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QUARTERLY COMPLIANCE REPORT
(Third Quarter 2020)

MALBURG GENERATING STATION
4963 SOTO STREET, VERNON, CA 90058

SUBMITTED TO:

CALIFORNIA ENERGY COMMISSION

1516 9TH STREET, SACRAMENTO, CA 95814

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LIST OF TABLES

LIST OF APPENDICES

SECTION 1
INTRODUCTION

This Quarterly Compliance Report (QCR) has been prepared to meet the California Energy Commission (CEC) requirements for the Malburg Generating Station (MGS). This QCR fulfills various Conditions of Certifications as described in the California Energy Commission's Petition to Amend License, June 20, 2019.

1.1 PROJECT LOCATION AND DESCRIPTION

The Malburg Generating Station is located at 4963 Soto Street on approximately 3.4 acres, in an industrial land use area. MGS is located near the geographic center of metropolitan Los Angeles County. MGS consists of two Alstom GTX-100 frame type natural gas combustion turbine generators (CTGs); two heat recovery steam generators (HRSG); a steam turbine-generator (STG); a cooling tower, a diesel fuel fired emergency firewater pump and support equipment.

The commissioning of MGS was completed in October 2005 and the power plant began Commercial Operation on October 17, 2005.

1.2 ORGANIZATION OF THE QUARTERLY COMPLIANCE REPORT

A summary of each condition of certification and required means of verification are provided in Section 2. Each sub-section also contains a description of the method used by MGS to demonstrate compliance with the verification requirements and references to Appendices, Figures and Tables as appropriate.

SECTION 2
COMPLIANCE DETAILS

The compliance details for various conditions of certification are provided below.

2.1 CONDITION OF CERTIFICATION AQ-C6

As per the Condition of Certification Number AQ-C6, MGS shall determine the Total Dissolved Solids (TDS) levels in the blowdown water by independent laboratory testing prior to initial operation and periodically thereafter.

For verification of the above condition of certification, the CEC requires MGS to submit weekly TDS reports for the blowdown water as part of the quarterly emission report to the Compliance Project Manager (CPM) for approval.

As demonstration of compliance, the weekly TDS results are provided in Table 2-1, and the weekly sample reports during operation are provided in Appendix A.

2.2 CONDITION OF CERTIFICATION AQ-C7

As per the Condition of Certification Number AQ-C7, particulate matter of diameter less than 10 microns (PM_{10}) emissions from the cooling tower shall not exceed 6.2 lb/day.

Compliance with the PM_{10} daily emission limit shall be demonstrated as follows:

PM_{10} lb/day = A*B*C*D

Where:

A	=	circulating water recirculation rate
B	=	total dissolved solids concentration in the blowdown water to be updated on a weekly basis
C	=	design drift rate
D	=	correction factor

For verification of the above condition of certification, the CEC requires the project owner to calculate the daily PM_{10} emissions from the cooling tower and submit all calculations and results on a quarterly basis in the quarterly emissions reports to the CPM for approval.

As demonstration of compliance, the daily PM_{10} emissions from the cooling tower are provided in Tables 2-2 through 2-4.

2.3 CONDITION OF CERTIFICATION AQ-C8

As per the Condition of certification Number AQ-C8, the project owner shall refrain from testing the firewater pump during the same hour as either gas fired combustion turbines is in start up or shut down as defined by Condition of Certification AQ-C9.

For verification of the above condition of certification, the CEC requires MGS to submit to the CPM for approval all testing times and results of the diesel fired emergency firewater pump in the quarterly emissions report.

As demonstration of compliance, the testing times for the diesel fired emergency firewater pump are provided in Table 2-5. MGS refrained from testing the diesel fired

emergency firewater pump on the same hour the combustion turbines were either started or shutdown.

2.4 CONDITION OF CERTIFICATION AQ-C9

As per the Condition of certification Number AQ-C9, MGS shall use the provided definitions to determine compliance with startup, shutdown and any related emission or operational limitations.

For verification of the above condition of certification, the CEC requires MGS to submit to the CPM for approval, a record of all startups and shutdowns including duration and date of occurrence on a quarterly basis as part of the quarterly emission report.

As demonstration of compliance, the startup and shutdown details are provided in Table 2-14.

2.5 CONDITION OF CERTIFICATION AQ-C10

The condition of certification number AQ-C10 has been deleted.

2.6 CONDITION OF CERTIFICATION AQ-C11

As per the Condition of Certification Number AQ-C11, MGS shall submit a quarterly emissions report on a quarterly basis to the CPM for approval. The quarterly emissions report shall generally report all ammonia, NO_X, SO_X, CO, PM_{10} and VOC emissions from the MGS as necessary to demonstrate compliance with all emission limits. The fourth quarter emission report shall include an annual summary of all emissions of ammonia, NO_X, SO_X, CO, PM_{10} and VOC as necessary to demonstrate compliance with all annual emission limits.

For verification of the above condition of certification, the CEC requires MGS to submit the quarterly emissions report no less than 30 days after the end of each calendar quarter.

2.7 CONDITION OF CERTIFICATION AQ-2

As per the Condition of Certification Number AQ-2, MGS shall not use diesel oil containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

For verification of the above condition of certification, the CEC requires MGS to submit fuel purchase records for approval to the CPM on a quarterly basis in the quarterly emissions report.

Low sulfur diesel fuel was purchased February 19, 2020.

2.8 CONDITION OF CERTIFICATION AQ-3

As per the Condition of Certification Number AQ-3, MGS shall keep records, in a manner approved by the District, for the following parameter(s) or item(s): Purchase records of fuel oil and sulfur content of the fuel.

For verification of the above condition of certification, the CEC requires MGS to submit fuel purchase records for approval to the CPM on a quarterly basis in the quarterly emissions report.

Low sulfur diesel fuel was purchased February 19, 2020.

2.9 CONDITION OF CERTIFICATION AQ-5

As per the condition of certification number AQ-5, MGS shall limit the emissions from both gas-fired combustion turbine-heat recovery steam generator train exhaust stacks as follows:

Contaminant Emissions Limit

- CO 7,633 lbs in any one month
- PM_{10} 4,876 lbs in any one month
- $PM_{2.5}$ 4,876 lbs in any one month
- VOC 3,236 lbs in any one month
- SO_x 227 lbs in any one month

For verification of the above condition of certification, the CEC requires the MGS to submit all emission calculations, fuel use and a summary demonstrating compliance of all emission limits stated in this condition for approval to the CPM on a quarterly basis in the quarterly emissions report.

As demonstration of compliance, the monthly emissions of CO, PM_{10}, VOC, and SOx are presented in Tables 2-11 through 2-13. In addition, the fuel usage for the two turbine-duct burner pairs is provided in Table 2-15. MGS calculates the emission limit(s) for CO based on readings from the certified CEMS. In the event the CO CEMS is not operating or the emissions exceed the valid upper range of the analyzer, the emissions are calculated in accordance with the approved CEMS Plan. MGS calculates the emission limit(s) by using the monthly fuel use data and the following emission factors:- $PM_{10,}$ $PM_{2.5}$: 6.014 lb/mmscf, VOC: 1.54 lb/mmscf & SOx: 0.28lb/mmscf.

2.10 CONDITION OF CERTIFICATION AQ-6

As per the condition of certification numbers AQ-6; following commissioning, start-ups shall not exceed 120 minutes during a cold start-up without a trip, and 150 minutes during a cold start-up with a trip. Cold start-ups with or without a trip shall not exceed the following limits: NOx 122.8 lbs, CO 204.8 lbs and VOC 1.75 lbs.

Start-ups shall not exceed 90 minutes during a non-cold start-up without a trip or 120 minutes during a non-cold start-up with a trip. Non-cold start-ups shall not exceed the following limits: NOx 51.3 lbs, CO 59.9 lbs, and VOC 1.55 lbs.

Shut-downs shall not exceed 30 minutes. Shut-downs shall not exceed the following limits: NOx 4.5 lbs, CO 10.8 lbs, and VOC 0.71 lbs.

The number of startups shall not exceed two per day per turbine.

For verification of the above condition of certification, the CEC requires the MGS to submit a record of all startups and shutdowns including duration and date of occurrence on a quarterly basis as part of the quarterly emission report.

As demonstration of compliance, the startup and shutdown details are provided in Table 2-14. Additionally, quarterly excess emission reports from the DAHS are provided in Appendix B.

2.11 CONDITION OF CERTIFICATION AQ-8

The Condition of Certification Number AQ-8 has been deleted.

2.12 CONDITION OF CERTIFICATION AQ-9

As per the Condition of Certification Number AQ-9, the 2.0 ppmv oxides of nitrogen (NO_X) emissions limit(s) are averaged over 1 hour at 15 percent oxygen, dry basis, during the normal operation of the MGS combustion turbine generators.

For verification of the above condition of certification, the CEC requires MGS to submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.

NO_X emission for MGS Units 1 and 2 are measured using the CEMS. A review of CEMS NOx emission data indicated that the maximum corrected NOx emissions concentration for both MGS combustion turbines during normal operations was 2.1 ppmv, which is greater than the emission concentration limit of 2.0 ppmv. All CEMS data for MGS combustion turbines are stored electronically at MGS. The quarterly excess emission reports from the DAHS are provided in Appendix B.

2.13 CONDITION OF CERTIFICATION AQ-10

As per the Condition of Certification Number AQ-10 the 2.0 ppmv carbon monoxide (CO) emissions limit(s) are averaged over 1 hour at 15 percent oxygen, dry basis, during the normal operation of the MGS combustion turbine generators.

For verification of the above condition of certification, the CEC requires MGS to submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.

CO emission for MGS Units 1 and 2 are measured using the CEMS. A review of CEMS CO emission data indicated that maximum CO emission concentration for both MGS combustion turbines was 0.7 ppmv, which is lower than the emission concentration limit of 2.0 ppmv. All CEMS data for MGS combustion turbines are stored electronically at MGS. As demonstration of compliance, quarterly excess emission reports from the DAHS are provided in Appendix B.

2.14 CONDITION OF CERTIFICATION AQ-11

As per the Condition of Certification Number AQ-11, the 2.0 ppmv VOC emission limit(s) are averaged over 1 hour at 15 percent oxygen, dry basis.

For verification of the above condition of certification, the CEC requires MGS to submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.

2.15 CONDITION OF CERTIFICATION AQ-12

As per the Condition of Certification Number AQ-12, the 5 ppm ammonia (NH_3) emission limit(s) are averaged over 1 hour at 15 percent oxygen, dry basis. MGS shall calculate and continuously record the ammonia slip concentration using the following:

NH_3 (ppmv) = [a-(b*c/1,000,000)]*(1,000,000*d/b) where

a = ammonia injection rate (lbs/hr)/17 (lbs/lb-mole)

b = dry exhaust gas flow rate (lbs/hr)/29 (lbs/lb-mole)

c = change in measured NO_X across the SCR (ppmv dry basis)

d = correction derived by comparing the measured and calculated NH3 slip concentrations during annual compliance testing.

For verification of the above condition of certification, the CEC requires MGS to submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.

NH_3 emissions are calculated via the CEMS on an hourly basis but compliance with 5 ppm limit is demonstrated from source tests. The last NH3 compliance source test, performed in March 2020, indicated compliance with the emission limits for both CT1 and for CT2.

2.16 CONDITION OF CERTIFICATION AQ-13

As per the Condition of Certification Number AQ-13, for the purpose of determining compliance with District Rule 475, combustion contaminant emissions may exceed the concentration limit or the mass emission limit listed, but not both emission limits at the same time.

For verification of the above condition of certification, the CEC requires MGS to submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.

Rule 475 limits emission of combustion contaminants from electric generating equipment to no more than 5 kilograms (11 pounds) per hour or 23 milligrams per cubic meter (0.01 gr/SCF) calculated at three percent oxygen on a dry basis averaged over 15 consecutive minutes or any other averaging time specified by the Executive Officer.

The results of the last compliance source tests performed in August 2019 indicated compliance with the particulate matter emission limits for both CT1 and CT2.

2.17 CONDITION OF CERTIFICATION AQ-14

As per the Condition of Certification Number AQ-14, MGS shall only use diesel fuel containing the following specified compounds:

Sulfur less than or equal to 15 ppm by weight.

For verification of the above condition of certification, the CEC requires MGS to submit fuel purchase records to the CPM on a quarterly basis as part of the quarterly emissions report.

MGS uses CARB Ultra Low Sulfur Diesel for the diesel fire pump (D48). This is an ash less oil. As demonstration of compliance, detailed specifications of CARB Ultra Low Sulfur Diesel are provided in Appendix C.

2.18 CONDITION OF CERTIFICATION AQ-15

As per the condition of certification number AQ-15, MGS will limit the operating time to no more than 200 hours each in any one year.

Operations for maintenance and testing as defined in Rule 1470 shall not exceed 50 hours in any one calendar year. The total annual operating time includes all operations including maintenance and testing.

For verification of the above condition of certification, the CEC requires MGS to submit to the CPM for approval all testing times and results of the diesel fired emergency firewater pump in the quarterly emissions report.

As demonstration of compliance, the testing times for the diesel fired emergency firewater pump are provided in Table 2-5.

2.19 CONDITION OF CERTIFICATION NUMBER AQ-27

As per the Condition of Certification Number AQ-27, MGS shall limit the fuel usage of each turbine-duct burner pair to no more than 405 MM cubic feet per month.

For verification of the above condition of certification, the CEC requires MGS to submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.

As demonstration of compliance, the fuel usage for the two turbine-duct burner pairs is provided in Table 2-15.

Table 2-1

Malburg Generating Station
Cooling Tower TDS Sampling Results
Quarter 3, 2020

Starting	Ending	TDS (ppm)
6/28/2020	7/4/2020	4500
7/5/2020	7/11/2020	4440
7/12/2020	7/18/2020	4420
7/19/2020	7/25/2020	4680
7/26/2020	8/1/2020	4670
8/2/2020	8/8/2020	4380
8/9/2020	8/15/2020	4570
8/16/2020	8/22/2020	4700
8/23/2020	8/29/2020	4520
8/30/2020	9/5/2020	4650
9/6/2020	9/12/2020	4400
9/13/2020	9/19/2020	4140
9/20/2020	9/26/2020	4870
9/27/2020	10/3/2020	4290

Table 2-2

Malburg Generating Station
Cooling Tower Daily PM10 Emissions During Jul. 2020

PM_{10} = A x B x C x D **A = Circulation Rate** **B = TDS**
PM_{10} Limit is 6.2 lbs/day **C = Drift Factor** **D = Correction Factor**

Date	Circulation Rate (gal/day)	TDS (ppm)	PM_{10} (lbs/day)
1	38,811,456	4500	**1.46**
2	38,811,456	4500	**1.46**
3	38,811,456	4500	**1.46**
4	38,811,456	4500	**1.46**
5	38,811,456	4440	**1.44**
6	38,811,456	4440	**1.44**
7	38,811,456	4440	**1.44**
8	38,811,456	4440	**1.44**
9	38,811,456	4440	**1.44**
10	38,811,456	4440	**1.44**
11	38,811,456	4440	**1.44**
12	38,811,456	4420	**1.43**
13	38,811,456	4420	**1.43**
14	38,811,456	4420	**1.43**
15	38,811,456	4420	**1.43**
16	38,811,456	4420	**1.43**

Date	Circulation Rate (gal/day)	TDS (ppm)	PM_{10} (lbs/day)
17	38,811,456	4420	**1.43**
18	38,811,456	4420	**1.43**
19	38,811,456	4680	**1.51**
20	38,811,456	4680	**1.51**
21	38,811,456	4680	**1.51**
22	38,811,456	4680	**1.51**
23	38,811,456	4680	**1.51**
24	38,811,456	4680	**1.51**
25	38,811,456	4680	**1.51**
26	38,811,456	4670	**1.51**
27	38,811,456	4670	**1.51**
28	38,811,456	4670	**1.51**
29	38,811,456	4670	**1.51**
30	38,811,456	4670	**1.51**
31	38,811,456	4670	**1.51**

Table 2-3

Malburg Generating Station
Cooling Tower Daily PM10 Emissions During Aug. 2020

PM_{10} = A x B x C x D **A = Circulation Rate** **B = TDS**
PM_{10} Limit is 6.2 lbs/day **C = Drift Factor** **D = Correction Factor**

Date	Circulation Rate (gal/day)	TDS (ppm)	PM_{10} (lbs/day)
1	38,811,456	4670	**1.51**
2	38,811,456	4380	**1.42**
3	38,811,456	4380	**1.42**
4	38,811,456	4380	**1.42**
5	38,811,456	4380	**1.42**
6	38,811,456	4380	**1.42**
7	38,811,456	4380	**1.42**
8	38,811,456	4380	**1.42**
9	38,811,456	4570	**1.48**
10	38,811,456	4570	**1.48**
11	38,811,456	4570	**1.48**
12	38,811,456	4570	**1.48**
13	38,811,456	4570	**1.48**
14	38,811,456	4570	**1.48**
15	38,811,456	4570	**1.48**
16	38,811,456	4700	**1.52**

Date	Circulation Rate (gal/day)	TDS (ppm)	PM_{10} (lbs/day)
17	38,811,456	4700	**1.52**
18	38,811,456	4700	**1.52**
19	38,811,456	4700	**1.52**
20	38,811,456	4700	**1.52**
21	38,811,456	4700	**1.52**
22	38,811,456	4700	**1.52**
23	38,811,456	4520	**1.46**
24	38,811,456	4520	**1.46**
25	38,811,456	4520	**1.46**
26	38,811,456	4520	**1.46**
27	38,811,456	4520	**1.46**
28	38,811,456	4520	**1.46**
29	38,811,456	4520	**1.46**
30	38,811,456	4650	**1.50**
31	38,811,456	4650	**1.50**

Table 2-4

Malburg Generating Station
Cooling Tower Daily PM10 Emissions During Sep. 2020

PM_{10} = A x B x C x D **A = Circulation Rate** **B = TDS**
PM_{10} Limit is 6.2 lbs/day **C = Drift Factor** **D = Correction Factor**

Date	Circulation Rate (gal/day)	TDS (ppm)	PM_{10} (lbs/day)
1	38,811,456	4650	**1.50**
2	38,811,456	4650	**1.50**
3	38,811,456	4650	**1.50**
4	38,811,456	4650	**1.50**
5	38,811,456	4650	**1.50**
6	38,811,456	4400	**1.42**
7	38,811,456	4400	**1.42**
8	38,811,456	4400	**1.42**
9	38,811,456	4400	**1.42**
10	38,811,456	4400	**1.42**
11	38,811,456	4400	**1.42**
12	38,811,456	4400	**1.42**
13	38,811,456	4140	**1.34**
14	38,811,456	4140	**1.34**
15	38,811,456	4140	**1.34**
16	38,811,456	4140	**1.34**

Date	Circulation Rate (gal/day)	TDS (ppm)	PM_{10} (lbs/day)
17	38,811,456	4140	**1.34**
18	38,811,456	4140	**1.34**
19	38,811,456	4140	**1.34**
20	38,811,456	4870	**1.58**
21	38,811,456	4870	**1.58**
22	38,811,456	4870	**1.58**
23	38,811,456	4870	**1.58**
24	38,811,456	4870	**1.58**
25	38,811,456	4870	**1.58**
26	38,811,456	4870	**1.58**
27	38,811,456	4290	**1.39**
28	38,811,456	4290	**1.39**
29	38,811,456	4290	**1.39**
30	38,811,456	4290	**1.39**

Table 2-5

Heorot Power Management
Malburg Generating Station
Diesel Fuel Fired Emergency Firewater Pump Testing Times
During Quarter 3, 2020

Date	Time	Main / Test Emerg.	Hours of Operation	Fuel Used (gals)	Initials
Jul. 05, 2020	22:23	Testing	0.6	6.7	SCTFO
Jul. 12, 2020	21:18	Testing	0.6	6.7	JAFO
Jul. 19, 2020	20:09	Testing	0.5	5.6	STFO
Jul. 26, 2020	23:23	Testing	0.5	5.6	JPFO
Aug. 03, 2020	00:37	Testing	0.4	4.5	SCTFO
Aug. 09, 2020	19:42	Testing	0.6	6.7	JAFO
Aug. 16, 2020	20:33	Testing	0.5	5.6	STFO
Aug. 23, 2020	23:19	Testing	0.5	5.6	JPFO
Aug. 27, 2020	09:55	Testing	0.4	4.5	JAFO
Sep. 09, 2020	09:13	Testing	0.5	5.6	JAFO
Sep. 20, 2020	23:19	Testing	0.5	5.6	JPFO
Sep. 28, 2020	01:02	Testing	0.5	5.6	SCTFO

Note: Event 'DNR' - Did Not Run

Table 2-11

Malburg Generating Station
Total Monthly Emissions
Jul-2020

Contaminant	Gas Turbines (2)
CO lbs	1,042
PM10 lbs	2,690
PM2.5 lbs	2,690
VOC lbs	689
SOx lbs	125

Table 2-12

Malburg Generating Station
Total Monthly Emissions
Aug-2020

Contaminant	Gas Turbines (2)
CO lbs	1,085
PM10 lbs	2,828
PM2.5 lbs	2,828
VOC lbs	724
SOx lbs	131

Table 2-13

Malburg Generating Station
Total Monthly Emissions
Sep-2020

Contaminant	Gas Turbines (2)
CO lbs	974
PM10 lbs	2,641
PM2.5 lbs	2,641
VOC lbs	677
SOx lbs	123

Table 2-14

Malburg Generating Station
Combustion Turbines Startup and Shutdown Events
During Quarter 3, 2020

CT1

Date	Event Type	Event Start	Event End	Duration (hrs:min)
07/03/2020	Shutdown/Trip	16:24	16:24	0:00
07/03/2020	Warm Startup	21:04	21:57	0:53
08/02/2020	Shutdown	00:01	00:09	0:08
08/02/2020	Warm Startup	17:14	18:17	1:03
08/29/2020	Shutdown/Trip	22:07	22:08	0:01
08/30/2020	Warm Startup	00:38	01:33	0:55
09/21/2020	Shutdown/Trip	14:14	14:14	0:00
09/21/2020	Warm Startup	14:53	15:55	1:02

CT2

07/03/2020	Shutdown/Trip	16:25	16:25	0:00
07/03/2020	Warm Startup	19:41	20:37	0:56
07/26/2020	Shutdown	00:01	00:09	0:08
07/26/2020	Warm Startup	17:02	18:03	1:01
08/29/2020	Shutdown/Trip	22:09	22:09	0:00
08/30/2020	Warm Startup	08:23	09:28	1:05
09/21/2020	Shutdown/Trip	14:14	14:14	0:00
09/21/2020	Warm Startup	16:15	17:04	0:49

Table 2-15

Malburg Generating Station
Combustion Turbines and Duct Burner Gas Usage
During Quarter 3,2020

Month	CT-1 / DB-1 Gas Usage (mmscf)	CT-2 / DB-2 Gas Usage (mmscf)
Jul-20	225.82	221.44
Aug-20	231.69	238.59
Sep-20	218.13	221.07

Appendix A

Cooling Tower Blowdown Reports

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

July 06, 2020

Tom Barnhart
Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Report No.: 2006303
Project Name: Malburg Generating Station Weekly

Dear Tom Barnhart,

This report contains the analytical results for the sample(s) received under chain of custody(s) by Positive Lab Service on June 29, 2020.

The test results in this report are performed in compliance with ELAP accreditation requirements for the certified parameters. The laboratory report may not be produced, except in full, without the written approval of the laboratory.

The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report. Preliminary data should not be used for regulatory purposes. Authorized signature(s) is provided on final report only.

If you have any questions in reference to this report, please contact your Positive Lab Service coordinator.

Project Manager

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

Certificate of Analysis

Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Attn: Tom Barnhart Phone: (323) 476-3626 FAX:(323) 476-3640

File #:74548
Report Date: 07/06/20
Submitted: 06/29/20
PLS Report No.: 2006303

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2006303-01) Sampled: 06/29/20 09:50 Received: 06/29/20 09:50

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4500**		1	mg/L	5.0	- SM 2540C	07/01/20	07/02/20	dd	BG00238

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BG00238 - -										
Blank	**Prepared: 07/01/20 Analyzed: 07/02/20**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 07/01/20 Analyzed: 07/02/20**									
Total Dissolved Solids	49.0	5.0	mg/L	50.00		98.0	80-120			
Duplicate **Source: 2006303-01**	**Prepared: 07/01/20 Analyzed: 07/02/20**									
Total Dissolved Solids	4500	5.0	mg/L		4500			0.111	5	

Notes and Definitions

NA	Not Applicable
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
MDL	Method Detection Limit
PQL	Practical Quantitation Limit

Environmental Laboratory Accreditation Program Certificate No. 1131, Mobile Lab No. 2534, LACSD No. 10138

Rick Owen Parker

Authorized Signature(s)

112804

POSITIVE LAB SERVICE

CHAIN OF CUSTODY AND ANALYSIS REQUEST

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

DATE: 6-29-20 PAGE 1 OF ____

LOG BOOK NO. ____ FILE NO. ____ LAB NO. 200303

CLIENT NAME: CEM Project Name/No. Malburg Generating Station Weekly P.O. NO.

ADDRESS:

PROJECT MANAGER: Tom Barnett PHONE NO: FAX NO:

SAMPLER NAME: Tom Barnett (Printed) (Signature)

TAT (Analytical Turn Around Time): 0 = Same Day; 1 = 1 Day; 2 = 2 Days; 3 = 3 Days; N = Normal (5-7 Working Days)

CONTAINER TYPES: B = Brass, E = Encore, G = Glass, P = Plastic, V = VOA Vial, O = Other:

UST Project: Y N - Global ID# ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

AIRBILL NO: ____

COOLER TEMP: 1.0°C

PRESERVATIVE:

REMARKS:

ANALYSES REQUESTED:

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	SOIL	SLUDGE	OTHER	TAT	CONTAINER: #	TYPE	TDS								SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		6-29-20	0950	Cooling Tower Blowdown	X				2	1	P	X								
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished By: (Signature and Printed Name) Tom Barnett Received By: (Signature and Printed Name) Guadalupe Tanaka Date: 6-29-20 Time: 1025

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

SPECIAL INSTRUCTIONS:

SAMPLE DISPOSITION:

1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: ____ days

By ____ Date ____

PRESERVATIVE: 1-HNO_3, 2-H_2SO_4, 3-HCL, 4-Zinc Acetate, 5-NaOH, 6-NH_4 Buffer, 7-Other

LAB COPY

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

July 16, 2020

Tom Barnhart
Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Report No.: 2007092
Project Name: Malburg Generating Station Weekly

Dear Tom Barnhart,

This report contains the analytical results for the sample(s) received under chain of custody(s) by Positive Lab Service on July 10, 2020.

The test results in this report are performed in compliance with ELAP accreditation requirements for the certified parameters. The laboratory report may not be produced, except in full, without the written approval of the laboratory.

The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report. Preliminary data should not be used for regulatory purposes. Authorized signature(s) is provided on final report only.

If you have any questions in reference to this report, please contact your Positive Lab Service coordinator.

Project Manager

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

Certificate of Analysis

Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Attn: Tom Barnhart Phone: (323) 476-3626 FAX:(323) 476-3640

File #:74548
Report Date: 07/16/20
Submitted: 07/10/20
PLS Report No.: 2007092

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2007092-01) Sampled: 07/10/20 09:40 Received: 07/10/20 09:40

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4440**		1	mg/L	5.0	- SM 2540C	07/13/20	07/14/20	dd	BG01412

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BG01412 - -										
Blank	**Prepared: 07/13/20 Analyzed: 07/14/20**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 07/13/20 Analyzed: 07/14/20**									
Total Dissolved Solids	47.0	5.0	mg/L	50.00		94.0	80-120			
Duplicate **Source: 2007092-01**	**Prepared: 07/13/20 Analyzed: 07/14/20**									
Total Dissolved Solids	4460	5.0	mg/L		4440			0.337	5	

Notes and Definitions

NA	Not Applicable
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
MDL	Method Detection Limit
PQL	Practical Quantitation Limit

Environmental Laboratory Accreditation Program Certificate No. 1131, Mobile Lab No. 2534, LACSD No. 10138

Authorized Signature(s)

114433

POSITIVE LAB SERVICE

CHAIN OF CUSTODY AND ANALYSIS REQUEST

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

DATE: 7-10-20 PAGE 1 OF

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 2007092

CLIENT NAME: CEM Project Name/No. Malburg Generating Station Weekly P.O. NO.

AIRBILL NO:

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 1.9°C

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: Jon Bade (Printed) (Signature)

REMARKS:

TAT (Analytical Turn Around Time): 0 = Same Day; 1 = 1 Day; 2 = 2 Days; 3 = 3 Days; N = Normal (5-7 Working Days)

CONTAINER TYPES: B = Brass, E = Encore, G = Glass, P = Plastic, V = VOA Vial, O = Other:

UST Project: Y N - Global ID# ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	SOIL	SLUDGE	OTHER	TAT	CONTAINER: #	TYPE	TDS							SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		7/10/20	0940	Cooling Tower Blowdown	X				N	1	P	Y							
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished By: (Signature and Printed Name) J Johnbade Received By: (Signature and Printed Name) Guadalupe Tanaka Date: 7/13/20 Time: 1040

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

SPECIAL INSTRUCTIONS:

SAMPLE DISPOSITION:

1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: _____ days

By _____ Date _____

PRESERVATIVE: 1-HNO_3, 2-H_2SO_4, 3-HCL, 4-Zinc Acetate, 5-NaOH, 6-NH_4 Buffer, 7-Other

LAB COPY

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

July 20, 2020

Tom Barnhart
Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Report No.: 2007109
Project Name: Malburg Generating Station Weekly

Dear Tom Barnhart,

This report contains the analytical results for the sample(s) received under chain of custody(s) by Positive Lab Service on July 13, 2020.

The test results in this report are performed in compliance with ELAP accreditation requirements for the certified parameters. The laboratory report may not be produced, except in full, without the written approval of the laboratory.

The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report. Preliminary data should not be used for regulatory purposes. Authorized signature(s) is provided on final report only.

If you have any questions in reference to this report, please contact your Positive Lab Service coordinator.

Project Manager

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

Certificate of Analysis

Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Attn: Tom Barnhart Phone: (323) 476-3626 FAX:(323) 476-3640

File #:74548
Report Date: 07/20/20
Submitted: 07/13/20
PLS Report No.: 2007109

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2007109-01) Sampled: 07/13/20 08:35 Received: 07/13/20 08:35

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4420**		1	mg/L	5.0	- SM 2540C	07/16/20	07/17/20	dd	BG01706

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BG01706 - -										
Blank	**Prepared: 07/16/20 Analyzed: 07/17/20**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 07/16/20 Analyzed: 07/17/20**									
Total Dissolved Solids	50.0	5.0	mg/L	50.00		100	80-120			
Duplicate **Source: 2007109-01**	**Prepared: 07/16/20 Analyzed: 07/17/20**									
Total Dissolved Solids	4410	5.0	mg/L		4420			0.151	5	
Duplicate **Source: 2007132-01**	**Prepared: 07/16/20 Analyzed: 07/17/20**									
Total Dissolved Solids	4500	5.0	mg/L		4420			1.84	5	

Notes and Definitions

NA	Not Applicable
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
MDL	Method Detection Limit
PQL	Practical Quantitation Limit

Environmental Laboratory Accreditation Program Certificate No. 1131, Mobile Lab No. 2534, LACSD No. 10138

Authorized Signature(s)

114442

POSITIVE LAB SERVICE

CHAIN OF CUSTODY AND ANALYSIS REQUEST

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

DATE: 7-13-20 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 200109

CLIENT NAME: CEM Project Name/No. Malburg Generating Station Weekly P.O. NO.

AIRBILL NO: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 6.1°C

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: Tom Bade (Printed) TB (Signature)

REMARKS:

TAT (Analytical Turn Around Time): 0 = Same Day; 1 = 1 Day; 2 = 2 Days; 3 = 3 Days; N = Normal (5-7 Working Days)

CONTAINER TYPES: B = Brass, E = Encore, G = Glass, P = Plastic, V = VOA Vial, O = Other:

UST Project: Y N - Global ID# ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	SOIL	SLUDGE	OTHER	TAT	CONTAINER: #	TYPE	TPH							SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		7-13-20	0835	Cooling Tower Blowdown	X				N	1	P	X							
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished By: (Signature and Printed Name) TB Tom Bade Received By: (Signature and Printed Name) Guadalupe Tanaka Date: 7/13/20 Time: 1115

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

SPECIAL INSTRUCTIONS:

SAMPLE DISPOSITION:
1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: _____ days

By _____ Date _____

PRESERVATIVE: 1-HNO_3, 2-H_2SO_4, 3-HCL, 4-Zinc Acetate, 5-NaOH, 6-NH_4 Buffer, 7-Other

LAB COPY

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

July 28, 2020

Tom Barnhart
Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Report No.: 2007199
Project Name: Malburg Generating Station Weekly

Dear Tom Barnhart,

This report contains the analytical results for the sample(s) received under chain of custody(s) by Positive Lab Service on July 21, 2020.

The test results in this report are performed in compliance with ELAP accreditation requirements for the certified parameters. The laboratory report may not be produced, except in full, without the written approval of the laboratory.

The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report. Preliminary data should not be used for regulatory purposes. Authorized signature(s) is provided on final report only.

If you have any questions in reference to this report, please contact your Positive Lab Service coordinator.

Project Manager

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

Certificate of Analysis

Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Attn: Tom Barnhart Phone: (323) 476-3626 FAX:(323) 476-3640

File #:74548
Report Date: 07/28/20
Submitted: 07/21/20
PLS Report No.: 2007199

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2007199-01) Sampled: 07/21/20 10:05 Received: 07/21/20 10:05

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4680**		1	mg/L	5.0	- SM 2540C	07/23/20	07/24/20	dd	BG02713

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BG02713 - -										
Blank	**Prepared: 07/23/20 Analyzed: 07/24/20**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 07/23/20 Analyzed: 07/24/20**									
Total Dissolved Solids	49.0	5.0	mg/L	50.00		98.0	80-120			
Duplicate Source: 2007199-01	**Prepared: 07/23/20 Analyzed: 07/24/20**									
Total Dissolved Solids	4650	5.0	mg/L		4680			0.822	5	

Notes and Definitions

NA	Not Applicable
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
MDL	Method Detection Limit
PQL	Practical Quantitation Limit

Environmental Laboratory Accreditation Program Certificate No. 1131, Mobile Lab No. 2534, LACSD No. 10138

Rick Daren Parker

Authorized Signature(s)

114464

POSITIVE LAB SERVICE

CHAIN OF CUSTODY AND ANALYSIS REQUEST

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

DATE: 7.21.20 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 200199

CLIENT NAME: GEM Project Name/No. Malburg Generating Station Weekly P.O. NO.

ADDRESS:

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

SAMPLER NAME: Tom Barnhart (Printed) _____ (Signature)

TAT (Analytical Turn Around Time): 0 = Same Day; 1 = 1 Day; 2 = 2 Days; 3 = 3 Days; N = Normal (5-7 Working Days)

CONTAINER TYPES: B = Brass, E = Encore, G = Glass, P = Plastic, V = VOA Vial, O = Other:

UST Project: Y N - Global ID# ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

ANALYSES REQUESTED:

AIRBILL NO: _____

COOLER TEMP: 1.5°C

PRESERVATIVE:

REMARKS:

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	SOIL	SLUDGE	OTHER	TAT	CONTAINER: #	TYPE	SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		7.21.20	1045	Cooling Tower Blowdown	X				2	1	P	X
2												
3												
4												
5												
6												
7												
8												
9												
10												

Relinquished By: (Signature and Printed Name) Tom Barnhart Received By: (Signature and Printed Name) Guadalupe Tanaka Date: 7.21.20 Time: 1135

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

SPECIAL INSTRUCTIONS:

SAMPLE DISPOSITION:

1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: _____ days

By _____ Date _____

PRESERVATIVE: 1-HNO_3, 2-H_2SO_4, 3-HCL, 4-Zinc Acetate, 5-NaOH, 6-NH_4 Buffer, 7-Other

LAB COPY

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

August 03, 2020

Tom Barnhart
Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Report No.: 2007258
Project Name: Malburg Generating Station Weekly

Dear Tom Barnhart,

This report contains the analytical results for the sample(s) received under chain of custody(s) by Positive Lab Service on July 27, 2020.

The test results in this report are performed in compliance with ELAP accreditation requirements for the certified parameters. The laboratory report may not be produced, except in full, without the written approval of the laboratory.

The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report. Preliminary data should not be used for regulatory purposes. Authorized signature(s) is provided on final report only.

If you have any questions in reference to this report, please contact your Positive Lab Service coordinator.

D Sanchez
Project Manager

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

Certificate of Analysis

Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

File #:74548
Report Date: 08/03/20
Submitted: 07/27/20
PLS Report No.: 2007258

Attn: Tom Barnhart Phone: (323) 476-3626 FAX:(323) 476-3640

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2007258-01) Sampled: 07/27/20 08:30 Received: 07/27/20 08:30

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4670**		1	mg/L	5.0	- SM 2540C	07/30/20	07/31/20	dd	BH00312

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BH00312 - -										
Blank	**Prepared: 07/30/20 Analyzed: 07/31/20**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 07/30/20 Analyzed: 07/31/20**									
Total Dissolved Solids	52.0	5.0	mg/L	50.00		104	80-120			
Duplicate **Source: 2007258-01**	**Prepared: 07/30/20 Analyzed: 07/31/20**									
Total Dissolved Solids	4450	5.0	mg/L		4670			4.90	5	

Notes and Definitions

NA	Not Applicable
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
MDL	Method Detection Limit
PQL	Practical Quantitation Limit

Environmental Laboratory Accreditation Program Certificate No. 1131, Mobile Lab No. 2534, LACSD No. 10138

Authorized Signature(s)

114385

POSITIVE LAB SERVICE

CHAIN OF CUSTODY AND ANALYSIS REQUEST

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

DATE: 7/2/20 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 207258

CLIENT NAME: CAM Project Name/No. Malburg Generating station Weekly P.O. NO.

ADDRESS:

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

SAMPLER NAME: Tom Barnhart (Printed) (Signature)

TAT (Analytical Turn Around Time): 0 = Same Day; 1 = 1 Day; 2 = 2 Days; 3 = 3 Days; N = Normal (5-7 Working Days)

CONTAINER TYPES: B = Brass, E = Encore, G = Glass, P = Plastic, V = VOA Vial, O = Other:

UST Project: Y N - Global ID# ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

AIRBILL NO: _____

COOLER TEMP: 13°C

PRESERVATIVE:

REMARKS:

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	SOIL	SLUDGE	OTHER	TAT	CONTAINER: #	TYPE	ANALYSES REQUESTED: TDS	SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		7/2/20	0830	Cooling Tower Blowdown	✓				N	1	P	✓	
2													
3													
4													
5													
6													
7													
8													
9													
10													

Relinquished By: (Signature and Printed Name) Tom Barnhart Received By: (Signature and Printed Name) Guadalupe Tanaka Date: 7/2/20 Time: 0945

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

SPECIAL INSTRUCTIONS:

SAMPLE DISPOSITION:

1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: _____ days

By _____ Date _____

PRESERVATIVE: 1-HNO_3, 2-H_2SO_4, 3-HCL, 4-Zinc Acetate, 5-NaOH, 6-NH_4 Buffer, 7-Other

LAB COPY

POSITIVE
LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

August 10, 2020

Tom Barnhart
Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Report No.: 2008010
Project Name: Malburg Generating Station Weekly

Dear Tom Barnhart,

This report contains the analytical results for the sample(s) received under chain of custody(s) by Positive Lab Service on August 04, 2020.

The test results in this report are performed in compliance with ELAP accreditation requirements for the certified parameters. The laboratory report may not be produced, except in full, without the written approval of the laboratory.

The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report. Preliminary data should not be used for regulatory purposes. Authorized signature(s) is provided on final report only.

If you have any questions in reference to this report, please contact your Positive Lab Service coordinator.

D Sanchez
Project Manager

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

Certificate of Analysis

Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

File #:74548
Report Date: 08/10/20
Submitted: 08/04/20
PLS Report No.: 2008010

Attn: Tom Barnhart Phone: (323) 476-3626 FAX:(323) 476-3640

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2008010-01) Sampled: 08/04/20 08:15 Received: 08/04/20 08:15

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4380**		1	mg/L	5.0	- SM 2540C	08/06/20	08/07/20	dd	BH00711

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BH00711 - -										
Blank	**Prepared: 08/06/20 Analyzed: 08/07/20**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 08/06/20 Analyzed: 08/07/20**									
Total Dissolved Solids	48.0	5.0	mg/L	50.00		96.0	80-120			
Duplicate **Source: 2008010-01**	**Prepared: 08/06/20 Analyzed: 08/07/20**									
Total Dissolved Solids	4570	5.0	mg/L		4380			4.20	5	

Notes and Definitions

NA	Not Applicable
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
MDL	Method Detection Limit
PQL	Practical Quantitation Limit

Environmental Laboratory Accreditation Program Certificate No. 1131, Mobile Lab No. 2534, LACSD No. 10138

Rick Owen Parker

Authorized Signature(s)

112845

POSITIVE LAB SERVICE

CHAIN OF CUSTODY AND ANALYSIS REQUEST

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

DATE: 8.4.20 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 112845

CLIENT NAME: COM Project Name/No. Malburg Generating Station Weekly P.O. NO.

ADDRESS:

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

SAMPLER NAME: John Bare (Printed) (Signature)

TAT (Analytical Turn Around Time): 0 = Same Day; 1 = 1 Day; 2 = 2 Days; 3 = 3 Days; N = Normal (5-7 Working Days)

CONTAINER TYPES: B = Brass, E = Encore, G = Glass, P = Plastic, V = VOA Vial, O = Other:

UST Project: Y N - Global ID# ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

AIRBILL NO: _____

COOLER TEMP: 1.6°C

PRESERVATIVE:

REMARKS:

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	SOIL	SLUDGE	OTHER	TAT	CONTAINER: #	TYPE	ANALYSES REQUESTED: TDS								SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		8.4.20	0815	Cooling Tower Blowdown	X				2	1	P	X								
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished By: (Signature and Printed Name) John Bare Received By: (Signature and Printed Name) Guadalupe Tanaka Date: 8.4.20 Time: 1540

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

SPECIAL INSTRUCTIONS:

SAMPLE DISPOSITION:
1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: _____ days

By _____ Date _____

PRESERVATIVE: 1-HNO_3, 2-H_2SO_4, 3-HCL, 4-Zinc Acetate, 5-NaOH, 6-NH_4 Buffer, 7-Other

LAB COPY

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

August 18, 2020

Tom Barnhart
Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Report No.: 2008110
Project Name: Malburg Generating Station Weekly

Dear Tom Barnhart,

This report contains the analytical results for the sample(s) received under chain of custody(s) by Positive Lab Service on August 12, 2020.

The test results in this report are performed in compliance with ELAP accreditation requirements for the certified parameters. The laboratory report may not be produced, except in full, without the written approval of the laboratory.

The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report. Preliminary data should not be used for regulatory purposes. Authorized signature(s) is provided on final report only.

If you have any questions in reference to this report, please contact your Positive Lab Service coordinator.

D Sanchez

Project Manager

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

Certificate of Analysis

Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Attn: Tom Barnhart Phone: (323) 476-3626 FAX:(323) 476-3640

File #:74548
Report Date: 08/18/20
Submitted: 08/12/20
PLS Report No.: 2008110

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2008110-01) Sampled: 08/12/20 08:20 Received: 08/12/20 08:20

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4570**		1	mg/L	5.0	- SM 2540C	08/13/20	08/14/20	dd	BH01713

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BH01713 - -										
Blank	**Prepared: 08/13/20 Analyzed: 08/14/20**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 08/13/20 Analyzed: 08/14/20**									
Total Dissolved Solids	52.0	5.0	mg/L	50.00		104	80-120			
Duplicate Source: 2008114-09	**Prepared: 08/13/20 Analyzed: 08/14/20**									
Total Dissolved Solids	3770	5.0	mg/L		3750			0.620	5	
Duplicate Source: 2008110-01	**Prepared: 08/13/20 Analyzed: 08/14/20**									
Total Dissolved Solids	4480	5.0	mg/L		4570			1.99	5	

Notes and Definitions

NA	Not Applicable
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
MDL	Method Detection Limit
PQL	Practical Quantitation Limit

Environmental Laboratory Accreditation Program Certificate No. 1131, Mobile Lab No. 2534, LACSD No. 10138

Rick Owen Parker

Authorized Signature(s)

112856

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

CHAIN OF CUSTODY AND ANALYSIS REQUEST

DATE: 8-12-20 PAGE 1 OF 1

LOG BOOK NO. ________ FILE NO. ________ LAB NO. 2008110

CLIENT NAME: CEM Project Name/No. Malburg Generating Station Weekly P.O. NO.

AIRBILL NO: ________

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 4.1°C

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: Tom Baird (Printed) (Signature)

REMARKS:

TAT (Analytical Turn Around Time): 0 = Same Day; 1 = 1 Day; 2 = 2 Days; 3 = 3 Days; N = Normal (5-7 Working Days)

CONTAINER TYPES: B = Brass, E = Encore, G = Glass, P = Plastic, V = VOA Vial, 0 = Other:

UST Project: Y N - Global ID# ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	MATRIX: SOIL	MATRIX: SLUDGE	MATRIX: OTHER	TAT	CONTAINER: #	CONTAINER: TYPE	P								SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		8-12-20	0820	Cooling Tower Blowdown	X				N	1	P	X								
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished By: (Signature and Printed Name)	Received By: (Signature and Printed Name)	Date:	Time:
Tom Baird	Guadalupe Tanaka	8-12-20	0930

SPECIAL INSTRUCTIONS:

SAMPLE DISPOSITION:

1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: ________ days

By ________ Date ________

PRESERVATIVE: 1-HNO_3, 2-H_2SO_4, 3-HCL, 4-Zinc Acetate, 5-NaOH, 6-NH_4 Buffer, 7-Other

LAB COPY

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

August 24, 2020

Tom Barnhart
Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Report No.: 2008164
Project Name: Malburg Generating Station Weekly

Dear Tom Barnhart,

This report contains the analytical results for the sample(s) received under chain of custody(s) by Positive Lab Service on August 18, 2020.

The test results in this report are performed in compliance with ELAP accreditation requirements for the certified parameters. The laboratory report may not be produced, except in full, without the written approval of the laboratory.

The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report. Preliminary data should not be used for regulatory purposes. Authorized signature(s) is provided on final report only.

If you have any questions in reference to this report, please contact your Positive Lab Service coordinator.

D Sanchez
Project Manager

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

Certificate of Analysis

Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

File #:74548
Report Date: 08/24/20
Submitted: 08/18/20
PLS Report No.: 2008164

Attn: Tom Barnhart Phone: (323) 476-3626 FAX:(323) 476-3640

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2008164-01) Sampled: 08/18/20 08:15 Received: 08/18/20 08:15

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4700**		1	mg/L	5.0	- SM 2540C	08/20/20	08/21/20	dd	BH02418

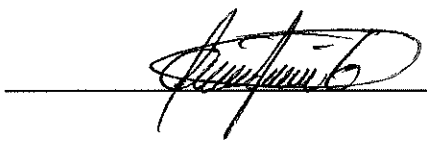
Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BH02418 - -										
Blank	**Prepared: 08/20/20 Analyzed: 08/21/20**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 08/20/20 Analyzed: 08/21/20**									
Total Dissolved Solids	52.0	5.0	mg/L	50.00		104	80-120			
Duplicate **Source: 2008164-01**	**Prepared: 08/20/20 Analyzed: 08/21/20**									
Total Dissolved Solids	4630	5.0	mg/L		4700			1.68	5	

Notes and Definitions

NA	Not Applicable
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
MDL	Method Detection Limit
PQL	Practical Quantitation Limit

Environmental Laboratory Accreditation Program Certificate No. 1131, Mobile Lab No. 2534, LACSD No. 10138



Authorized Signature(s)

112864

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

CHAIN OF CUSTODY AND ANALYSIS REQUEST

DATE: 8/18/20 PAGE 1 OF 1

LOG BOOK NO. ______ FILE NO. ______ LAB NO. 2008104

CLIENT NAME: CEM Project Name/No. Malibu Generating Station Weekly P.O. NO.

AIRBILL NO: ______

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 1.5°C

PROJECT MANAGER: Tom Bonnat PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: Jim Bon (Printed) (Signature)

REMARKS:

TAT (Analytical Turn Around Time): 0 = Same Day; 1 = 1 Day; 2 = 2 Days; 3 = 3 Days; N = Normal (5-7 Working Days)

CONTAINER TYPES: B = Brass, E = Encore, G = Glass, P = Plastic, V = VOA Vial, 0 = Other:

UST Project: Y N - Global ID# ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	MATRIX: SOIL	MATRIX: SLUDGE	MATRIX: OTHER	TAT	CONTAINER: #	CONTAINER: TYPE	TDS							SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		8/18/20	0815	Cooling tower Blowdown	x				N	1	P	x							
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished By: (Signature and Printed Name)	Received By: (Signature and Printed Name)	Date:	Time:
Jim Bon	Guadalupe Tanaka	8/18/20	09:10
Relinquished By: (Signature and Printed Name)	Received By: (Signature and Printed Name)	Date:	Time:
Relinquished By: (Signature and Printed Name)	Received By: (Signature and Printed Name)	Date:	Time:

SPECIAL INSTRUCTIONS:

SAMPLE DISPOSITION:
1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: ______ days

By ______ Date ______

PRESERVATIVE: 1-HNO_3, 2-H_2SO_4, 3-HCL, 4-Zinc Acetate, 5-NaOH, 6-NH_4 Buffer, 7-Other

LAB COPY

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

August 28, 2020

Tom Barnhart
Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Report No.: 2008223
Project Name: Malburg Generating Station Weekly

Dear Tom Barnhart,

This report contains the analytical results for the sample(s) received under chain of custody(s) by Positive Lab Service on August 24, 2020.

The test results in this report are performed in compliance with ELAP accreditation requirements for the certified parameters. The laboratory report may not be produced, except in full, without the written approval of the laboratory.

The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report. Preliminary data should not be used for regulatory purposes. Authorized signature(s) is provided on final report only.

If you have any questions in reference to this report, please contact your Positive Lab Service coordinator.

D Sanchez
Project Manager

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

Certificate of Analysis

Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Attn: Tom Barnhart Phone: (323) 476-3626 FAX:(323) 476-3640

File #:74548
Report Date: 08/28/20
Submitted: 08/24/20
PLS Report No.: 2008223

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2008223-01) Sampled: 08/24/20 08:15 Received: 08/24/20 08:15

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4520**		1	mg/L	5.0	- SM 2540C	08/26/20	08/27/20	dd	BH02734

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BH02734 - -										
Blank	**Prepared: 08/26/20 Analyzed: 08/27/20**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 08/26/20 Analyzed: 08/27/20**									
Total Dissolved Solids	50.0	5.0	mg/L	50.00		100	80-120			
Duplicate **Source: 2008223-01**	**Prepared: 08/26/20 Analyzed: 08/27/20**									
Total Dissolved Solids	4450	5.0	mg/L		4520			1.60	5	

Notes and Definitions

NA	Not Applicable
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
MDL	Method Detection Limit
PQL	Practical Quantitation Limit

Environmental Laboratory Accreditation Program Certificate No. 1131, Mobile Lab No. 2534, LACSD No. 10138

Authorized Signature(s)

112876

POSITIVE LAB SERVICE

CHAIN OF CUSTODY AND ANALYSIS REQUEST

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

DATE: 8/27/20 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 108727

CLIENT NAME: CEM Project Name/No. Mallory Generating Station Inventory P.O. NO.

AIRBILL NO: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 04°

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: Tom Barnhart (Printed) (Signature)

REMARKS:

TAT (Analytical Turn Around Time): 0 = Same Day; 1 = 1 Day; 2 = 2 Days; 3 = 3 Days; N = Normal (5-7 Working Days)

CONTAINER TYPES: B = Brass, E = Encore, G = Glass, P = Plastic, V = VOA Vial, O = Other:

UST Project: Y N - Global ID# ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	SOIL	SLUDGE	OTHER	TAT	CONTAINER: #	TYPE	Cr								SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		8/27/20	0815	Cooling Tower Blowdown	X				N	1	P	Y								
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished By: (Signature and Printed Name) Tom Barnhart — Received By: (Signature and Printed Name) — Date: 8/27/20 Time: 0845

Relinquished By: (Signature and Printed Name) — Received By: (Signature and Printed Name) — Date: Time:

Relinquished By: (Signature and Printed Name) — Received By: (Signature and Printed Name) — Date: Time:

SPECIAL INSTRUCTIONS:

SAMPLE DISPOSITION:

1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: _____ days

By _____ Date _____

PRESERVATIVE: 1-HNO_3, 2-H_2SO_4, 3-HCL, 4-Zinc Acetate, 5-NaOH, 6-NH_4 Buffer, 7-Other

LAB COPY

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

September 04, 2020

Tom Barnhart
Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Report No.: 2008264
Project Name: Malburg Generating Station Weekly

Dear Tom Barnhart,

This report contains the analytical results for the sample(s) received under chain of custody(s) by Positive Lab Service on August 31, 2020.

The test results in this report are performed in compliance with ELAP accreditation requirements for the certified parameters. The laboratory report may not be produced, except in full, without the written approval of the laboratory.

The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report. Preliminary data should not be used for regulatory purposes. Authorized signature(s) is provided on final report only.

If you have any questions in reference to this report, please contact your Positive Lab Service coordinator.

Project Manager

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

Certificate of Analysis

Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Attn: Tom Barnhart Phone: (323) 476-3626 FAX:(323) 476-3640

File #:74548
Report Date: 09/04/20
Submitted: 08/31/20
PLS Report No.: 2008264

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2008264-01) Sampled: 08/31/20 07:50 Received: 08/31/20 07:50

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4650**		1	mg/L	5.0	- SM 2540C	09/01/20	09/02/20	dd	BI00332

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BI00332 - -										
Blank	**Prepared: 09/01/20 Analyzed: 09/02/20**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 09/01/20 Analyzed: 09/02/20**									
Total Dissolved Solids	52.0	5.0	mg/L	50.00		104	80-120			
Duplicate **Source: 2008264-01**	**Prepared: 09/01/20 Analyzed: 09/02/20**									
Total Dissolved Solids	4630	5.0	mg/L		4650			0.359	5	

Notes and Definitions

NA	Not Applicable
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
MDL	Method Detection Limit
PQL	Practical Quantitation Limit

Environmental Laboratory Accreditation Program Certificate No. 1131, Mobile Lab No. 2534, LACSD No. 10138

Authorized Signature(s)

112887

POSITIVE LAB SERVICE

CHAIN OF CUSTODY AND ANALYSIS REQUEST

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

DATE: 8.31.20 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 208264

CLIENT NAME: CEM Project Name/No. Malburg Generating Station Weekly P.O. NO.

AIRBILL NO: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 0.3°c

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: Tom Barnhart (Printed) _____ (Signature)

REMARKS:

TAT (Analytical Turn Around Time): 0 = Same Day; 1 = 1 Day; 2 = 2 Days; 3 = 3 Days; N = Normal (5-7 Working Days)

CONTAINER TYPES: B = Brass, E = Encore, G = Glass, P = Plastic, V = VOA Vial, O = Other:

UST Project: Y N - Global ID# ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	SOIL	SLUDGE	OTHER	TAT	CONTAINER: #	TYPE	TDS								SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		8.31.20	0750	Cooling Tower Blowdown	X				N	1	P	X								
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished By: (Signature and Printed Name) _____ Received By: (Signature and Printed Name) Guadalupe Tanaka Date: 8.31.20 Time: 0850

Relinquished By: (Signature and Printed Name) _____ Received By: (Signature and Printed Name) _____ Date: _____ Time: _____

Relinquished By: (Signature and Printed Name) _____ Received By: (Signature and Printed Name) _____ Date: _____ Time: _____

SPECIAL INSTRUCTIONS:

SAMPLE DISPOSITION:
1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: _____ days

By _____ Date _____

PRESERVATIVE: 1-HNO_3, 2-H_2SO_4, 3-HCL, 4-Zinc Acetate, 5-NaOH, 6-NH_4 Buffer, 7-Other

LAB COPY

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

September 14, 2020

Tom Barnhart
Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Report No.: 2009108
Project Name: Malburg Generating Station Weekly

Dear Tom Barnhart,

This report contains the analytical results for the sample(s) received under chain of custody(s) by Positive Lab Service on September 09, 2020.

The test results in this report are performed in compliance with ELAP accreditation requirements for the certified parameters. The laboratory report may not be produced, except in full, without the written approval of the laboratory.

The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report. Preliminary data should not be used for regulatory purposes. Authorized signature(s) is provided on final report only.

If you have any questions in reference to this report, please contact your Positive Lab Service coordinator.

D Sanchez

Project Manager

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

Certificate of Analysis

Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Attn: Tom Barnhart Phone: (323) 476-3626 FAX:(323) 476-3640

File #:74548
Report Date: 09/14/20
Submitted: 09/09/20
PLS Report No.: 2009108

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2009108-01) Sampled: 09/09/20 07:50 Received: 09/09/20 07:50

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4400**		1	mg/L	5.0	- SM 2540C	09/10/20	09/11/20	dd	BI01421

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BI01421 - -										
Blank	**Prepared: 09/10/20 Analyzed: 09/11/20**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 09/10/20 Analyzed: 09/11/20**									
Total Dissolved Solids	46.0	5.0	mg/L	50.00		92.0	80-120			
Duplicate **Source: 2009108-01**	**Prepared: 09/10/20 Analyzed: 09/11/20**									
Total Dissolved Solids	4460	5.0	mg/L		4400			1.24	5	

Notes and Definitions

NA	Not Applicable
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
MDL	Method Detection Limit
PQL	Practical Quantitation Limit

Environmental Laboratory Accreditation Program Certificate No. 1131, Mobile Lab No. 2534, LACSD No. 10138

Authorized Signature(s)

113114

POSITIVE LAB SERVICE

CHAIN OF CUSTODY AND ANALYSIS REQUEST

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

DATE: 9.9.20 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 209108

CLIENT NAME: CEM Project Name/No. Malburg Generating Station P.O. NO.

AIRBILL NO: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 1.2c

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: John Bass (Printed) (Signature)

REMARKS:

TAT (Analytical Turn Around Time): 0 = Same Day; 1 = 1 Day; 2 = 2 Days; 3 = 3 Days; N = Normal (5-7 Working Days)

CONTAINER TYPES: B = Brass, E = Encore, G = Glass, P = Plastic, V = VOA Vial, O = Other:

UST Project: Y N - Global ID# ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	SOIL	SLUDGE	OTHER	TAT	CONTAINER: #	TYPE		SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		9/9/20	0750	Cooling Tower Blowdown	X				N	1	P	X	
2													
3													
4													
5													
6													
7													
8													
9													
10													

Relinquished By: (Signature and Printed Name) John Bass — Received By: (Signature and Printed Name) Guadalupe Tanaka — Date: 9.9.20 — Time: 0940

Relinquished By: (Signature and Printed Name) — Received By: (Signature and Printed Name) — Date: — Time:

Relinquished By: (Signature and Printed Name) — Received By: (Signature and Printed Name) — Date: — Time:

SPECIAL INSTRUCTIONS:

SAMPLE DISPOSITION:
1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: _____ days

By _____ Date _____

PRESERVATIVE: 1-HNO_3, 2-H_2SO_4, 3-HCL, 4-Zinc Acetate, 5-NaOH, 6-NH_4 Buffer, 7-Other

LAB COPY

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

September 21, 2020

Tom Barnhart
Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Report No.: 2009177
Project Name: Malburg Generating Station Weekly

Dear Tom Barnhart,

This report contains the analytical results for the sample(s) received under chain of custody(s) by Positive Lab Service on September 14, 2020.

The test results in this report are performed in compliance with ELAP accreditation requirements for the certified parameters. The laboratory report may not be produced, except in full, without the written approval of the laboratory.

The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report. Preliminary data should not be used for regulatory purposes. Authorized signature(s) is provided on final report only.

If you have any questions in reference to this report, please contact your Positive Lab Service coordinator.

Project Manager

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

Certificate of Analysis

Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Attn: Tom Barnhart Phone: (323) 476-3626 FAX:(323) 476-3640

File #:74548
Report Date: 09/21/20
Submitted: 09/14/20
PLS Report No.: 2009177

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2009177-01) Sampled: 09/14/20 08:30 Received: 09/14/20 08:30

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4140**		1	mg/L	5.0	- SM 2540C	09/17/20	09/18/20	dd	BI02129

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BI02129 - -										
Blank	**Prepared: 09/17/20 Analyzed: 09/18/20**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 09/17/20 Analyzed: 09/18/20**									
Total Dissolved Solids	46.0	5.0	mg/L	50.00		92.0	80-120			
Duplicate **Source: 2009177-01**	**Prepared: 09/17/20 Analyzed: 09/18/20**									
Total Dissolved Solids	4300	5.0	mg/L		4140			3.67	5	

Notes and Definitions

NA	Not Applicable
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
MDL	Method Detection Limit
PQL	Practical Quantitation Limit

Environmental Laboratory Accreditation Program Certificate No. 1131, Mobile Lab No. 2534, LACSD No. 10138

Authorized Signature(s)

113236

POSITIVE LAB SERVICE

CHAIN OF CUSTODY AND ANALYSIS REQUEST

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

DATE: 9/15/20 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 200977

CLIENT NAME: CEM Project Name/No. Malburg Generating Station Weekly P.O. NO.

AIRBILL NO: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 1.1°C

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: Tom Barnhart (Printed) (Signature)

REMARKS:

TAT (Analytical Turn Around Time): 0 = Same Day; 1 = 1 Day; 2 = 2 Days; 3 = 3 Days; N = Normal (5-7 Working Days)

CONTAINER TYPES: B = Brass, E = Encore, G = Glass, P = Plastic, V = VOA Vial, O = Other:

UST Project: Y N - Global ID# ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	SOIL	SLUDGE	OTHER	TAT	CONTAINER: #	TYPE	TB?	SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		9-15-20	0830	Cooling Tower Blowdown	b				2	1	P	Y	
2													
3													
4													
5													
6													
7													
8													
9													
10													

Relinquished By: (Signature and Printed Name) Tom Barnhart Received By: (Signature and Printed Name) Guadalupe Tanaka Date: 9-14-20 Time: 0905

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

SPECIAL INSTRUCTIONS:

SAMPLE DISPOSITION:

1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: _____ days

By _____ Date _____

PRESERVATIVE: 1-HNO_3, 2-H_2SO_4, 3-HCL, 4-Zinc Acetate, 5-NaOH, 6-NH_4 Buffer, 7-Other

LAB COPY

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

September 29, 2020

Tom Barnhart
Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Report No.: 2009242
Project Name: Malburg Generating Station Weekly

Dear Tom Barnhart,

This report contains the analytical results for the sample(s) received under chain of custody(s) by Positive Lab Service on September 22, 2020.

The test results in this report are performed in compliance with ELAP accreditation requirements for the certified parameters. The laboratory report may not be produced, except in full, without the written approval of the laboratory.

The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report. Preliminary data should not be used for regulatory purposes. Authorized signature(s) is provided on final report only.

If you have any questions in reference to this report, please contact your Positive Lab Service coordinator.

Project Manager

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

Certificate of Analysis

Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Attn: Tom Barnhart Phone: (323) 476-3626 FAX:(323) 476-3640

File #:74548
Report Date: 09/29/20
Submitted: 09/22/20
PLS Report No.: 2009242

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2009242-01) Sampled: 09/22/20 09:20 Received: 09/22/20 09:20

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4870**		1	mg/L	5.0	- SM 2540C	09/24/20	09/25/20	dd	BI02513

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BI02513 - -										
Blank	**Prepared: 09/24/20 Analyzed: 09/25/20**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 09/24/20 Analyzed: 09/25/20**									
Total Dissolved Solids	51.0	5.0	mg/L	50.00		102	80-120			
Duplicate **Source: 2009242-01**	**Prepared: 09/24/20 Analyzed: 09/25/20**									
Total Dissolved Solids	4880	5.0	mg/L		4870			0.205	5	

Notes and Definitions

NA	Not Applicable
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
MDL	Method Detection Limit
PQL	Practical Quantitation Limit

Environmental Laboratory Accreditation Program Certificate No. 1131, Mobile Lab No. 2534, LACSD No. 10138

Rick Owen Parlier

Authorized Signature(s)

113259

POSITIVE LAB SERVICE

CHAIN OF CUSTODY AND ANALYSIS REQUEST

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

DATE: 9.22.15 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 200742

CLIENT NAME: CEM Project Name/No. Malibu County Station P.O. NO.

AIRBILL NO: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: Ice

PROJECT MANAGER: Tom Bernhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: Tom Bass (Printed) _____ (Signature)

REMARKS:

TAT (Analytical Turn Around Time): 0 = Same Day; 1 = 1 Day; 2 = 2 Days; 3 = 3 Days; N = Normal (5-7 Working Days)

CONTAINER TYPES: B = Brass, E = Encore, G = Glass, P = Plastic, V = VOA Vial, O = Other:

UST Project: Y N - Global ID# ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	SOIL	SLUDGE	OTHER	TAT	CONTAINER: #	TYPE	TPH							SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		9220	0920	Coring Tower Boundary	X				2	1	P	X							
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished By: (Signature and Printed Name) Tom Bass Received By: (Signature and Printed Name) Guadalupe Tanaka Date: 9/22/15 Time: 1315

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: Time:

SPECIAL INSTRUCTIONS:

SAMPLE DISPOSITION:

1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: _____ days

By _____ Date _____

PRESERVATIVE: 1-HNO_3, 2-H_2SO_4, 3-HCL, 4-Zinc Acetate, 5-NaOH, 6-NH_4 Buffer, 7-Other

LAB COPY

POSITIVE
LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

October 05, 2020

Tom Barnhart
Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Report No.: 2009349
Project Name: Malburg Generating Station Weekly

Dear Tom Barnhart,

This report contains the analytical results for the sample(s) received under chain of custody(s) by Positive Lab Service on September 28, 2020.

The test results in this report are performed in compliance with ELAP accreditation requirements for the certified parameters. The laboratory report may not be produced, except in full, without the written approval of the laboratory.

The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report. Preliminary data should not be used for regulatory purposes. Authorized signature(s) is provided on final report only.

If you have any questions in reference to this report, please contact your Positive Lab Service coordinator.

Project Manager

POSITIVE LAB SERVICE

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

Certificate of Analysis

Colorado Energy Management
4963 Soto St.
Vernon, CA 90058

Attn: Tom Barnhart Phone: (323) 476-3626 FAX:(323) 476-3640

File #:74548
Report Date: 10/05/20
Submitted: 09/28/20
PLS Report No.: 2009349

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2009349-01) Sampled: 09/28/20 07:20 Received: 09/28/20 07:20

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4290**		1	mg/L	5.0	- SM 2540C	10/01/20	10/02/20	dd	BJ00529

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BJ00529 - -										
Blank	**Prepared: 10/01/20 Analyzed: 10/02/20**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 10/01/20 Analyzed: 10/02/20**									
Total Dissolved Solids	48.0	5.0	mg/L	50.00		96.0	80-120			
Duplicate Source: 2009349-01	**Prepared: 10/01/20 Analyzed: 10/02/20**									
Total Dissolved Solids	4300	5.0	mg/L		4290			0.233	5	

Notes and Definitions

NA	Not Applicable
ND	Analyte NOT DETECTED at or above the detection limit
NR	Not Reported
MDL	Method Detection Limit
PQL	Practical Quantitation Limit

Environmental Laboratory Accreditation Program Certificate No. 1131, Mobile Lab No. 2534, LACSD No. 10138

Rick Owen Parker

Authorized Signature(s)

113270

POSITIVE LAB SERVICE

CHAIN OF CUSTODY AND ANALYSIS REQUEST

781 East Washington Blvd., Los Angeles, CA 90021
(213) 745-5312 FAX (213) 745-6372

DATE: 9.28.20 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 2009349

CLIENT NAME: CPM

Project Name/No: Moorpark Generating Station - weekly

P.O. NO.

AIRBILL NO:

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 1.0°C

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: Tom Barnhart (Printed) (Signature)

REMARKS:

TAT (Analytical Turn Around Time): 0 = Same Day; 1 = 1 Day; 2 = 2 Days; 3 = 3 Days; N = Normal (5-7 Working Days)

CONTAINER TYPES: B = Brass, E = Encore, G = Glass, P = Plastic, V = VOA Vial, O = Other:

UST Project: Y N - Global ID# _____

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	SOIL	SLUDGE	OTHER	TAT	CONTAINER: #	TYPE	E	SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		9.28.20	0720	Cooling Tower Blowdown	G				N	1	P	Y	
2													
3													
4													
5													
6													
7													
8													
9													
10													

Relinquished By: (Signature and Printed Name) Tom Barnhart
Received By: (Signature and Printed Name) Guadalupe Tanaka Date: 9.28.20 Time: 0852

Relinquished By: (Signature and Printed Name)
Received By: (Signature and Printed Name) Date: Time:

Relinquished By: (Signature and Printed Name)
Received By: (Signature and Printed Name) Date: Time:

SPECIAL INSTRUCTIONS:

SAMPLE DISPOSITION:

1. Samples returned to client? YES NO
2. Samples will not be stored over 30 days, unless additional storage time is requested.
3. Storage time requested: _____ days

By _____ Date _____

PRESERVATIVE: 1-HNO_3, 2-H_2SO_4, 3-HCL, 4-Zinc Acetate, 5-NaOH, 6-NH_4 Buffer, 7-Other

LAB COPY

Appendix B

Excess Emission Reports

Startup/Shutdown Excess Emissions Report

U1 CO Startup/Shutdown

From: 07/01/2020 00:00 **To:** 09/30/2020 23:59 **Facility Name:** Malburg Generating Station

Generated: 10/12/2020 09:46 **Location:** Vernon, California

Tag Name: U1_CO_LbPerHr_1M

SI = SampleInvalid, * = Excess Emission

Total Operating Time: 2,183.12 Hours

Non-Operating Time: 24.88 Hours Report Time: 2,208.00 Hours

Unit Operation

Event Period				Reason	Action
Begin/End	Duration in Minute(s)	Lb/Event	Limit	Code - Description	Code - Description

No excess emissions were found in the reporting period.

Startup/Shutdown Excess Emissions Report

U1 NOx Startup/Shutdown

From: 07/01/2020 00:00 **To:** 09/30/2020 23:59 **Facility Name:** Malburg Generating Station

Generated: 10/12/2020 09:44 **Location:** Vernon, California

Tag Name: U1_NOx_LbPerHr_1M

SI = SampleInvalid, * = Excess Emission

Total Operating Time: 2,183.12 Hours

Non-Operating Time: 24.88 Hours Report Time: 2,208.00 Hours

Unit Operation

Event Period				Reason	Action
Begin/End	Duration in Minute(s)	Lb/Event	Limit	Code - Description	Code - Description

No excess emissions were found in the reporting period.

Startup/Shutdown Excess Emissions Report

U1 VOC Startup/Shutdown

From: 07/01/2020 00:00 **To:** 09/30/2020 23:59 **Facility Name:** Malburg Generating Station

Generated: 10/12/2020 09:58 **Location:** Vernon, California

Tag Name: U1_VOC_LbPerHr_1M SI = SampleInvalid, * = Excess Emission

Total Operating Time: 2,183.12 Hours

Non-Operating Time: 24.88 Hours Report Time: 2,208.00 Hours

Unit Operation

Event Period				Reason	Action
Begin/End	Duration in Minute(s)	Lb/Event	Limit	Code - Description	Code - Description

No excess emissions were found in the reporting period.

Excess Emission Report

Unit 1 - NOx ppmvdc 1-hour during Normal Operation

From: 07/01/2020 00:00 **To:** 09/30/2020 23:59 **Facility Name:** Malburg Generating Station
Generated: 10/12/2020 09:47 **Location:** Vernon, California

Tag Name: U1_NOxNormal_Ppmvdc_1H
Total Operating Time: 2,187.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 21.00 Hour(s) Report Time: 2,208.00 Hour(s)

Inc No	Start Time	End Time	Duration in Hour(s)	Average	Limit	Maximum	Reason Code	Action Code
1	08/21/20 15:00	08/21/20 15:59	1	2.1	2.0	2.1		

Total Operating Time:	**2,187.00 Hour(s)**
Total Duration (Online only):	**1.00 Hour(s)**
Time in exceedance as a percentage of operating time:	**0.05 %**
Time in compliance as a percentage of operating time:	**99.95 %**

Excess Emission Report

Unit 1 - VOC ppmvdc 1-hour during Normal Operation

From: 07/01/2020 00:00 **To:** 09/30/2020 23:59 **Facility Name:** Malburg Generating Station
Generated: 10/12/2020 09:43 **Location:** Vernon, California

Tag Name: U1_VOCNormal_Ppmvdc_1H
Total Operating Time: 2,187.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 21.00 Hour(s) Report Time: 2,208.00 Hour(s)

No incidents have been reported for this reporting period. Data is 100% in compliance.

Total Operating Time:	**2,187.00 Hour(s)**
Total Duration (Online only):	**0.00 Hour(s)**
Time in exceedance as a percentage of operating time:	**0.00 %**
Time in compliance as a percentage of operating time:	**100.00 %**

Excess Emission Report

Unit 1 - CO ppmvdc 1-hour during Normal Operation

From: 07/01/2020 00:00 **To:** 09/30/2020 23:59 **Facility Name:** Malburg Generating Station
Generated: 10/12/2020 09:40 **Location:** Vernon, California

Tag Name: U1_CONormal_Ppmvdc_1H
Total Operating Time: 2,187.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 21.00 Hour(s) Report Time: 2,208.00 Hour(s)

No incidents have been reported for this reporting period. Data is 100% in compliance.

Total Operating Time:	**2,187.00 Hour(s)**
Total Duration (Online only):	**0.00 Hour(s)**
Time in exceedance as a percentage of operating time:	**0.00 %**
Time in compliance as a percentage of operating time:	**100.00 %**

Quad K Excess Emissions Report

U1 NOX 4-Hour Events

From: 07/01/2020 00:00 **To:** 09/30/2020 23:59 **Facility Name:** Malburg Generating Station
Generated: 10/12/2020 09:38 **Location:** Vernon, California

Tag Name: U1_NOx4H_Ppmvdc_1H
Total Operating Time: 2,187.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 21.00 Hour(s) Report Time: 2,208.00 Hour(s)

No incidents have been reported for this reporting period. Data is 100% in compliance.

Total Operating Time:	**2,187.00 Hour(s)**
Total Duration (Online only):	**0.00 Hour(s)**
Time in exceedance as a percentage of operating time:	**0.00 %**
Time in compliance as a percentage of operating time:	**100.00 %**

Startup/Shutdown Event Report

U2 CO Startup/Shutdown Events

From: 07/01/2020 00:00 **To:** 09/30/2020 23:59 **Facility Name:** Malburg Generating Station
Generated: 10/13/2020 07:25 **Location:** Vernon, California
Tag Name: U2_CO_LbPerHr_1M
SI = SampleInvalid, * = Excess Emission

Total Operating Time: 2,175.58 Hours
Non-Operating Time: 32.42 Hours Report Time: 2,208.00 Hours

Unit Operation

Event Period				Reason	Action
Begin/End	Duration in Minute(s)	Lb/Event	Limit	Code - Description	Code - Description
07/03/2020 14:55 07/03/2020 15:24 Shutdown	30	27.4 *	10.8	1 - Startup/shutdown	104 - Grid Disturbance caused unit to shutdown

Total Duration of Excess Emission	**30**	**Minute(s)**
Time of Excess Emission as a percentage of operating time	**0.02**	**%**
Time in compliance as percentage of operating time	**99.98**	**%**

Startup/Shutdown Excess Emissions Report

U2 NOx Startup/Shutdown

From: 07/01/2020 00:00 **To:** 09/30/2020 23:59 **Facility Name:** Malburg Generating Station

Generated: 10/13/2020 07:27 **Location:** Vernon, California

Tag Name: U2_NOx_LbPerHr_1M

SI = SampleInvalid, * = Excess Emission

Total Operating Time: 2,175.58 Hours

Non-Operating Time: 32.42 Hours Report Time: 2,208.00 Hours

Unit Operation

Event Period				Reason	Action
Begin/End	Duration in Minute(s)	Lb/Event	Limit	Code - Description	Code - Description
07/03/2020 14:55 07/03/2020 15:24 Shutdown	30	8.3 *	4.5	1 - Startup/shutdown	104 - Grid Disturbance caused unit to shutdown

Total Duration of Excess Emission	**30**	**Minute(s)**
Time of Excess Emission as a percentage of operating time	**0.02**	**%**
Time in compliance as percentage of operating time	**99.98**	**%**

Startup/Shutdown Event Report

U2 VOC Startup/Shutdown Events

From: 07/01/2020 00:00 **To:** 09/30/2020 23:59 **Facility Name:** Malburg Generating Station
Generated: 10/12/2020 09:52 **Location:** Vernon, California
Tag Name: U2_VOC_LbPerHr_1M
SI = SampleInvalid, * = Excess Emission

Total Operating Time: 2,175.58 Hours
Non-Operating Time: 32.42 Hours Report Time: 2,208.00 Hours

Unit Operation

Event Period				Reason	Action
Begin/End	Duration in Minute(s)	Lb/Event	Limit	Code - Description	Code - Description

No excess emissions were found in the reporting period.

Excess Emission Report

Unit 2 - NOx ppmvdc 1-hour during Normal Operation

From: 07/01/2020 00:00 **To:** 09/30/2020 23:59 **Facility Name:** Malburg Generating Station
Generated: 10/12/2020 10:00 **Location:** Vernon, California

Tag Name: U2_NOxNormal_Ppmvdc_1H
Total Operating Time: 2,180.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 28.00 Hour(s) Report Time: 2,208.00 Hour(s)

No incidents have been reported for this reporting period. Data is 100% in compliance.

Total Operating Time:	**2,180.00 Hour(s)**
Total Duration (Online only):	**0.00 Hour(s)**
Time in exceedance as a percentage of operating time:	**0.00 %**
Time in compliance as a percentage of operating time:	**100.00 %**

Excess Emission Report

Unit 2 - VOC ppmvdc 1-hour during Normal Operation

From: 07/01/2020 00:00 **To:** 09/30/2020 23:59 **Facility Name:** Malburg Generating Station
Generated: 10/12/2020 10:02 **Location:** Vernon, California

Tag Name: U2_VOCNormal_Ppmvdc_1H
Total Operating Time: 2,180.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 28.00 Hour(s) Report Time: 2,208.00 Hour(s)

No incidents have been reported for this reporting period. Data is 100% in compliance.

Total Operating Time:	**2,180.00 Hour(s)**
Total Duration (Online only):	**0.00 Hour(s)**
Time in exceedance as a percentage of operating time:	**0.00 %**
Time in compliance as a percentage of operating time:	**100.00 %**

Excess Emission Report

Unit 2 - CO ppmvdc 1-hour during Normal Operation

From: 07/01/2020 00:00 **To:** 09/30/2020 23:59 **Facility Name:** Malburg Generating Station
Generated: 10/12/2020 10:03 **Location:** Vernon, California

Tag Name: U2_CONormal_Ppmvdc_1H
Total Operating Time: 2,180.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 28.00 Hour(s) Report Time: 2,208.00 Hour(s)

No incidents have been reported for this reporting period. Data is 100% in compliance.

Total Operating Time:	**2,180.00 Hour(s)**
Total Duration (Online only):	**0.00 Hour(s)**
Time in exceedance as a percentage of operating time:	**0.00 %**
Time in compliance as a percentage of operating time:	**100.00 %**

Quad K Excess Emissions Report

U2 NOX 4-Hour Events

From: 07/01/2020 00:00 **To:** 09/30/2020 23:59 **Facility Name:** Malburg Generating Station
Generated: 10/12/2020 10:04 **Location:** Vernon, California

Tag Name: U2_NOx4H_Ppmvdc_1H
Total Operating Time: 2,180.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 28.00 Hour(s) Report Time: 2,208.00 Hour(s)

No incidents have been reported for this reporting period. Data is 100% in compliance.

Total Operating Time:	**2,180.00 Hour(s)**
Total Duration (Online only):	**0.00 Hour(s)**
Time in exceedance as a percentage of operating time:	**0.00 %**
Time in compliance as a percentage of operating time:	**100.00 %**

Appendix C

Diesel Fuel Oil Specifications

3b

Invoice

SC Commercial LLC DBA SC Fuels
1800 West Katella Ave, Suite 400, P.O. Box 4159, Orange, CA 92863-4159
PLEASE REMIT ALL PAYMENTS TO:
P.O. BOX 14237
ORANGE, CA 92863-1237
Ph: (800) 659-5823 Credit Inquiries: (888) SCFUELS Ext.6017

SHIP TO: 1L **CUST NO: 01-0001084**
COLORADO ENERGY MGMT-VERNON
4963 SOTO STREET
VERNON, CA 90058

INVOICE 1592103-IN	**DUE DATE** 3/27/2020
INVOICE DATE 2/26/2020	**SHIP DATE** 2/26/2020
ORDER DATE 2/19/2020	**SHIP VIA** 826
CUSTOMER PO MGS18808	**ORDER NUMBER** 1592103
TERMS N30	**SALESMAN** Todd Cripps 714-938-5714

ACCT NO (Bill-to): **01-0001084**
COLORADO ENERGY MANAGEMENT LLC
ATTN: ACCOUNTS PAYABLE
4963 S. SOTO STREET
VERNON, CA 90058
(323) 476-3622

ITEM CODE	ITEM DESCRIPTION	QUANTITY ORDERED	QUANTITY DELIVERED	PACKAGE DESCRIPTION	EXTENDED QTY	UNIT PRICE	EXT PRICE
422D055	DYED CARB ULS DIESEL (RED)	2	2.00	55 GAL DRM	110.00	4.43000	487.30
	Whse: 101						
	UN1202, DIESEL FUEL, 3, PG III - NONTAXABLE USE ONLY, PENALITY FOR TAXABLE USE						
	Federal Lust					0.00100	0.11
	Federal Oil Spill					0.00214	0.24
	CA - AB 32 - DSL					0.00704	0.77
						4.44018	488.42
DRUMDEPOSITC001	DRUM FEE	2	2.00	MISC CHRG	2.00	25.00000	50.00
	Whse: 101						
/FUELCH	FUEL SURCHARGE						9.92
/RCF	REGULATORY COMPLIANCE FEE						12.95
MSRTNDRMC001	RETURN DRUM	0	-2.00	MISC CHRG	2.00-	15.00000	30.00-
	Whse: 101						

Save time, pay online! View invoices, make payments and more.
Sign up for the Customer Portal today. Email: creditinquiries@scfuels.com or Call 888-SCFuels Ext. 6017 or login to Customer Portal: https://customerportal.scfuels.com
24-hour Emergency Response Call CHEMTREC: 800-424-9300

Net Invoice:	531.29
Less Discount:	0.00
Freight:	0.00
Sales Tax:	48.57
Invoice Total:	579.86

- IN THE EVENT THAT THE ABOVE CHARGES ARE NOT PAID WHEN DUE, SC COMMERCIAL, LLC d.b.a SC FUELS RESERVES THE RIGHT TO REFUSE FURTHER CHARGES TO THE ACCOUNT. A SERVICE CHARGE OF 1.5% PER MONTH(A.P.R. 18%) WILL APPLY TO ALL PAST DUE INVOICES.
- ERRORS IN PRICE, EXTENSION, AND ADDITION SUBJECT TO CORRECTION.
- It is the purchaser's responsibility to verify that all applicable taxes are being charged in accordance with fedral and state laws.
- Prices shown on this invoice reflect discounts received for Payment by Cash, Check, or Electronic Funds Transfer(EFT). Payment by other

3C

ox 14237
nge, CA 92863-1237
el: 800-659-5823
Fax: 714-992-7377
Credit Inquiries: 888-364-0121

SC FUELS®

DELIVERY TICKET

Order#: 1592103
Order Date: 2/19/2020
Delv Req Date: 2/26/2020
Sales Person: 0177 - Todd Cripps

SOLD TO: 01-0001084
COLORADO ENERGY MANAGEMENT LLC
ATTN: ACCOUNTS PAYABLE
4963 S. SOTO STREET
VERNON, CA 90058
(323) 476-3622

SHIP TO: 1L
COLORADO ENERGY MGMT-VERNON
4963 SOTO STREET
VERNON, CA 90058
(323) 476-3632

Confirm To: ASHLEY HURD
Customer PO: MGS18808 Ship Via: Whse: 101 Terms: N30

HM	Product Code / Desc / Svc Type	Qty Ordered / Package Desc	Ext Qty Ordered	Qty Delivered	Unit Price	Extended Amoun
X	UN1202, DIESEL FUEL, 3, PG III - NONTAXABLE USE ONLY, PENALITY FOR TAXABLE USE					
	422D055 30 DYED CARB ULS DIESEL (RED)	2.00 55 GAL DRM	110.00 GALS	2 Drums		
	DRUMDEPOSITC001 30 DRUM FEE	2.00 MISC CHRG	2.00 EACH	2 Drums		
	/FUELCH 30 FUEL SURCHARGE		0.00			
	/RCF 30 REGULATORY COMPLIANCE FEE		0.00			

Rec'd by [signature] Date 2/26/2020
Print Name Ethan Sluter
Driver's Signature [signature]

Received in INFOR
2/26/20
M. Gordon

ARRIVED LOAD POINT	AM PM	DATE		COMPLETED LOADING	AM PM	DATE	TRUCK # 826	B/L #	FOR COMPANY USE ONLY RT ☐ TF ☐ OP ☐
ARRIVED DESTINATION 840	AM PM	DATE 2/26/2020		COMPLETED UNLOADING	AM PM	DATE 2/26/2020	D.O.T. HAZARDOUS MATERIALS PLACARD PROVIDED BY SHIPPER ☐ CARRIER ☐		
END TANK	GAS	DIESEL	OTHER	WATER DETECTED ? ☐ YES ☐ NO		GRAVITY	THIS IS TO CERTIFY THAT THE ABOVE NAMED MATERIALS ARE PROPERLY CLASSIFIEI DESCRIBED, PACKAGED, MARKED AND LABELED AND ARE IN PROPER CONDITION FO TRANSPORTATION ACCORDING TO APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.		
BEGINNING TANK	GAS	DIESEL	OTHER	DRUM DEPOSIT 2 Drums		DRUM CREDIT	IN THE EVENT OF A HAZARDOUS MATERIALS INCIDENT - CALL 1-800-424-9300		

FOR CHEMICAL EMERGENCY
Spill, Leak, Fire Exposure or Accident
CALL CHEMTREC - DAY OR NIGHT
800-424-9300

CHEVRON GST® OILS

ISO 32, 46, 68, 100

CUSTOMER BENEFITS

Chevron GST Oils deliver value through:

- **Superior oxidation stability** for long service life at elevated temperatures.
- **Rust and corrosion protection**
- **High viscosity index** assures minimum viscosity change when variations in temperature occur.
- **Minimum foam** prevents sump overflow or erratic governor operation.
- **Fast air release** minimizes possibility of pump cavitation in systems with high circulation rates and small reservoirs.
- **Superior thermal stability** minimizes deposit formation.
- **Rapid water separation** keeps water in oil to a minimum.
- **Hydraulic fluid service** — Chevron GST Oils ISO 32, 46, and 68 are excellent hydraulic fluids in low pressure systems up to 1000 psi.
- **Air compressor** lubricant when OEM recommends R&O type oil.
- **Environmental benefits** — All grades are ashless. This facilitates reclaiming and recycling of the used oils. Chevron GST Oils are not expected to be harmful to aquatic organisms.

FEATURES

Chevron GST Oils are designed to meet the critical demands of:

- gas, steam, and hydroelectric turbine bearing lubrication
- reduction gear lubrication in marine operations

They are an excellent recommendation for many other industrial applications including air compression.

Chevron GST Oils are formulated with ISOSYN® base stocks.

Higher temperatures in advanced gas and steam turbines require a circulating system oil with exceptional high temperature stability. Chevron GST Oils have outstanding **thermal and oxidation stability**.

Nonvolatile **oxidation inhibition** minimizes the evaporative loss of the inhibitors, a common problem with turbine oils where bearing temperatures are high and system capacities are limited. With retained oxidation resistance for long periods under high temperature conditions, Chevron GST Oils have proven they will provide longer oil service life and reduced turbine down time.

Corrosion inhibition protects costly turbine shafts and gears from corrosion and rusting.

Chevron GST Oils have excellent demulsibility characteristics which allow these oils to maintain a high film strength coating on critical wear points of bearings and gear reducers and assure fast removal of water contamination.

Foam inhibition prevents sump overflow and erratic governor operation.

APPLICATIONS

Chevron GST Oils are recommended for use in turbines of all types including gas, steam, and hydroelectric turbines, and marine gear turbine sets.

The following viscosity grades are formulated to meet the specified OEM requirements:

Chevron GST Oil ISO 32

- meets and exceeds
  - — **General Electric** GEK-32568f, GEK 28143A, GEK-46506D, GEK-27070
  - — **Ingersoll Rand** specification for Centac Centrifugal Compressors
  - — **Solar** ES 9 224 requirements for gas turbine oils
  - — **ASTM D4304**, **British Standard 489**, and **DIN 51515** standard organization requirements for new lubricants used in gas and steam turbines and auxiliary equipment
- is approved by
  - — **Cincinnati Machine** P-38
  - — **Alstom Power** HTGD 90117
  - — **Siemens Westinghouse** M spec 55125Z3
  - — **Siemens** TLV 901304

Chevron GST Oil ISO 46

- meets
  - — **General Electric** and **Westinghouse** requirements for marine gas turbine system oils. Recommended by Siemens Westinghouse for reactor coolant pump motor bearings.
  - — **Siemens** TLV 901304
  - — **Solar** ES 9 224 requirements for gas turbine oils
  - — **ASTM D4304**, **British Standard 489**, and **DIN 51515** standard organization requirements for new lubricants used in gas and steam turbines and auxiliary equipment
- is approved by
  - — **Cincinnati Machine** P 55
  - — **Alstom Power** HTGD 90117

Chevron GST Oil ISO 68

- meets
  - — meets **General Electric**, **Alstom**, **Westinghouse**, and other OEM requirements for hydroelectric turbines, land and marine steam turbines, and associated reduction gears
  - — **ASTM D4304**, **British Standard 489**, and **DIN 51515** standard organization requirements for new lubricants used in gas and steam turbines and auxiliary equipment
- is approved by
  - — **Cincinnati Machine** P-54

Chevron GST Oil ISO 100

- meets
  - — meets **General Electric**, **Alstom**, **Westinghouse**, and other OEM requirements for hydroelectric turbines, land and marine steam turbines, and associated reduction gears
  - — **ASTM D4304**, **British Standard 489**, and **DIN 51515** standard organization requirements for new lubricants used in gas and steam turbines and auxiliary equipment

Chevron GST Oils ISO 32, 46, 68, and 100 are registered with NSF and are acceptable as lubricants where there is no possibility of food contact (H2) in and around food processing areas. The NSF Nonfood Compounds Registration Program is a continuation of the USDA product approval and listing program, which is based on meeting regulatory requirements of appropriate use, ingredient review and labeling verification.

Do not use in high pressure systems in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

Do not use in breathing air apparatus or medical equipment.

TYPICAL TEST DATA

ISO Grade	32	46	68	100
CPS Number	*253026*	*253027*	*253028*	*253029*
MSDS Number	*6710*	*6710*	*6710*	*6710*
AGMA Grade	—	1	2	3
API Gravity	32.7	32.0	31.7	31.4
Viscosity, Kinematic cSt at 40°C cSt at 100°C	 30.4 5.2	 43.7 6.6	 64.6 8.5	 95.0 11.0
Viscosity, Saybolt SUS at 100°F SUS at 210°F	 157 43.8	 225 48.2	 334 54.8	 495 63.9
Viscosity Index	102	101	102	100
Flash Point,°C(°F)	222(432)	224(435)	245(473)	262(504)
Pour Point, °C(°F)	-36(-33)	-36(-33)	-33(-27)	-30(-22)
Oxidation Stability ASTM D 943[1] ASTM D 2272[2]	 17,000 1700	 12,000 1400	 11,000 1400	 11,000 1400
FZG, Pass stage, DIN 51354	—	—	—	—

Typical test data are average values only. Minor variations which do not affect product performance are to be expected in normal manufacturing.

1 Hours to 2.0 mg KOH/g acid number modified D943
2 Minutes to 25 psi pressure drop

Appendix D

Cooling Tower PM10 Guidance

SPX Cooling Technologies

Balcke | Hamon Dry Cooling | Marley

COOLING TOWER DRIFT MASS DISTRIBUTION
Excel Drift Eliminators

The following table represents the predicted mass distribution of drift particle size for cooling tower drift dispersed from Marley TU10 and TU12 Excel Drift Eliminators properly installed in a cooling tower.

Mass in Particles (%)		Droplet Size (Microns)
0.2	Larger Than	525
1.0	Larger Than	375
5.0	Larger Than	230
10.0	Larger Than	170
20.0	Larger Than	115
40.0	Larger Than	65
60.0	Larger Than	35
80.0	Larger Than	15
88.0	Larger Than	10

How to read table: Example – 0.2% of the drift will have particle sizes larger than 525 microns.

Marley guarantees the data above for properly installed, undamaged drift eliminators in 'like-new' condition.

SPX COOLING TECHNOLOGIES

PREFERRED COOLING TOWER WATER CONDITION LIMITS

NOTE: Biological treatment and control of Legionella and other potentially health-threatening bacteria is essential. Consult a competent water treatment expert or service company.

pH	6.5 to 9.0 (special materials may be required beyond these limits)
Temperature	125° F (51.7° C) typical maximum; higher temperatures possible with special materials
Langelier Saturation Index	0.0 to 1.0 recommended; higher allowed if scale is controllable.
M-Alkalinity	100 to 500 ppm as $CaCO_3$
Silica	150 ppm as SiO_2 maximum (scale formation)
Iron	3 ppm maximum (staining and scale contributor)
Manganese	0.1 ppm maximum (staining and scale contributor)
Sulfides	Greater than 1 ppm can be corrosive to copper alloys, iron, steel, and galvanized steel. See table below for limits with film fill.
Ammonia	50 ppm maximum if copper alloys present; lower limits apply for film fill - see table.
Chlorine / bromine	1 ppm free residual intermittently (shock), or 0.4 ppm continuously maximum. Excess can attack sealants, accelerate corrosion, increase drift, and embrittle PVC.
Organic solvents	These can attack plastics and promote bio-growth. Trace amounts may be acceptable, depending on the solvent.
TDS	Over 5000 ppm may require thermal performance derate.

Individual Ions:		MAXIMUM:
Cations:	**Calcium**	800 ppm as $CaCO_3$ preferred, (300 ppm with MX fills in arid climate).
	Magnesium	Depends on pH and silica level (for magnesium silicate scale).
	Sodium	No limit.
Anions:	**Chlorides**	450 ppm as Cl^- (300 for galvanized towers). upgrades are required for higher chloride levels.
	Sulfates	800 ppm as $CaCO_3$ preferred if calcium is also high ($CaSO_4$ scale).
	Nitrates	300 ppm as NO_3 (bacteria nutrient).
	Carbonates/Bicarbonates	300 ppm as $CaCO_3$ preferred for wood or galvanized steel tower.

Fouling Contaminant Limits - based on fouling load of 2.5 pounds per cubic foot

Bacteria counts listed below relate to maintaining fill thermal efficiency only.
Biocidal treatment is required for all cooling tower installations. (see NOTE above).

Fill Type	Aerobic Bacteria Heterotrophic Plate Count	Total Suspended Solids (TSS)	Oil and Grease	Sulfides	Ammonia
MC75, MC120	10,000 CFU/ml	50 ppm	1 ppm	0.5 ppm	10 ppm
FB20, MX75 and MX625 (crossflow)	100,000 CFU/ml with TSS up to 50 ppm, or 10,000 CFU/ml with TSS up to 150 ppm		1 ppm	1.0 ppm	15 ppm
DF254, MCR16	100,000 CFU/ml	150 ppm	5 ppm	1.5 ppm	25 ppm
DF381 with 1' MC75 overlay	1,000,000 CFU/ml with TSS up to 50 ppm, or 100,000 CFU/ml with TSS up to 150 ppm		5 ppm	1.5 ppm	25 ppm
DF381, MVC20, AAFNCS ('Cleanflow') MCR12, Tricklebloc	1,000,000 CFU/ml	250 ppm	10 ppm	2.0 ppm	25 ppm
Splash bar or grid fill	1,000,000 CFU/ml target	No specific limit	10 ppm	N/A	N/A

Note: Any amount of oil or grease is likely to adversely affect thermal performance. Sulfides and ammonia promote bacterial growth which can cause fill fouling; conformance to the limits above will assist in controlling bacteria to the recommended levels.

Drift Effects:

Certain contaminants or treatment chemicals such as surfactants, glycols, biodispersants and antifoams may increase drift rate. When minimizing drift is vital, the circulating water shall have a surface tension of at least 65 dynes/cm and a total organic carbon (TOC) level below 25 ppm. *Reclaim or re-use waters in particular may contain contaminants which increase drift rate either directly or by necessitating the use of treatment chemicals which increase drift rate.*

Miscellaneous Solids and Nutrients

Avoid high efficiency fill (MC75) with water containing bacteria nutrients such as alcohols, nitrates, ammonia, fats, glycols, phosphates, black liquor, or TOC greater than 50 ppm. Clog-resistant fills may be considered for contaminated water, case by case.
For all film fills, avoid fibrous, oily, greasy, fatty, or tarry contaminants, which can plug fill.
In general, do not use film fill in Steel Plants, Pulp & Paper Mills, Food Processing Operations, or similar applications unless leaks and contamination by airborne or waterborne particulates, oil, or fibers are extremely unlikely. If film fill is used, biological-growth control must be stringent and diligent.