov

EXPLANATION OF YOUR FEEDBACK 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: https://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: https://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: https://www.epa.gov/airmarkets/clean-air-markets-ecmps-reporting-instructions.

Facility ID (ORISPL): 55393 State: CA

ECMPS Feedback

October 15, 2019 12:11 PM

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

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	1,533	486	1,675			3,694
Operating Time (hrs)	1,506.44	441.55	1,624.49			3,572.48
SO2 Mass (tons)	0.8	0.2	0.8			1.8
CO2 Mass (tons)	166,579.7	40,862.7	164,594.4			372,036.8
Heat Input (mmBtu)	2,803,012	687,608	2,769,636			6,260,256
NOx Emission Rate (Ib/mmBtu)	0.008	0.017	0.009			0.009



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

October 15, 2019 12:12 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 "Feedback 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 Feedback 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 2019 QTR 3
Feedback Status Level:	No Errors
Submission Date/Time:	10/15/2019 12:12:10 PM
Submitter User ID:	rsilva
Submission ID:	1281122
Resubmission Required:	No
EPA Analyst:	Carlos R Martinez; (202) 343-9747; martinez.carlos@epa.gov

EXPLANATION OF YOUR FEEDBACK 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: https://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: https://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: https://www.epa.gov/airmarkets/clean-air-markets-ecmps-reporting-instructions.

Facility ID (ORISPL): 55393 State: CA

ECMPS Feedback

October 15, 2019 12:12 PM

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

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	1,505	556	1,579			3,640
Operating Time (hrs)	1,483.11	500.26	1,534.47			3,517.84
SO2 Mass (tons)	0.8	0.2	0.8			1.8
CO2 Mass (tons)	165,036.3	46,906.3	158,095.1			370,037.7
Heat Input (mmBtu)	2,777,030	789,287	2,660,255			6,226,572
NOx Emission Rate (Ib/mmBtu)	0.008	0.020	0.009			0.010



January 28, 2020 02:53 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 "Feedback 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 Feedback 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 2019 QTR 4
Feedback Status Level:	No Errors
Submission Date/Time:	01/28/2020 2:53:28 PM
Submitter User ID:	rsilva
Submission ID:	1314756
Resubmission Required:	No
EPA Analyst:	Carlos R Martinez; (202) 343-9747; martinez.carlos@epa.gov

EXPLANATION OF YOUR FEEDBACK 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 Table1 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: https://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: https://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: https://www.epa.gov/airmarkets/clean-air-markets-ecmps-reporting-instructions.

Facility ID (ORISPL): 55393 State: CA

ECMPS Feedback

January 28, 2020 02:53 PM

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

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	1,533	486	1,675	1,838		5,532
Operating Time (hrs)	1,506.44	441.55	1,624.49	1,816.58		5,389.06
SO2 Mass (tons)	0.8	0.2	0.8	0.9		2.7
CO2 Mass (tons)	166,579.7	40,862.7	164,594.4	187,487.9		559,524.7
Heat Input (mmBtu)	2,803,012	687,608	2,769,636	3,154,831		9,415,087
NOx Emission Rate (lb/mmBtu)	0.008	0.017	0.009	0.007		0.009



January 28, 2020 02:53 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 "Feedback 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 Feedback 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 2019 QTR 4
Feedback Status Level:	No Errors
Submission Date/Time:	01/28/2020 2:53:48 PM
Submitter User ID:	rsilva
Submission ID:	1314759
Resubmission Required:	No
EPA Analyst:	Carlos R Martinez; (202) 343-9747; martinez.carlos@epa.gov

EXPLANATION OF YOUR FEEDBACK 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: https://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: https://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: https://www.epa.gov/airmarkets/clean-air-markets-ecmps-reporting-instructions.

Facility ID (ORISPL): 55393 State: CA

ECMPS Feedback

January 28, 2020 02:53 PM

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

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Ozone Season	Year-to-Date
Number of Operating Hours	1,505	556	1,579	1,839		5,479
Operating Time (hrs)	1,483.11	500.26	1,534.47	1,812.59		5,330.43
SO2 Mass (tons)	0.8	0.2	0.8	0.9		2.7
CO2 Mass (tons)	165,036.3	46,906.3	158,095.1	188,167.9		558,205.6
Heat Input (mmBtu)	2,777,030	789,287	2,660,255	3,166,240		9,392,812
NOx Emission Rate (lb/mmBtu)	0.008	0.020	0.009	0.008		0.010
Appendix 7



Tower Location METCALF Owner/Company CALPINE Company Contact Signature Signature Owner's Tower Designation Tower Manufacturer MHRLEY Process Served by Tower	Date Inspected Inspected by Inspector Signature Model No. 7496 Operation		cted by	03 - 18 - 19 JEFFRE9 Adafund 11 -10 - 10 PAND Serial No. 2236417 continuous & Intermittent D Seasonal D		
Design Conditions: GPM 153.400 HW	89.GF OF				CW 7219F °F WB 59°F °F	
Cell No / Number of Fan Cells /D	Tower Type:			e.	Crossflow Z Counterflow	
Date Tower was installed			•) P			
Condition: 1–Good 2–Keep	an ey	e o	n it	3-1	eeds immediate attention	
		0	2		Commonto	
Structure		4	3		Comments	
Structure	V		1	press.		
Casing Material	X		-			
Structural Material	V	-	-			
Fan Deck Material	A					
Stairway 🗆 Material	V		-			
Ladder G Material	X		-			
Handrall 🖬 Material	X		12307			
Cold Water Regin Material	X					
Cold Water Basin Material Concerts	-		+			
Water Distribution System						
Open Basin System						
Distribution Basin Material CONCRETE	X					
Inlet Pipe Material	X				•	
Inlet Manifold Material FIREZ	X					
Flow Control Valves BUTTERFLY 18 Size	X					
Nozzles-Orifice Diameter 3" Size	X					
Silt, Algae, Debris			- Ya			
Sprav Type System						
Header Pipe Material ABS	X					
Branch Pipe Material PVC	X					
Nozzles-Orifice Diameter 3 ¹¹ Size	X					
Up spray 🛛 Down spray 💋						
Heat Transfer System	·					
Fill-Type & Material <u>Pyc</u>		X	_			
Eliminators-Type & Material R/C		X	_			
Louvers-Type & Material		_				
Biological Fouling				-		
Use this space to list specific items needing attention:						
			201-522			

Condition: 1—Good 2—Keep	an e	eye	on	it 3	Needs immediate attention
Machanical Equipment	1	2	3	1	Comments
Speed Reducer Type: Bolt D. Good D. Di	root	Driv	0		Commente
Belt Drive Unit	601		ο ,	-	
Belt Designation		1	r	1	
Ean Sheave Designation		-			
Motor Shoayo Designation	-				
Gear Drive Unit	L		Contract		
Manufacturer Unalley Model	4	lno	1		Ratio 15.94 /1
Oil Level: Full of Add Immediately	_		ai a	Low	check again soon
Oil Cendition: Good M Contains Water	u D		C	LOW	
Oil Type Llood 17/ Trazil F 192	<u>u</u>		00	Jinai	
Soolo	V			1	
Decklock	X	-	-		
Backlash	1				
Han Shan Endplay	Act	l	Por		
	AC	1011	neo	quire	a
Drive Shaft Manufacturer Material C202					
Manufacturer Material <u>Prote-</u> .	L				
Fan					
Monufacturer and March	c	ivod		loh C	Adjustable Pitch P
	L.	IXe0			
Diameter 394 Hr 1000 - 10	N	um	ber	OI BI	ades <u>70</u>
Diada Matarial		V			122 Mart al 21mg
	V	~			PILE SHOVING ON SHALTES
Hub Cover Material	X				
Plade Assembly Herdware	×				
Tip Cloarange	Y				
	1		anne i		
Fon Cylinder Height	x				
Machanical Equipment Support	V		-		
Oil Fill and Drain Lina	Ý			_	
	x				
	/			- opning	
Motor					
Monutacturar Tera METANA HAUSE					
Nama Plata Data: HP 160	R		17	80	Phase 3 Hz /D Volte Alla
FLAmps 71.6 Frame 5009	1	111	11	S	FILE Special Info AA# AFHA = MATERA
F L Amps <u>97.9</u> Hame <u>9707</u>				0	The opecial into. No. Maria VIDU a
Grasse Lload Type 74 Tall Tal2					
Lipusual Noisos?	Y	'es	П	А	ction Bequired
Unusual Vibration?	Y	'es		A	ction Bequired
	Y	'es		A	ction Required
			-		
Make-un Valve			Τ		
Other Component					
Other Component					

Marley Cooling Technologies • 7401 W 129 Street • Overland Park Kansas 66213 USA 913 664 7400



Tower Location METCALE	Date Inspected	03-18-19			
Owner/Company CALPINE	Inspected by	JEFF-PK-4			
Company Contact	Inspector				
Signature	Signature	Solaking			
Owner's Tower Designation	(
Tower Manufacturer MARLEY	Model No. F450	11-10-10 PAND Serial No. 2236417			
Process Served by Tower	Operation: (Continuous Z Intermittent D Seasonal D			
Design Conditions: GPM 133.400 HW	89.81 °F	CW 721 % "F WB 59 % "F			
Cell No. 2 Number of Fan Cells 10	Tower Type:	Crossflow Z Counterflow			
Date Tower was installed					
Condition: 1–Good 2–Keep	an eye on it 3–I	eeds immediate attention			
	1 2 3	Comments			
Structure					
Casing Material CORRUGATED	X				
Structural Material FIBER	X				
Fan Deck Material	X				
Stairway 🔎 Material _//	X				
Ladder \land Material 🖊	X				
Handrail 🏾 🏹 Material <u>FIBER</u>	X				
Interior Walkway 🖉 Material FRE	X				
Cold Water Basin Material Conclete	X				
Silt, Debris Buildup					
Water Distribution System					
Open Basin System					
Distribution Basin Material	X				
Inlet Pine Material	X				
Inlet Manifold Material	X				
Flow Control Valves ButtkPELY 16 Size	X				
Nozzles-Orifice Diameter 3" Size	X				
Silt. Algae. Debris	1				
Spray Type System	<u></u>				
Header Pipe Material ABS	X				
Branch Pipe Material PVC	X				
Nozzles–Orifice Diameter 3 ["] Size	X				
Up spray 🛛 Down spray 🗭	,				
Uset Transfer System					
Fill Type & Material	X Z	PATTIE			
Filiminetere Tune & Material 214	x	EDIATE ALTER JERLINETS			
Leuwere Type & Material		WHE NEED REJEATLED			
Louvers-Type & Material <u>GPLY</u>					
	L	· · · · · · · · · · · · · · · · · · ·			
Use this space to list specific items needing attention:					

Condition: 1—Good 2—Keep	an e	eye	on i	t 3	—Needs immediate attention
Mechanical Equipment	1	2	3		Comments
Speed Reducer Type: Belt D Gear of Dir	rect	Driv		1	
Belt Drive Unit		Din		•	
Belt Designation		Π			
Fan Sheave Designation	-				
Motor Sheave Designation					
Gear Drive Unit	L				1
Manufacturer MARLER Model	14	laco			Ratio 15.84 /1
Oil Level: Full 🗹 Add Immediately	a	n)/1		Low	check again soon
Oil Condition: Good 🔏 Contains Water	Q		Co	ntain	s Metal Contains Sludge
Oil Type Used 76 TuzBINE 220					
Seals	X				
Backlash	X				
Fan Shaft Endplay					
Unusual Noises? No 🗹 Yes 🗅	Act	ion I	Req	uired	I_NA
Drive Shaft					
Manufacturer MARLEY Material FIBER.					
Fan					
Fan Type: Propeller 🗹 Blower 🗅					
Manufacturer MARLEY	Fi	ixed	Pito	h 🖬	Adjustable Pitch
Diameter 394" HP 7000 - 10	N	umb	er o	f Bla	des 10
Blade Material		X			FIBER SHOWING
Hub Material CARBON	X				
Hub Cover Material FiseR	X				
Blade Assembly Hardware 5/5	X				
Tip Clearance min max	X				
Vibration Level	X				
Fan Cylinder Height _/4	X				
Mechanical Equipment Support GAW	X				
Oil Fill and Drain Line 5/5		X			FITING LEAKS
Oil Level Sight Glass			-		
Vibration Limit Switch METRIC					
Motor					
Manufacturer TECD WESTING HOUSE					
Name Plate Data: HP 250	RP	'M _	178	iv .	Phase <u>3</u> Hz 60 Volts 4160
FLAmps 31.5 Frame 5009				SF	1.13 Special Info. M# AEH6 - WTOO 2
Last Lubrication—Date					
Grease Used—Type 76 FolsTAC -7					1 0
Unusual Noises? No 🗹	Y	es (ב	Ac	tion Required
Unusual Vibration? No 🛛	Ye	es C	ב	Ac	tion Required
Unusual Heat Build-up? No 🗹	Ye	es C	ב	Ac	tion Required
с. 	- T				-
Make-up Valve		_			
Other Component	-		_		· · · ·
Other Component					

Marlev Cooling Technologies • 7401 W 129 Street • Overland Park, Kansas 66213 USA 913 664 7400



SM-CKLIST

Tower Location METCALF Owner/Company CALPINE Company Contact	Date Inspected Inspected by Inspector Signature Model No. 77498 Operation: C 59.67° F Tower Type:				$\begin{array}{c} 03-18-19\\ \hline \hline$			
			0		Commente			
Structure Casing Material Corrugation Structural Material FIBER Fan Deck Material FIBER Stairway Material Ladder Material Handrail Material FIBER Interior Walkway Interior Walkway Material Cold Water Basin Material Concrete Silt, Debris Buildup								
Water Distribution Ovotom								
Open Basin System		-						
Distribution Basin Material CONCRETE	X	_	_					
Inlet Pipe Material	X		-					
Inlet Manifold Material FIBER	-	,	X -		HAS A LEAK			
Flow Control Valves <u>Buttle L9</u> Size Nozzles-Orifice Diameter <u>3</u> " Size Silt, Algae, Debris	X				· · · · · · · · · · · · · · · · · · ·			
Spray Type System	N	T			a and a second			
Reader Pipe Material	1							
Nozzlas-Orifice Diameter 3 ¹¹ Size	X							
Up spray Down spray					*			
Heat Transfer System								
Fill-Type & Material RVC		X		T	RITTLE			
Eliminators-Type & Material RVC		X		N	EED SOME REPLACED			
Louvers-Type & Material <u>GALY</u> . Biological Fouling								
Use this space to list specific items needing attention:								

Condition: 1—Good 2—Keep	an e	eye	oni	it 3	-Needs immediate attention
Mechanical Equinment	1	2	3		Comments
Speed Reducer Type: Belt D Geer D' Di	rect	Driv		ן ר	
Belt Drive Unit	1001	DIN		1	
Belt Designation	-	1	1		
Ean Sheave Designation	-				
Motor Sheave Designation					
Gear Drive Unit	-				
Manufacturer <u>Miller</u> Model	2	lao)		Ratio 15.94 /1
Oil Level: Full 🛛 Add Immediately	Q			Low	check again soon 🗖
Oil Condition: Good 💋 Contains Water			Co	ontai	ns Metal 🗅 Contains Sludge 🗅
Oil Type Used 176 Tuzz 1/17 220		an and a start of			
Seals		X			LETIK
Backlash		1			
Fan Shaft Endplay					
Unusual Noises? No 🗖 Yes 🗅	Ac	tion	Rec	quire	d
Drive Shaft		-			
Manufacturer MARLEY Material FIBER.	X	sorrell.			
Fan					
Fan Type: Propeller 🗹 Blower 🗅					
Manufacturer MARLE4	F	ixec	d Pit	ch C	Adjustable Pitch 🗅
Diameter 384" H77000 - 10	N	lumł	ber	of Bla	ades _/2
	1				
Blade Material	_	X	_		SHOWING FIBER
Hub Material CARBON	Y				
Hub Cover Material	X				
Blade Assembly Hardware 5/5	*				
Tip Clearance min max	×				3
Vibration Level					
Fan Cylinder Height _/4	X				
Mechanical Equipment Support	X		-		
Oil Fill and Drain Line <u>3/5</u>	X				
Oil Level Sight Glass	X				
Vibration Limit Switch METRIX			·		
Motor					
Manufacturer TECD WESTING HOUSE		1910 - E		1.2	
Name Plate Data: HP	R	PM_	14	80	Phase <u>3</u> Hz <u>60</u> Volts <u>4160</u>
F L Amps 31.5 Frame 5009	/			S	F <u>1.13</u> Special Info. $M \neq AEHG - WTOOR$
Last Lubrication—Date					
Grease Used—Type <u>76 10191ACo • 7</u>					
Unusual Noises? No Z)	'es	u	A	ction Required
Unusual Vibration? No Z)	es	U o	A	ction Hequired
Unusual Heat Build-up? No 🤉	١	es	Ц	A	ction Required
			Т		· · · · · · · · · · · · · · · · · · ·
Make-up valve			-		
			-		
Other Component					



		SM-CKLIST
Tower Location METRALI	Date Inspected	03-18-19
Owner Company (LAIDIT	Inspected by	TEFFREY
Owner/Company	Inspected by	
	Signaturo	Adakast
Signature	Signature	Te more t
Owner's Tower Designation	Madal No -74	10-10-10PAND Serial No 2236417
Tower Manufacturer <u>MARLEY</u>		Continuous de Intermittent D Seasonal D
Process Served by Tower	Operation:	Continuous & Internitient & Seasonal &
Design Conditions: GPM <u>133.400</u> HW	99.81 °F	CW 7217 F WB 377 F
Cell No Number of Fan Cells	Tower Type:	Crossflow A Counterflow
Date Tower was installed 2005		
Condition: 1–Good 2–Keep	an eye on it 3-	-Needs immediate attention Comments
Structure	Laanse Annand Street and Street	
Casing Material Co28116ATED	X	
Structural Material FIBEZ	X	
Ean Deck Material	Ý	
Stainway D Material	X	
Ladder D' Material	V	
Handrail & Material FIRER	2	
Interior Welkway D Material Tizer	V	
Cold Water Basin Material An(APTTE	Ý I	
Cilt Dobris Buildun		
	<u>,</u>	Lange (1997)
Water Distribution System		
Open Basin System		
Distribution Basin Material	X	
Inlet Pipe Material	X	
Inlet Manifold Material	X	
Flow Control Valves ButterFL4 Size		
Nozzles-Orifice Diameter 3" Size	У	
Silt, Algae, Debris		
Spray Type System		
Header Pipe Material ABS	X	
Branch Pipe Material PVC	X	
Nozzles-Orifice Diameter 3" Size	X	

Heat Transfer System

Fill-Type & Material

Biological Fouling

Up spray 🛛 Down spray 🗹

Eliminators-Type & Material

Louvers-Type & Material

	X	BRITHE	
WC .	X	NEEDS	SOME REPLACED
LV			

Use this space to list specific items needing attention:

FVC

Condition: 1—Good 2—Keep	an e	eye o	on i	t 3	—Needs immediate attention
		0			Comments
Mechanical Equipment		2	3		Comments
Speed Reducer Type: Belt Gear Z Dir	rect	Driv	e L	1	**************************************
Belt Drive Unit		1			
Belt Designation 1914					
Fan Sheave Designation	-			<u></u>	
Motor Sheave Designation	L				
Gear Drive Unit	1	Inn			and we and he
Manufacturer <u>MARLER</u> Model		eev	un est		Ratio <u>13.01 /1</u>
Oil Level: Full Z Add Immediately	Q		0	Low	Check again soon
Oil Condition: Good Z Contains Water			Co	ontai	
Oil Type Used 76 Tuzzik/E 010		.1			1-0111
Seals	N	X			KEFK2
Backlash	~				
Fan Shaft Endplay	L				
Unusual Noises? No 🗹 Yes 🗅	Act	tion	Rec	quire	a
Drive Shaft	1				
Manufacturer MAKLEY Material FIBER.	X				
Fan					
Fan Type: Propeller Ø Blower			_		
Manufacturer <u>MARLE</u>	F	ixec	l Pit	ch C	Adjustable Pitch L
Diameter <u>384 HR 7000 - 10</u>	N	lumb	oer o	of Bl	ades _/2
Blade Material	-	X	-		SHOWING FIBER
Hub Material <u>CARBON</u>	X				
Hub Cover Material	X				
Blade Assembly Hardware <u>5/5</u>	T		_		
Tip Clearance " min " max	X				
Vibration Level		-			
Fan Cylinder Height _/4	X		_		
Mechanical Equipment Support	X			_	
Oil Fill and Drain Line 5/5		X			FITING LEAKS
Oil Level Sight Glass					
Vibration Limit Switch METRIK					
Motor					
Manufacturer TECD WESTING HOUSE					
Name Plate Data: HP _ 250	R	PM.	17	80	Phase <u>3</u> Hz <u>60</u> Volts <u>4160</u>
F L Amps 31.5 Frame 5009	7			S	F 1.15 Special Info. M# AFILG - WTOOR
Last Lubrication—Date					
Grease Used—Type 76 F619TAC - 7	-				./.
Unusual Noises? No 🗹	١	/es	D	A	ction Required <u>NA</u>
Unusual Vibration? No 🛛	١	res		A	ction Required NA
Unusual Heat Build-up? No 🗹	١	/es		A	ction Required
Make-up Valve	-				2
Other Component					
Other Component					

Marlev Cooling Technologies • 7401 W 129 Street • Overland Park Kansas 66213 USA 913 664 7400



Tower Location METCALF Owner/Company CAPINE Owner/Company CAPINE Company Contact Signature Signature Owner's Tower Designation Tower Manufacturer MHRLEY Process Served by Tower Design Conditions: Design Conditions: GPM Cell No. 5 Number of Fan Cells 10 Date Tower was installed 2005	Date Inspected Inspector Signature Model No. 7497 Operation: 697.67 ° F Tower Type:	$\begin{array}{c} 03 - 19 - 19 \\ \hline \\ $
Condition: 1–Good 2–Keep	an eye on it 3-l	veeds immediate attention
	1 2 3	Comments
Structure		
Casing Material Copplic NTED	V	
Structural Material	$\mathbf{\hat{\mathbf{v}}}$	
Ean Dock Material	5	
Stairway Ø Material	X	
Ladder Ø Material	ý l	
Handrail A Material TIRE	4	
Interior Walkway D Material	5	
Cold Water Basin Material	Ŷ	
Silt Debris Buildun		
Water Distribution System		
Onen Basin System		
Distribution Basin Material	Y	
Inlet Pine Material	X	
Inlet Monifold Material	X	
Flow Control Values SuTERTUR 16" Size	Y	
Norrige Orifice Diameter 21' Size	Y	
Nozzies-Office Diameter 2 Size		
Sill, Algae, Deblis		
Spray Type System	V	
Reader Fipe Material	X	
Nezzleo Orifico Diameter 7/1 Sizo	Y	
op spray 🗅 Down spray 🟳		
Heat Transfor System		
Fill Tupo & Motorial	XD	IT FU
Eliminatore_Type & Material Pill	XG	ME NEEDED
Louvers-Type & Material		Net Vet Vet
Biological Fouling		
	<u></u>	
Use this space to list specific items needing attention		
	, ()	

Condition: 1—Good 2—Keep	an	eye	on	it 3	3—Needs immediate attention
Mechanical Equipment	1	2	3		Comments
Speed Beducer Type: Belt \Box Gear $\overline{A'}$ Di	rect	Driv		ו ר	
Belt Drive Unit	1001	DI		-	
Belt Designation N4		1			
Fan Sheave Designation					
Motor Sheave Designation					a
Gear Drive Unit		-			
Manufacturer MIRLEY Model	2	lao	,		Ratio 15.84 /1
Oil Level: Full 🔏 Add Immediately	Q			Low	, check again soon 🗖
Oil Condition: Good 💋 Contains Water	D		Сс	ontai	ns Metal 🗅 Contains Sludge 🗅
Oil Type Used 76 TUZBINE 220	·				
Seals		X			LEAKS
Backlash	X				-
Fan Shaft Endplay					
Unusual Noises? No 🗹 Yes 🗅	Ac	tion	Rec	luire	d
Drive Shaft	-	-			
Manufacturer MARLEY Material FIBER.	X	1			
Fan					
Fan Type: Propeller 🛛 Blower 🗅					
Manufacturer <u>MARLE4</u>	F	ixec	l Pit	ch 🕻	Adjustable Pitch
Diameter 394" HP 7000 - 10	Ν	lumł	oer o	of Bl	ades 10
Blade Material		X	_		Stownib FIGER
Hub Material <u>CARBON</u>	X				
Hub Cover Material <u>FIBER</u>	X		-	_	
Blade Assembly Hardware 5/5	X				
Tip Clearance min max	X		-		
Vibration Level	1				
Fan Cylinder Height	X				
Mechanical Equipment Support <u>GAU</u>	X		-	_	Cart II I and
Oil Fill and Drain Line <u>3/5</u>		X	-		FILLING LEAKS
			-		
Vibration Limit Switch <u>Me 7 Kick</u>					
Montor The site Talk three					
Nama Plata Data:	DI		1/2	80	Phase 3 HE D Mate Hille
		- 111	11		Filase HZ Volts
F L Amps <u>07.9</u> Frame <u>9007</u>				0	<u>J.15</u> Special Into. <u>M(+ Akiros + W160%</u>
Grosse Used Type 7/ TalkTar = 2					1
	Y	(es		А	ction Bequired
Linusual Vibration? No Ø	Y	les		A	ction Bequired a/.2
Unusual Heat Build-up? No Ø	Y	'es	0	A	ction Required 1/2
	,	20	-	~	
Make-up Valve					
Other Component					
Other Component	-				

Marlev Cooling Technologies • 7401 W 129 Street • Overland Park, Kansas 66213 USA 913 664 7400



Tower Location METCALF Owner/Company CALPINE Company Contact	Date Inspected Inspected by Inspector Signature Model No. 174750 Operation: G9.61 ° F C Tower Type:	$\frac{D3-04-19}{TEFREG}$ $\frac{1}{1000}$ $\frac{1}{10$		
Condition: 1–Good 2–Keep	an eye on it 3–N	leeds immediate attention		
	1 2 3	Comments		
Structure	hanna a la serie de la serie d			
Casing Material COZULLATED	X			
Structural Material	V			
Ean Dock Material	V			
Stoinway A Material	ý I			
Ladder R Material	V			
Landroil & Material				
Handrall Malenal <u>FISER</u>	X			
Interior Walkway 2 Material	S			
Cold Water Basin Material Concrete	x			
Silt, Debris Buildup				
		90		
Water Distribution System				
Open Basin System				
Distribution Basin Material CONCLETE				
Inlet Pipe Material	X			
Inlet Manifold Material	X			
Flow Control Valves Butterfly Size	X			
Nozzles-Orifice Diameter 3" Size	X			
Silt, Algae, Debris				
Spray Type System	·			
Header Pipe Material ABS	X			
Branch Pipe Material PVC	X			
Nozzles-Orifice Diameter 3 ¹¹ Size	X			
Up spray 🛛 Down spray 🗹				
Heat Transfer System		2		
Fill-Type & Material		KITTLE FILL		
Eliminators-Type & Material R/C	X M	EEDS REPLACED		
Louvers-Type & Material <u>GALY</u> .				
Biological Fouling				
Use this space to list specific items needing attention:				

Condition: 1—Good 2—Keep a	an e	eye c	on i	t 3	-Needs immediate attention
Mochanical Equipment	1	2	3		Comments
Speed Beducer Type: Belt \Box Gear $\overline{\alpha}'$ Dir	ect	Driv			Commente
Belt Drive Unit /	001	CIIV			
Belt Designation					
Fan Sheave Designation					2
Motor Sheave Designation					
Gear Drive Unit					1
Manufacturer MURLEY Model	4	laco			Ratio 15.84 /1
Oil Level: Full Add Immediately	a	Ann saithe		Low,	check again soon
Oil Condition: Good D Contains Water	Q		Со	ntain	s Metal Contains Sludge
Oil Type Used 76 Tazzill E 220					
Seals	X				
Backlash	X				
Fan Shaft Endplay					
Unusual Noises? No 🗹 Yes 🗅	Act	ion F	Req	uirec	l
Drive Shaft			W.		-
Manufacturer MARIEY Material FIBER.	X				
Fan					8
Fan Type: Propeller 🛛 Blower 🗅					
Manufacturer MARLE4	F	ixed	Pite	ch 🖸	Adjustable Pitch 🗅
Diameter 384" HP 7000 - 10	Ν	umb	er c	of Bla	ides 10
Blade Material		X		F	BER SHOWING - NO END PLUGS
Hub Material CARBON	×				
Hub Cover Material FiBer2	X		_		
Blade Assembly Hardware 5/5	X		_		
Tip Clearance 🔤 " min 🔤 🥵 " max	X			-	
Vibration Level	X				
Fan Cylinder Height _/4	X				
Mechanical Equipment Support	X		_		
Oil Fill and Drain Line	X				
Oil Level Sight Glass	X	-	-		
Vibration Limit Switch METRIN					
Motor					
Manufacturer TECD WESTING HOUSE					
Name Plate Data: HP _250	RF	PM_	14	30	Phase <u>3</u> Hz <u>60</u> Volts <u>4160</u>
F L Amps 31.5 Frame 5009		- 100 - 12		SF	I.13 Special Info. M# AEH6 - WTOO 2
Last Lubrication—Date	A				
Grease Used—Type <u>46 4619TACo + 7</u>					/
Unusual Noises? No 🗡	Y	es (Ac	ction Required
Unusual Vibration? No 🔎	Y	es (1	Ac	ction Required
Unusual Heat Build-up? No 🗡	Y	es (ב	Ac	ction Required
Make-un Valve			Τ	et autorite	
Other Component					
Other Component					
		i			

Marlev Cooling Technologies • 7401 W 129 Street • Overland Park Kansas 66213 USA 913 664 7400



Tower Location METCHLF Owner/Company CALPINE Owner/Company CALPINE Company Contact Signature Signature Owner's Tower Designation Tower Manufacturer MHRLEY Process Served by Tower Pesign Conditions: GPM 133.460 HW Cell No. 7 Number of Fan Cells 10 Date Tower was installed 2005 10	Date Inspected $\underline{D3} - \underline{24} - \underline{19}$ Inspected by $\underline{16} + \underline{77} + \underline{76} + \underline{77} +$
Condition: 1–Good 2–Keep	an eye on it 3–Needs immediate attention
Structure Casing Material Co2RUGATED Structural Material FIBEZ Fan Deck Material Image: Cost of the structural material Stairway Gr Material Image: Cost of the structural material Ladder Gr Material Image: Fiber of the structural material Handrail Gr Material Fiber of the structural material Cold Water Basin Material Conclette Silt, Debris Buildup Silt	1 2 3 Comments X
Water Distribution System Open Basin System Distribution Basin Material CDACRETE Inlet Pipe Material CPRESON Inlet Manifold Material FIRER Flow Control Valves ButtleDefLY Nozzles-Orifice Diameter 3'' Size Size Silt, Algae, Debris Size Branch Pipe Material ABS Branch Pipe Material PVC Nozzles-Orifice Diameter 3'' Size Size Signay Type System Size Header Pipe Material PVC Nozzles-Orifice Diameter 3'' Size Size Up spray Down spray	
Heat Transfer System Fill-Type & Material Rvc Eliminators-Type & Material Rvc Louvers-Type & Material GPLV. Biological Fouling Use this space to list specific items needing attention:	X BRITTLE X SOME NEED REPLACIALS

Condition: 1—Good 2—Keep	an e	eye d	on i	t 3	—Needs immediate attention
Mechanical Equipment	1	2	3		Comments
Speed Reducer Type: Belt D Gear D' Di	rect	Driv)	
Belt Being Unit	1601	DIN	0 4	-	
Belt Drive Unit					
Belt Designation	-				
Fan Sheave Designation				enante s	
Motor Sneave Designation	L				
Gear Drive Unit	. ,	Inn			and we and he
Manufacturer MARLEY Mode		uv			Ratio 19. 27 / 1
Oil Level: Full 🙇 Add Immediately	' Q			Low	, check again soon
Oil Condition: Good Z Contains Water	r Q		Co	ontair	hs Metal D Contains Sludge D
Oil Type Used 76 TuzBINE 220		./			
Seals		X		4	MAU LEAKS
Backlash	-		_		
Fan Shaft Endplay					
Unusual Noises? No 🗹 Yes 🗅	Act	tion	Rec	uire	äl
Drive Shaft		— T			-
Manufacturer MAPLEY Material FIBER.	Y				
Fan					
Fan Type: Propeller 🗹 Blower 🗅					
Manufacturer <u>MARLE9</u>	F	ixed	Pit	ch 🗆	Adjustable Pitch D
Diameter 384" H7 7000 - 10	N	lumb	ber	of Bla	ades _/2
				<u></u>	
Blade Material		X		7	BER SHOWING
Hub Material	X				
Hub Cover Material	×				
Blade Assembly Hardware 5/5	X				
Tip Clearance " min " max	x				
Vibration Level	X				
Fan Cylinder Height	X				
Mechanical Equipment Support	×				
Oil Fill and Drain Line 5/5		X		1	BMALL LEAK
Oil Level Sight Glass					
Vibration Limit Switch					
Motor					
Manufacturer TEAD WESTING HOUSE					
Name Plate Data: HP 250	R	PM	17	80	Phase 3 Hz 60 Volts 4160
FLAmps 31.5 Frame 5009	9			S	I.15 Special Info. M# AEH6 - WTOO2
Last Lubrication—Date					
Grease Used—Type 7/6 FollsTate - 7	L				
Unusual Noises? No 🗹	Y	(es	Q	А	ction Required
Unusual Vibration? No a	Y	/es	D	A	ction Required
Unusual Heat Build-up? No Z	Y	es		A	ction Required
Make-up Valve					
Other Component					
Other Component					
	L	I			

Marlev Cooling Technologies • 7401 W 129 Street • Overland Park, Kansas 66213 USA 913 664 7400



		SM-CKLIST
Tower Location METCALF Owner/Company CALPINE Company Contact	Date Inspected Inspected by Inspector Signature Model No. 1749 Operation: 199.161 ° F Tower Type:	$\frac{D3 - 24 - 19}{JEFFRE9}$ $\frac{JEFFRE9}{4 - \frac{10}{10}}$ Continuous B Intermittent \Box Seasonal \Box $CW = \frac{121}{12}$ °F WB <u>59 °F</u> °F Crossflow B Counterflow
Condition: 1–Good 2–Keep	an eye on it 3-	-Needs immediate attention
Structure Casing Material Co2RUGATED Structural Material FIBEZ Fan Deck Material FIBEZ Stairway Material Ladder Material Handrail Material FibeZ FibeZ Stairway Material Ladder Material Handrail Material FibeZ FibeZ Interior Walkway Material Cold Water Basin Material Conclette Silt, Debris Buildup	1 2 3 X	Comments
Water Distribution System Open Basin System Distribution Basin Material CONCRETE Inlet Pipe Material CARBON Inlet Manifold Material FIBRE Flow Control Valves Buttlepflet Nozzles-Orifice Diameter 3" Size Size Silt, Algae, Debris Size Branch Pipe Material ABS Branch Pipe Material PVC Nozzles-Orifice Diameter 3" Size Size Up spray Down spray		NEED A LITTLE CLEANING
Heat Transfer System		

Fill-Type & Material <u>PVC</u> Eliminators-Type & Material <u>PVC</u> Louvers-Type & Material <u>GPLV</u> .	X	OZD. SOME	FILL NEED	REPLACING	
Use this space to list specific items needing attention:					

Condition: 1—Good 2—Keep	an	eye	on i	it 3	Needs immediate attention
		1.			2
Mechanical Equipment	1	2	3		Comments
Speed Reducer Type: Belt Gear Z Di	rect	Driv	/e [נ	
Belt Drive Unit		1	r - 1		
Belt Designation	-	-			
Fan Sheave Designation	-	-			
Motor Sheave Designation					
Gear Drive Unit		1000			
Manufacturer MARLEY Mode	1_4	1000			Ratio 15.94 /1
Oil Level: Full a Add Immediately	0			Low	check again soon 🗖
Oil Condition: Good 🛛 Contains Water	r D		Co	ontain	s Metal 🗅 Contains Sludge 🗅
Oil Type Used 176 TuzBINE 220	_				
Seals	_	X			TEP OF GEAR BOX LUAK
Backlash	-				
Fan Shaft Endplay					
Unusual Noises? No 🗹 Yes 🗅	Ac	tion	Req	uired	1
Drive Shaft					*
Manufacturer MARLEP Material FIBER.	X				
Fan	,				
Fan Type: Propeller 🗹 🛛 Blower 🗅				1	
Manufacturer MARLE4	F	ixed	Pite	ch d	Adjustable Pitch Z
Diameter 384" HR 7000 -10	Ν	lumb	oer o	of Bla	des 10
Blade Material		X		I	BEZ SHAW JING 6
Hub Material CARBON	X				
Hub Cover Material FIBER	×				
Blade Assembly Hardware 5/5	×				
Tip Clearance / " min 2 " max	¥				
Vibration Level					
Fan Cylinder Height /// '	×				
Mechanical Equipment Support	X				
Oil Fill and Drain Line 5/5	•	X			FITING IFAKS
Oil Level Sight Glass		~			
Vibration Limit Switch					9
Motor			-	-	
Manufacturer TEAR MARETING HOUSE					
Name Plate Data: HP 160	RI		1129	80	Phase 3 Hz /D Vale Hille
FLAmps 71.6 Frame 5009)	IVI _	110	S F	I le Special Info at # 1511
Lest Lubrication Date	S				1.13 Special Into. Mar ARING - W100 2
Crease Head Tupe					
Grease Used—Type <u>46 40K7 14C - F</u>	~	100			tion Demuined
	Y	65 1	-	AC	tion Dominad
	Y	es l		AC	tion Required
Unusual Heat Build-up? NO D	Ŷ	esi	_	AC	
Make up Value			Т	_	
Nake-up valve					
			-	-	
Other Component					

Marlev Cooling Technologies • 7401 W 129 Street • Overland Park, Kansas 66213 USA 913 664 7400



		SM-CKLIST
Tower Location METCALF Owner/Company ALPINK Company Contact	Date Inspected Inspected by Inspector Signature Model No. 17498 Operation: Ggg. G 17 ° F Tower Type:	$\begin{array}{c} 03 - 05 - 19 \\ \hline $
Condition: 1–Good 2–Keep	oan eye on it 3–N	eeds immediate attention
	1 2 3	Comments
Structure		
Casing Material CO2RUGATED	X	
Structural Material	×	
Fan Deck Material	\times	
Stairway 🖵 Material /	X	
Ladder 🛛 Material	X	
Handrail @ Material FIBER	X	
Interior Walkway @ Material Fize2	1	
Cold Water Basin Material	X	
Silt, Debris Buildup	X	NEED CLEANING
Water Distribution System		
Open Basin System		
Distribution Basin Material	X	
Inlet Pipe Material CARBON	X	,
Inlet Manifold Material FIREZ	X	
Flow Control Valves Butterfly 18 Size	X	
Nozzles-Orifice Diameter 3" Size	X	
Silt. Algae. Debris		
Sprav Type System		
Header Pipe Material 4725	X	
Branch Pine Material DVC	X	
Nozzles-Orifice Diameter 3 ¹¹ Size	X	

Use this space to list specific items needing attention:

Nozzles-Orifice Diameter

Heat Transfer System

Fill-Type & Material

Biological Fouling

Up spray 🗆 Down spray 🗹

Eliminators-Type & Material

Louvers-Type & Material

3"

PVC

RUC

GALV.

Size

BRITTLE

REPLACE

SOME

V

Condition: 1—Good 2—Keep	an e	eye	on i	it 3	-Needs immediate attention
Mechanical Equinment	1	2	3		Comments
Speed Beducer Type: Belt D Gear D	rect	Driv		<u> </u>	
Belt Drive Unit	001	DIN		-	
Belt Designation	[
Ean Sheave Designation	-	-			
Motor Sheave Designation	-				
Gear Drive Unit	L				,
Manufacturer Miller Model	4	laco			Batio 15.84 /1
Oil Level: Full Add Immediately	_		-un X	Low	check again soon
Oil Condition: Good Z Contains Water			Co	ontai	ns Metal
Oil Type Used 76 The Bluff 120	-				
Seals		×			FITTING IFAKS
Backlash	X	Í			
Fan Shaft Endplay	ř-				
Unusual Noises? No 🗹 Yes 🗅	Act	tion	Rec	uire	±
Drive Shaft					
Manufacturer Material FIBER	X				
Fan	4				
Fan Type: Propeller Ø Blower					
Manufacturer MARLEY	F	ixed	Pite	ch C	Adjustable Pitch 🗹
Diameter 394" HP 7000 -10	N	lumb	ber o	of Bla	ades 10
<u> </u>					
Blade Material	•	X		F	TBER SHOWN 6
Hub Material CAZBort	x			Concernent of	
Hub Cover Material File	x				
Blade Assembly Hardware 5/5	V				
Tip Clearance min max	X				
Vibration Level					
Fan Cylinder Height /4'	×				
Mechanical Equipment Support	X				
Oil Fill and Drain Line 5/5	X				
Oil Level Sight Glass	×				
Vibration Limit Switch METRICK					A
Motor					
Manufacturer TECD WESTING HOUSE				_	
Name Plate Data: HP 250	R	PM_	17	80	Phase <u>3</u> Hz <u>60</u> Volts <u>4160</u>
FLAmps 31.5 Frame 5009	1			SI	= 1.15 Special Info. M # AEH6 - WTOO 2
Last Lubrication—Date	10000				1. Provide the second secon
Grease Used—Type <u>76 P619TAC 2</u>					1
Unusual Noises? No 😰	Y	'es l		A	ction Required NA
Unusual Vibration? No Q	Y	es l	Q	A	ction Required NA
Unusual Heat Build-up? No 📮	Y	es l		A	ction Required N P
Make-up Valve					
Other Component					
Other Component					
		-			



SM-CKLIST

Tower Location METCALF	Date Inspected	63-25-19
Owner/Company Catt PINE	Inspected by	TEFFRE 4
Company Contact	Inspector	
Signature	Signature	adrivie V
Owner's Tower Designation		- Ya took - 1
Tower Manufacturer	Model No F488	1-40-10PAND Serial No. 2236417
Presses Sanuad by Towar	Operation:	ontinuous 🖉 Intermittent 🛛 Seasonal 🔾
Design Conditions: CPM	GA AF OF	W 721 % °F WB 59 °F °F
Outline In Number of Ean Callo	Tower Type:	Crossflow Counterflow
Cell No. 10 Number of Pan Cells 10	Tower Type.	
Date Tower was installed		
Condition: 1–Good 2–Keep	an eye on it 3–N	eeds immediate attention
Structure		
Casing Material COZRUGATED	X	
Structural Material FIBEZ	X	
Fan Deck Material	X	
Stairway Material	V	
Ladder @ Material	Ý	
Handrail Q Material FIBER	X	
Interior Walkway & Material FIBiZ	X	
Cold Water Basin Material Con (CRETE	X	
Silt, Debris Buildup	X	NEED CLEANING
Water Distribution System		
Open Baola System		
Distribution Desin Material	X	
Unistribution Basin Material COACCECTE	2	
Inlet Pipe Material	× I	
Film Control Values 7 TERTUR IKI Sizo		
Flow Control Valves <u>DATIBETLY</u> IV Size		
Nozzies-Office Diameter <u>2</u> Size	X	· · · · · · · · · · · · · · · · · · ·
Slit, Algae, Debris		
Spray Type System		
Header Pipe Material <u>#52</u>		
Branch Pipe Material <u>PVC</u>		
Nozzies-Orifice Diameter 2 Size		
Up spray 🔲 Down spray 💋		
Heat Transfer System		
Fill-Type & Material <u>PyC</u>	X D	ATTLE HILL
Eliminators-Type & Material R/C	X 50	ME MEED KEILACIAG

Condition: 1—Good 2—Keep	an e	eye d	on it	t 3—Needs immediate attention
Mechanical Equipment	1	2	3	Comments
Speed Beducer Type: Belt \Box Gear \Box' Dir	rect	Driv		
Belt Drive Unit	001	DIIV		
Belt Designation				
Ean Sheave Designation				
Motor Sheave Designation	-			
Gear Drive Unit	L			
Manufacturer 1010180 Model	11	no		Patio 15.94
Oil avel: Full F Add Immediately			were start	
Oil Condition: Cood & Containe Water	U D		Co	Low, check again soon i
	u		00	
		V	T	P.1.110 100160
Seals		\wedge		SMALL LEAKS
Fan Shaft Endplay				
Unusual Noises? No Z Yes D	Act	ion H	Red	uired
Drive Shaft	v			
Manufacturer MALLEY Material FIBER.	r			
Fan				
Fan Type: Propeller 🗹 Blower 🗅			- 4.7.7 - 10	
Manufacturer <u>MARLER</u>	Fi	xed	Pitc	ch D Adjustable Pitch D
Diameter <u>364 HP 7000 - 10</u>	N	umb	er o	of Blades _/2
	<u>г т</u>		- 1	
Blade Material		X	_	FIBEL SHOWING
Hub Material CARBON	X	_	-	
Hub Cover Material FiBeiz	X		-	
Blade Assembly Hardware 3/5	X	-	_	
Tip Clearance min max	X		_	
Vibration Level	X		_	
Fan Cylinder Height _/4	X		_	
Mechanical Equipment Support	X		-	
Oil Fill and Drain Line 5/5	X			
Oil Level Sight Glass				
Vibration Limit Switch METRIK				
Motor				
Manufacturer TECD WESTING HOUSE				
Name Plate Data: HP 250	RF	M	178	30 Phase <u>3</u> Hz <u>60</u> Volts <u>4160</u>
F L Amps 31.5 Frame 5009	1			SF 1.15 Special Info. M# AFH& - WTOD 2
Last Lubrication—Date				
Grease Used—Type 76 F619TACs - 2				
Unusual Noises? No 🗹	Y	es (ב	Action Required
Unusual Vibration? No 🗹	Y	es (ב	Action Required
Unusual Heat Build-up? No 💋	Y	es Ç	ב	Action Required
Make-up Valve	T			
Other Component				
Other Component				

Marlev Cooling Technologies • 7401 W 129 Street • Overland Park, Kansas 66213 USA 913 664 7400

Appendix 8

Metcalf Energy Center

Annual Compliance Report 2019 Water Usage Summary

Recycled Water					
month consumption (gal)					
January	65,561,452				
February	47,529,416				
March	23,506,648				
April	5,981,756				
May	3,777,400				
June	26,556,992				
July	41,296,332				
August	59,630,560				
September	57,339,436				
October	61,288,128				
November	41,033,036				
December	66,692,428				
Total	500,193,584				

Potable Water						
month consumption (ga						
January	7,870,456					
February	6,652,712					
March	4,445,364					
April	6,142,576					
Мау	6,534,528					
June	9,332,796					
July	10,091,268					
August	7,691,684					
September	7,753,020					
October	8,130,760					
November	5,784,613					
December	5,743,174					
Total	86,172,951					

Metcalf Energy Center

Annual Compliance Report 2019 Water Usage Summary Condition of Certification S&W-1

Recycled Water

Cooling Tower for Steam Cycle Cooling	500,193,584
Total Gallons 201 9	500,193,584
Potable Water	
Condenser Make-Up	31,239,478
Steam Attemperation	29,546,189
Inlet Air Cooling	8,014,219
Domestic	664,539
RO Reject	13,226,664
Filter Backwash	2,645,333
CT Wash Water	426,294
Plant Wash Down	608,991
Total Gallons 2019	86,172,951

Appendix 9

METCALF ENERGY CENTER 2019 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	Туре	Planned	Actual
Non-hazardous	Recyclables	Recycle (Off-site)	Recycle (Off-site)
Solid Waste	Non-Recyclables	Landfill	Landfill
Non-hazardous	Sanitary Waste	Sewage Treatment Plant	Sewage Treatment Plant
Liquid Waste	Process Waste Water	Sewage Treatment Plant	Sewage Treatment Plant
	Used Oil	Recycle (Off-site)	Recycle (Off-site)
Hazardous	Oily Water	Off-site disposal company	Off-site disposal company
	Corrosive Liquid	Off-site disposal company	Off-site disposal company
	Used Oil Filters	Recycle (Off-site)	Recycle (Off-site)
Hazardous Solid	Oily Rags	Off-site disposal company	Off-site disposal company
T T T T T T T T T T T T T T T T T T T	Universal Waste	Recycle (Off-site)	Recycle (Off-site)

Appendix 10

ERIK NICHOIS

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 CPMapproved 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.

UNIT: Steam Turbine

	TURBINE / GENERATOR ENCLOSURE	GENERATOR / CONDENSER SOUND WALL
Chalking	l	1
Erosion	l	1
Discoloration	I	1
Fading	1	1
Loss of Gloss	1	· · · · · · · · · · · · · · · · · · ·
Mildew Defacement	1	1
Moisture Blushing	t	1
Orange Peel	1	١
Wrinkling	1	
Chemical Attack	1	N
High Temperature Attack	1	
Mottling	1	1
Crackling	1	
Saponification	1	1
Disbanding (peel/blister)	1	l
Crawling (fish eve)	1	1

Comments:

UNIT: Cooling Tower

	SUPERSTRUCTURE
Chalking	t
Erosion/Corrosion	1
Discoloration	1
Fading	1
Loss of Gloss	1
Mildew Defacement	1
Moisture Blushing	١
Orange Peel	1
Wrinkling	١
Chemical Attack	••••••
High Temperature Attack	1
Mottling	1.
Crackling	<u> </u>
Saponification	1
Disbanding {peel/blister)	l
Crawling (fish eye)	l

Comments:

UNIT: HRSG & Gas Turbine 1

	INLET AIR FILTER HOUSE	TURBINE/ GENERATOR	STACK	SCREENING
Chalking	t	t	1	1
Erosion/Corrosion	1	ĩ	I	1
Discoloration	١	1	1	1
FadinQ	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	I	1	\$	1
Wrinkling	1	1	1	١
Chemical Attack	1	1	I	1
High Temperature Attack	1	1	1	T
Mottling	t	1	I	1
Crackling	t	1	١	١
Saponification	1	L	1	1
Dispanding (peel/blister)	I	1	1	١
Crawling (fish eye)	(1

Comments:

	INLET AIR FILTER HOUSE	TURBINE/ GENERATOR	STACK	SCREENING
Chalking	1	1	1	1
Erosion/Corrosion	1	1	(ſ
Discoloration	1	1	1	1
Fading	1	1	1	1
Loss of Gloss	1	l	1	1
Mildew Defacement	1	١	I	1
Moisture Blushing	I.	1	1	1
Orange Peel	1	1	1	1
Wrinkling	1	4	l	1
Chemical Attack	1	1		1
High Temperature Attack	l	1		1
Mottling	1	1	1	X
Crackling	l	1	1	1
Saponification	1	1	١	1
Disbanding (peel/blister)	1		1	١
Crawling (fish eye)	1	1	1	1

UNIT: HRSG & Gas Turbine 2

Comments:

UNIT: Water Tanks

	SERVICE/FIRE WATER	DEMINERALIZED WATER
Chalking	l	l
Erosion/Corrosion	(1
Discoloration	1	1
Fading	l	[
Loss of Gloss	1	1
Mildew Defacement	1	1
Moisture Blushing	1	[
Crange Peel	1	t.
Wrinkling	J	
Chemical Attack	l	١
High Temperature Attack	L	١
Mottling	l	l
Crackling	1	l
Saponification	1	1
Disbanding (peel/blister)	١	1
Crawling (fish eye)	1	

Comments:

UNIT: Buildings

	ADMINISTRATION	WAREHOUSE
Chalking	1	١
Erosion/Corrosion	1	(
Discoloration	I	1
Fading	(1
Loss of Gloss	1	1
Mildew Defacement	1	1
Moisture Blushing	1	I
Orange Peel	1	1
Wrinkling	1	1
Chemical Attack	(1
High Temperature Attack	1	1
Mottling	1	
Crackling	1	1
Saponification	1	1
Disbanding (peel/blister)	1	1
Crawling (fish eye)	١	1

Comments:

ARCHITECTURAL TREATMENT INSPECTION DEFINITIONS

Chalking - To powder from weathering.

Erosion - State of being eroded.

Discoloration - A discolored marking or area; stain.

Fading - To lose brightness or vividness of color.

Loss of Gloss - A paint defect in which a dried film of paint loses gloss, usually over a period of time.

<u>Mildew Defacement</u> - Any of similar coatings or discolorations, caused by fungi, as that which appears when exposed to moisture.

Moisture Blushing - Blushing takes place when moisture goes through condensation on a coated surface during the process of curing. At times, the moisture may be generated from porous substrates. Blushing manifests as milky or white patches, with hazy effects in clear types of coatings. In pigmented coatings, blushing may produce defects in its gloss. Blushing is also known as water spotting.

<u>Orange Peel</u> - Orange peel occurs when paint is applied over an area with oil on the surface. Something as small as a fingerprint can leave enough oil on the surface to show up as orange peel in a completed paint job.

Wrinkling - A temporary slight ridge or furrow on a surface, due to contraction, folding, crushing, or the like.

<u>Chemical Attack</u> – Decomposition of a coating due to chemical exposure.

High Temperature Attack - Decomposition of a coating due to exposure to high temperatures.

Mottling - To color with streaks or blotches of different shades.

Crackling - To form a network of fine cracks on the surface.

<u>Saponification</u> - A reaction in which an ester is heated with an alkali, such as sodium hydroxide, producing a free alcohol and an acid salt.

Disbanding (peel/blister) - To break up or dissolve the coating.

<u>Crawling (fish eye)</u> - To raise or contract because of an imperfect bond with the underlying surface. A surface defect having the form of a spot.

Appendix 11
Metcalf Energy Center Plume Log

Cooling Tower Plumes

Date Start Time End time No Plume Events in December 2019.	e Total Time	Event	Relative Humidity	Temperature	Supplemental Firing (On/Off)	Plume Abatement In Service (Louvers Open)	
Total Cooling Tower Plume Hours:	0:00						
Remedial Actions To Be Taken							
 The Operator will verify that the plume abates The Operator will verify that the louvers were Curtail supplementary firing in the HRSG. 	ment was in serv completely oper	vice. ned.					
Stack Plumes			and the second se	ne and she was a second as a second secon	te provident de la construction de		
Date Start Time End tim No Plume Events in December 2019.	e Total Time	Event	Relative Humidity	Temperature	Supplemental Firing (On/Off)	Steam Injection (On/Off)	Economizer By-Pass Valve Position
Total Stack Plume Hours:	0:00						
Remedial Actions Taken							
 The Operator will operate the economizer by Curtail steam injection to the combustion turb Curtail supplementary firing in the HRSG. 	pass valve. pine (called PAG	steam).					
Total Combined Plume Hours:	0:00		a an				

Metcalf Energy Center Plume Log

Cooling Tower Plumes

Date	Start Time	End time	Total Time	e Event	Relative Humidity	Temperature	Supplemental Firing (On/Off)	Plume Abateme In Service (Louvers Open
No Plume Events in J	January 2019.							,
No Plume Events in F	ebruary 2019.							
No Plume Events in M	Aarch 2019.							
No Plume Events in A	pril 2019.						3	
No Plume Events in M	<i>l</i> ay 2019.							
No Plume Events in J	une 2019.							
No Plume Events in J	uly 2019.							
No Plume Events in A	ugust 2019.							
No Plume Events in S	eptember 2019	9.						
No Plume Events in O	ctober 2019							
No Plume Events in N	lovember 2019							
No Plume Events in D	ecember 2019							
Total Cooling Tow	er Plume Ho	urs YTD:	0:00					Ť
Remedial Actions T	o Be Taken							
Stack Plumes		NUMBER OF	()					
							Supplemental	
Date lo Plume Events in Ja	Start Time	End time	Total Time	Event	Relative Humidity	Temperature	(On/Off)	Steam Injection
	110ary 2015.							(Olilon)
lo Plume Events in Fe	ebruary 2019.							(onon)
o Plume Events in Fe o Plume Events in Ma	ebruary 2019. arch 2019.							(Olion)
o Plume Events in Fe o Plume Events in Ma o Plume Events in Ap	arch 2019. pril 2019.							(Olinon)
lo Plume Events in Fe lo Plume Events in Ma lo Plume Events in Ap lo Plume Events in Ma	arch 2019. oril 2019. ay 2019.							(Olifori)
lo Plume Events in Fe lo Plume Events in Ma o Plume Events in Ap o Plume Events in Ma o Plume Events in Ju	arch 2019. arch 2019. oril 2019. ay 2019. Ine 2019.							(Olinon)
lo Plume Events in Fe lo Plume Events in Ma lo Plume Events in Ap lo Plume Events in Ma lo Plume Events in Ju lo Plume Events in Ju	ebruary 2019. arch 2019. pril 2019. ay 2019. une 2019. Ily 2019.							(Olinori)
o Plume Events in Fe o Plume Events in Ma o Plume Events in Ap o Plume Events in Ma o Plume Events in Ju o Plume Events in Ju o Plume Events in Au	ebruary 2019. arch 2019. pril 2019. ay 2019. ine 2019. ily 2019. igust 2019.							(Olinori)
lo Plume Events in Re lo Plume Events in M lo Plume Events in Ap lo Plume Events in M lo Plume Events in Ju o Plume Events in Ju o Plume Events in Au o Plume Events in Se	ebruary 2019. arch 2019. ay 2019. ay 2019. Ine 2019. Ily 2019. Igust 2013. sptember 2019	1						(Olinori)
to Plume Events in Fe to Plume Events in M to Plume Events in M to Plume Events in M to Plume Events in Ju to Plume Events in Au to Plume Events in Se to Plume Events in Se	ebruary 2019. arch 2019. pril 2019. ay 2019. ine 2019. ily 2019. Jgust 2013. sptember 2019. ctober 2019.							(Olinori)
lo Plume Events in Re lo Plume Events in M lo Plume Events in Ap lo Plume Events in M lo Plume Events in Ju o Plume Events in Au o Plume Events in Se o Plume Events in Oc o Plume Events in No	ebruary 2019. arch 2019. pril 2019. ay 2019. June 2019. Ily 2019. Jgust 2019. Jgust 2019. Stober 2019. Stober 2019.							(Oliveri)
to Plume Events in Fe to Plume Events in M lo Plume Events in M lo Plume Events in M lo Plume Events in Ju lo Plume Events in Au lo Plume Events in Se o Plume Events in Oc o Plume Events in No	ebruary 2019. ebruary 2019. larch 2019. ay 2019. Jne 2019. Jly 2019. Jgust 2019. Jgust 2019. sptember 2019. Stober 2019. Svember 2019.							(Oliveri)
No Plume Events in Re No Plume Events in M No Plume Events in M No Plume Events in M No Plume Events in Ju No Plume Events in Au No Plume Events in Se No Plume Events in No No Plume Events in No No Plume Events in No	ebruary 2019. ebruary 2019. larch 2019. ay 2019. June 2019. June 2019. June 2019. June 2019. June 2019. Stober 2019. Stober 2019. Stober 2019. Stober 2019.		0:00					(Onion)

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