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QUARTERLY COMPLIANCE REPORT
(First Quarter 2021)

MALBURG GENERATING STATION
4963 SOTO STREET, VERNON, CA 90058

SUBMITTED TO:

CALIFORNIA ENERGY COMMISSION

1516 9TH STREET, SACRAMENTO, CA 95814

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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 March 29, 2021.

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 March 29, 2021.

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 2.0 ppmv, which is less than or equal to 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.

2.13 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 0.5 ppmv, which is lower than or equal to 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 2021, 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 1, 2021

Starting	Ending	TDS (ppm)
1/3/2021	1/9/2021	4320
1/10/2021	1/16/2021	4300
1/17/2021	1/23/2021	4260
1/24/2021	1/30/2021	4440
1/31/2021	2/6/2021	4260
2/7/2021	2/13/2021	4260
2/14/2021	2/20/2021	4550
2/21/2021	2/27/2021	4510
2/28/2021	3/6/2021	4430
3/7/2021	3/13/2021	3480
3/14/2021	3/20/2021	4650
3/21/2021	3/27/2021	0
3/28/2021	4/3/2021	0

Table 2-2

Malburg Generating Station
Cooling Tower Daily PM10 Emissions During Jan. 2021

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	4320	**1.40**
2	38,811,456	4320	**1.40**
3	38,811,456	4320	**1.40**
4	38,811,456	4320	**1.40**
5	38,811,456	4320	**1.40**
6	38,811,456	4320	**1.40**
7	38,811,456	4320	**1.40**
8	38,811,456	4320	**1.40**
9	38,811,456	4320	**1.40**
10	38,811,456	4300	**1.39**
11	38,811,456	4300	**1.39**
12	38,811,456	4300	**1.39**
13	38,811,456	4300	**1.39**
14	38,811,456	4300	**1.39**
15	38,811,456	4300	**1.39**
16	38,811,456	4300	**1.39**

Date	Circulation Rate (gal/day)	TDS (ppm)	PM_{10} (lbs/day)
17	38,811,456	4260	**1.38**
18	38,811,456	4260	**1.38**
19	38,811,456	4260	**1.38**
20	38,811,456	4260	**1.38**
21	38,811,456	4260	**1.38**
22	38,811,456	4260	**1.38**
23	38,811,456	4260	**1.38**
24	38,811,456	4440	**1.44**
25	38,811,456	4440	**1.44**
26	38,811,456	4440	**1.44**
27	38,811,456	4440	**1.44**
28	38,811,456	4440	**1.44**
29	38,811,456	4440	**1.44**
30	38,811,456	4440	**1.44**
31	38,811,456	4260	**1.38**

Table 2-3

Malburg Generating Station
Cooling Tower Daily PM10 Emissions During Feb. 2021

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	4260	**1.38**
2	38,811,456	4260	**1.38**
3	38,811,456	4260	**1.38**
4	38,811,456	4260	**1.38**
5	38,811,456	4260	**1.38**
6	38,811,456	4260	**1.38**
7	38,811,456	4260	**1.38**
8	38,811,456	4260	**1.38**
9	38,811,456	4260	**1.38**
10	38,811,456	4260	**1.38**
11	38,811,456	4260	**1.38**
12	38,811,456	4260	**1.38**
13	38,811,456	4260	**1.38**
14	38,811,456	4550	**1.47**
15	38,811,456	4550	**1.47**
16	38,811,456	4550	**1.47**

Date	Circulation Rate (gal/day)	TDS (ppm)	PM_{10} (lbs/day)
17	38,811,456	4550	**1.47**
18	38,811,456	4550	**1.47**
19	38,811,456	4550	**1.47**
20	38,811,456	4550	**1.47**
21	38,811,456	4510	**1.46**
22	38,811,456	4510	**1.46**
23	38,811,456	4510	**1.46**
24	38,811,456	4510	**1.46**
25	38,811,456	4510	**1.46**
26	38,811,456	4510	**1.46**
27	38,811,456	4510	**1.46**
28	38,811,456	4430	**1.43**

Table 2-4

Malburg Generating Station
Cooling Tower Daily PM10 Emissions During Mar. 2021

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	4430	**1.43**
2	38,811,456	4430	**1.43**
3	38,811,456	4430	**1.43**
4	38,811,456	4430	**1.43**
5	38,811,456	4430	**1.43**
6	38,811,456	4430	**1.43**
7	38,811,456	3480	**1.13**
8	38,811,456	3480	**1.13**
9	38,811,456	3480	**1.13**
10	38,811,456	3480	**1.13**
11	38,811,456	3480	**1.13**
12	38,811,456	3480	**1.13**
13	38,811,456	3480	**1.13**
14	38,811,456	4650	**1.50**
15	38,811,456	4650	**1.50**
16	38,811,456	4650	**1.50**

Date	Circulation Rate (gal/day)	TDS (ppm)	PM_{10} (lbs/day)
17	38,811,456	4650	**1.50**
18	38,811,456	4650	**1.50**
19	38,811,456	4650	**1.50**
20	38,811,456	4650	**1.50**
21	38,811,456	0	**0.00**
22	38,811,456	0	**0.00**
23	38,811,456	0	**0.00**
24	38,811,456	0	**0.00**
25	38,811,456	0	**0.00**
26	38,811,456	0	**0.00**
27	38,811,456	0	**0.00**
28	38,811,456	0	**0.00**
29	38,811,456	0	**0.00**
30	38,811,456	0	**0.00**

Table 2-5

Heorot Power Management
Malburg Generating Station
Diesel Fuel Fired Emergency Firewater Pump Testing Times
During Quarter 1, 2021

Date	Time	Main / Test Emerg.	Hours of Operation	Initials
Jan. 03, 2021	21:27	Testing	0.5	STFO
Jan. 10, 2021	22:26	Testing	0.5	RRFO
Jan. 17, 2021	21:07	Testing	0.5	ACFO
Jan. 24, 2021	22:18	Testing	0.6	JAFO
Jan. 31, 2021	22:36	Testing	0.3	RRFO
Feb. 07, 2021	21:58	Testing	0.6	STFO
Feb. 16, 2021	23:29	Testing	0.4	STFO
Feb. 23, 2021	13:17	Testing	0.5	ACFO
Mar. 01, 2021	01:28	Testing	0.6	RRFO
Mar. 07, 2021	20:22	Testing	0.5	STFO
Mar. 14, 2021	23:16	Testing	0.5	JAFO
Mar. 21, 2021	22:48	Testing	0.5	JAFO
Mar. 28, 2021		DNR		

Note: Event 'DNR' - Did Not Run

Table 2-11

Malburg Generating Station
Total Monthly Emissions
Jan-2021

Contaminant	Gas Turbines (2)
CO lbs	950
PM10 lbs	2,481
PM2.5 lbs	2,481
VOC lbs	635
SOx lbs	115

Table 2-12

Malburg Generating Station
Total Monthly Emissions
Feb-2021

Contaminant	Gas Turbines (2)
CO lbs	1,107
PM10 lbs	1,706
PM2.5 lbs	1,706
VOC lbs	437
SOx lbs	79

Table 2-13

Malburg Generating Station
Total Monthly Emissions
Mar-2021

Contaminant	Gas Turbines (2)
CO lbs	887
PM10 lbs	1,391
PM2.5 lbs	1,391
VOC lbs	356
SOx lbs	65

Table 2-14

Malburg Generating Station
Combustion Turbines Startup and Shutdown Events
During Quarter 1, 2021

CT1

Date	Event Type	Event Start	Event End	Duration (hrs:min)
01/01/2021	Warm Start	16:44	16:56	0:12
01/28/2021	Shutdown	23:55	00:03	:08
02/01/2021	Warm Start	15:43	16:56	1:13
02/05/2021	Shutdown	22:16	22:25	0:09
2/6/2021	Start	15:29	16:37	1:08
2/13/2021	Shutdown	22:13	22:18	0:05
2/14/2021	Warm Start	15:28	23:14	7:46
2/14/2021	Shutdown	22:13	22:21	0:08
2/15/2021	Warm Start	17:21	18:27	1:06
2/15/2021	Shutdown	22:12	22:20	0:08
2/18/2021	Start	13:29	14:44	1:15
2/19/2021	Shutdown	00:00	00:08	0:08
2/21/2021	Start	21:30	22:53	1:23
2/27/2021	Shutdown	00:09	00:16	0:07
2/28/201	Warm Start	14:37	15:53	1:16
3/5/2021	Shutdown	23:02	23:10	0:08
3/6/2021	Warm Start	14:28	15:34	1:06
3/7/2021	Shutdown	07:15	07:17	0:02
3/8/2021	Warm Start	13:09	14:27	1:18
3/13/2021	Shutdown	02:01	02:04	0:03
3/15/2021	Cold Start	13:55	15:18	1:23
3/15/2021	Shutdown/Trip	18:31		:01
3/15/2021	Warm Start	22:16	22:21	0:05
3/19/2021	Shutdown	22:12	22:21	0:09
3/20/2021	Warm Start	16:23	17:33	1:10
3/20/2021	Shutdown	06:52	06:56	0:04

CT2

Date	Event Type	Event Start	Event End	Duration (hrs:min)
1/1/2021	Warm Start	14:55	16:11	1:16
2/5/2021	Shutdown	22:16	22:25	0:09
2/6/2021	Warm Start	17:10	18:11	1:01
2/13/2021	Shutdown	22:13	22:22	0:09
2/14/2021	Warm Start	17:22	18:25	1:03
2/14/2021	Shutdown	22:13	22:21	0:08
2/15/2021	Warm Start	15:28	16:42	1:14
2/15/2021	Shutdown	22:12	22:20	0:08
2/16/2021	Warm Start	14:28	15:40	01:12
2/16/2021	Shutdown	21:32	21:38	00:06
2/17/2021	Warm Start	02:01	03:04	01:03
2/17/2021	Shutdown	07:15	07:25	00:10
2/19/2021	Warm Start	13:28	14:44	01:16
2/20/2021	Shutdown	00:04	00:11	00:07
2/22/2021	Cold Start	15:43	16:51	01:08
2/27/2021	Shutdown	00:09	00:16	00:07
2/28/2021	Warm Start	17:56	19:10	01:14
3/5/2021	Shutdown	23:02	23:10	00:08
3/6/2021	Warm Start	16:03	17:06	01:03
3/7/2021	Shutdown	07:15	07:17	00:02
3/8/2021	Warm Start	15:10	16:19	1:09
3/9/2021	Shutdown/Trip	07:18		0:01
3/9/2021	Warm Start	08:32	09:26	0:54
3/13/2021	Shutdown	23:58	00:06	00:08
3/15/2021	Start	16:10	17:27	01:17
3/15/2021	Shutdown/Trip	18:31		00:01
3/15/2021	Warm Start	23:50	00:42	00:52
3/19/2021	Shutdown	22:56	23:11	00:15
3/20/2021	Warm Start	18:15	19:21	01:06
3/20/2021	Shutdown	23:57	00:12	00:15

Table 2-15

Malburg Generating Station
Combustion Turbines and Duct Burner Gas Usage
During Quarter 1,2021

Month	CT-1 / DB-1 Gas Usage (mmscf)	CT-2 / DB-2 Gas Usage (mmscf)
Jan-21	189.70	222.85
Feb-21	135.05	148.70
Mar-21	116.82	114.47

Appendix A

Cooling Tower Blowdown Reports

POSITIVE LAB SERVICE

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

January 12, 2021

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

Report No.: 2101018
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 January 06, 2021.

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

File #:74548
Report Date: 01/12/21
Submitted: 01/06/21
PLS Report No.: 2101018

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

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2101018-01) Sampled: 01/06/21 10:00 Received: 01/06/21 10:00

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4320**		1	mg/L	5.0	- SM 2540C	01/07/21	01/08/21	dd	BA10802

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BA10802 - -										
Blank	**Prepared: 01/07/21 Analyzed: 01/08/21**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 01/07/21 Analyzed: 01/08/21**									
Total Dissolved Solids	48.0	5.0	mg/L	50.00		96.0	80-120			
Duplicate **Source: 2101018-01**	**Prepared: 01/07/21 Analyzed: 01/08/21**									
Total Dissolved Solids	4270	5.0	mg/L		4320			1.20	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

Authorized Signature(s)

115713

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: 1-6-21 PAGE 1 OF 1

LOG BOOK NO. ______ FILE NO. ______ LAB NO. 2101018

CLIENT NAME: CEM Project Name/No. Molburg Gereafigstation - Weekly P.O. NO.

AIRBILL NO: ______

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 1.4°

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: John Bone (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	SOIL	SLUDGE	OTHER	TAT	CONTAINER #	TYPE	TDS							SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		1-6-21	1000	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:
John Bone	Guadalupe Tanaka	1-6-21	1040

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

January 15, 2021

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

Report No.: 2101051
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 January 11, 2021.

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: 01/15/21
Submitted: 01/11/21
PLS Report No.: 2101051

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2101051-01) Sampled: 01/11/21 07:55 Received: 01/11/21 07:55

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4300**		1	mg/L	5.0	- SM 2540C	01/13/21	01/14/21	dd	BA11441

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BA11441 - -										
Blank	**Prepared: 01/13/21 Analyzed: 01/14/21**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 01/13/21 Analyzed: 01/14/21**									
Total Dissolved Solids	47.0	5.0	mg/L	50.00		94.0	80-120			
Duplicate Source: 2101051-01	**Prepared: 01/13/21 Analyzed: 01/14/21**									
Total Dissolved Solids	4310	5.0	mg/L		4300			0.155	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)

115891

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: 1-11-24 PAGE 1 OF 1
LOG BOOK NO. _____ FILE NO. _____ LAB NO. 240151

CLIENT NAME: CCM
Project Name/No. Malburg Generating Station - Weekly
P.O. NO.
AIRBILL NO: _____
ADDRESS:
ANALYSES REQUESTED:
COOLER TEMP: 0.8°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		1-11-24	0755	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) Guadalupe Tavallali
Date: 1-11-24 Time: 1050

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

January 25, 2021

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

Report No.: 2101143
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 January 19, 2021.

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.

John Schmidt
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: 01/25/21
Submitted: 01/19/21
PLS Report No.: 2101143

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2101143-01) Sampled: 01/19/21 10:15 Received: 01/19/21 10:15

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4260**		1	mg/L	5.0	- SM 2540C	01/20/21	01/21/21	dd	BA12131

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BA12131 - -										
Blank	**Prepared: 01/20/21 Analyzed: 01/21/21**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 01/20/21 Analyzed: 01/21/21**									
Total Dissolved Solids	52.0	5.0	mg/L	50.00		104	80-120			
Duplicate Source: 2101143-01	**Prepared: 01/20/21 Analyzed: 01/21/21**									
Total Dissolved Solids	4310	5.0	mg/L		4260			1.21	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 Parlier

Authorized Signature(s)

115911

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: 1-19-21 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 210143

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

AIRBILL NO: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 1.3°c

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: Jon Baze (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		1/19/21	1015	Cooling Tower Blowdown	X				2	1	P	X							
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished By: (Signature and Printed Name) Jon Baze — Received By: (Signature and Printed Name) Guadalupe Tanaka — Date: 1/19/21 — Time: 1415

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

January 29, 2021

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

Report No.: 2101189
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 January 25, 2021.

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: 01/29/21
Submitted: 01/25/21
PLS Report No.: 2101189

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2101189-01) Sampled: 01/25/21 08:25 Received: 01/25/21 08:25

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	01/28/21	01/29/21	dd	BA12902

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BA12902 - -										
Blank	**Prepared: 01/28/21 Analyzed: 01/29/21**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 01/28/21 Analyzed: 01/29/21**									
Total Dissolved Solids	52.0	5.0	mg/L	50.00		104	80-120			
Duplicate Source: 2101185-01	**Prepared: 01/28/21 Analyzed: 01/29/21**									
Total Dissolved Solids	4380	5.0	mg/L		30300			150	5	
Duplicate Source: 2101225-11	**Prepared: 01/28/21 Analyzed: 01/29/21**									
Total Dissolved Solids	930	5.0	mg/L		926			0.431	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)

115924

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: 1-25-21 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 210189

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

AIRBILL NO: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 0.7°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	SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		1-25-21	0825	Cooling Tower Blowdown	G				2	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: 1-25-21 Time: 0910

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

February 09, 2021

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

Report No.: 2102091
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 February 03, 2021.

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: 02/09/21
Submitted: 02/03/21
PLS Report No.: 2102091

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2102091-01) Sampled: 02/03/21 08:40 Received: 02/03/21 08:40

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4260**		1	mg/L	5.0	- SM 2540C	02/04/21	02/05/21	dd	BB10503

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BB10503 - -										
Blank	**Prepared: 02/04/21 Analyzed: 02/05/21**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 02/04/21 Analyzed: 02/05/21**									
Total Dissolved Solids	50.0	5.0	mg/L	50.00		100	80-120			
Duplicate **Source: 2102091-01**	**Prepared: 02/04/21 Analyzed: 02/05/21**									
Total Dissolved Solids	4120	5.0	mg/L		4260			3.34	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)

115956

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: 2.3.21 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 210291

CLIENT NAME: CEM

Project Name/No. Malburg Generating Station

P.O. NO.

AIRBILL NO: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 1.5°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		2.3.21	0840	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 Barnhart	Guadalupe Tanaka	2.3.21	1010
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

February 16, 2021

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

Report No.: 2102176
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 February 09, 2021.

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

File #:74548
Report Date: 02/16/21
Submitted: 02/09/21
PLS Report No.: 2102176

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

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2102176-01) Sampled: 02/09/21 09:35 Received: 02/09/21 09:35

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4260**		1	mg/L	5.0	SM 2540C	02/11/21	02/12/21	dd	BB11544

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BB11544 - -										
Blank	**Prepared: 02/11/21 Analyzed: 02/12/21**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 02/11/21 Analyzed: 02/12/21**									
Total Dissolved Solids	48.0	5.0	mg/L	50.00		96.0	80-120			
Duplicate **Source: 2102176-01**	**Prepared: 02/11/21 Analyzed: 02/12/21**									
Total Dissolved Solids	4340	5.0	mg/L		4260			1.86	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)

115961

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: 2-9-21 PAGE 1 OF 7

LOG BOOK NO. ______ FILE NO. ______ LAB NO. 2102176

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

AIRBILL NO: ______

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 1.0°

PROJECT MANAGER: Tom Bernhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: Jon Bare (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		2-9-21	0935	Cooling Tower Blowdown	X				N	1	P	✓								
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished By: (Signature and Printed Name)	Received By: (Signature and Printed Name)	Date:	Time:
Jon Bare	Guadalupe Tanaka	2-9-21	1020

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

February 23, 2021

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

Report No.: 2102223
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 February 15, 2021.

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: 02/23/21
Submitted: 02/15/21
PLS Report No.: 2102223

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2102223-01) Sampled: 02/15/21 08:10 Received: 02/15/21 08:10

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4550**		1	mg/L	5.0	- SM 2540C	02/18/21	02/19/21	dd	BB11904

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BB11904 - -										
Blank	**Prepared: 02/18/21 Analyzed: 02/19/21**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 02/18/21 Analyzed: 02/19/21**									
Total Dissolved Solids	52.0	5.0	mg/L	50.00		104	80-120			
Duplicate **Source: 2102223-01**	**Prepared: 02/18/21 Analyzed: 02/19/21**									
Total Dissolved Solids	4630	5.0	mg/L		4550			1.67	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)

116365

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: 2-15-24 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 240223

CLIENT NAME: CEM Project Name/No. Malburg Generating Station 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	FDS								SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		2/15/24	0810	Cooling Tower Blowdown	X				N	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: 2-15-24	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

March 01, 2021

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

Report No.: 2102313
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 February 23, 2021.

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: 03/01/21
Submitted: 02/23/21
PLS Report No.: 2102313

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2102313-01) Sampled: 02/23/21 08:25 Received: 02/23/21 08:25

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4510**		1	mg/L	5.0	- SM 2540C	02/24/21	02/25/21	dd	BB12533

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BB12533 - -										
Blank	**Prepared: 02/24/21 Analyzed: 02/25/21**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 02/24/21 Analyzed: 02/25/21**									
Total Dissolved Solids	48.0	5.0	mg/L	50.00		96.0	80-120			
Duplicate **Source: 2102313-01**	**Prepared: 02/24/21 Analyzed: 02/25/21**									
Total Dissolved Solids	4400	5.0	mg/L		4510			2.47	5	
Duplicate **Source: 2102327-10**	**Prepared: 02/24/21 Analyzed: 02/25/21**									
Total Dissolved Solids	5410	5.0	mg/L		5440			0.523	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)

116377

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: 2-23-21 PAGE 1 OF ____

LOG BOOK NO. ____ FILE NO. ____ LAB NO. 202313

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

ADDRESS:

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

SAMPLER NAME: Tom Bade (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: TDS

AIRBILL NO: ____

COOLER TEMP: 1.4°c

PRESERVATIVE:

REMARKS:

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	SOIL	SLUDGE	OTHER	TAT	CONTAINER: #	TYPE	TDS	SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		2-23-21	0825	Cooling Tower Blowdown	X				N	1	P	Y	
2													
3													
4													
5													
6													
7													
8													
9													
10													

Relinquished By: (Signature and Printed Name) Tom Bade — Received By: (Signature and Printed Name) Guadalupe Tanaka — Date: 2-23-21 — Time: 0957

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

March 08, 2021

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

Report No.: 2103019
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 March 02, 2021.

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: 03/08/21
Submitted: 03/02/21
PLS Report No.: 2103019

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2103019-01) Sampled: 03/02/21 08:50 Received: 03/02/21 08:50

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4430**		1	mg/L	5.0	- SM 2540C	03/04/21	03/05/21	dd	BC10518

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BC10518 - -										
Blank	**Prepared: 03/04/21 Analyzed: 03/05/21**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 03/04/21 Analyzed: 03/05/21**									
Total Dissolved Solids	49.0	5.0	mg/L	50.00		98.0	80-120			
Duplicate **Source: 2103019-01**	**Prepared: 03/04/21 Analyzed: 03/05/21**									
Total Dissolved Solids	4310	5.0	mg/L		4430			2.67	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)

116391

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: 3.22.1 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 2103019

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

AIRBILL NO: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 1.5°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	PH								SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		3.22.1	0850	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: 3-22-1 Time: 1145

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

March 15, 2021

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

Report No.: 2103113
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 March 08, 2021.

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: 03/15/21
Submitted: 03/08/21
PLS Report No.: 2103113

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (2103113-01) Sampled: 03/08/21 08:50 Received: 03/08/21 08:50

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**3480**		1	mg/L	5.0	- SM 2540C	03/10/21	03/11/21	dd	BC11126

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BC11126 - -										
Blank	**Prepared: 03/10/21 Analyzed: 03/11/21**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 03/10/21 Analyzed: 03/11/21**									
Total Dissolved Solids	53.0	5.0	mg/L	50.00		106	80-120			
Duplicate **Source: 2103113-01**	**Prepared: 03/10/21 Analyzed: 03/11/21**									
Total Dissolved Solids	3440	5.0	mg/L		3480			1.01	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)

116460

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: 3/8/24 PAGE 1 OF

LOG BOOK NO. FILE NO. LAB NO. 203113

CLIENT NAME: CEM Project Name/No. Mallory Generating Station 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								SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		3-8-24	0850	Cooling Tower Blowdown	X				2	1	P	Y							
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Guadalupe Tanaka Date: 3-8-24 Time: 1100

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

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Appendix B

Excess Emission Reports

Startup/Shutdown Excess Emissions Report

U1 CO Startup/Shutdown

From: 01/01/2021 00:00 **To:** 03/31/2021 23:59 **Facility Name:** Malburg Generating Station

Generated: 04/08/2021 05:39 **Location:** Vernon, California

Tag Name: U1_CO_LbPerHr_1M

SI = SampleInvalid, * = Excess Emission

Total Operating Time: 1,437.60 Hours

Non-Operating Time: 722.40 Hours Report Time: 2,160.00 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: 01/01/2021 00:00 **To:** 03/31/2021 23:59 **Facility Name:** Malburg Generating Station
Generated: 04/08/2021 05:40 **Location:** Vernon, California

Tag Name: U1_NOxNormal_Ppmvdc_1H
Total Operating Time: 1,454.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 706.00 Hour(s) Report Time: 2,160.00 Hour(s)

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

Total Operating Time:	**1,454.00 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 - VOC ppmvdc 1-hour during Normal Operation

From: 01/01/2021 00:00 **To:** 03/31/2021 23:59 **Facility Name:** Malburg Generating Station
Generated: 04/08/2021 05:42 **Location:** Vernon, California

Tag Name: U1_VOCNormal_Ppmvdc_1H
Total Operating Time: 1,454.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 706.00 Hour(s) Report Time: 2,160.00 Hour(s)

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

Total Operating Time:	**1,454.00 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: 01/01/2021 00:00 **To:** 03/31/2021 23:59 **Facility Name:** Malburg Generating Station
Generated: 04/08/2021 05:43 **Location:** Vernon, California

Tag Name: U1_CONormal_Ppmvdc_1H
Total Operating Time: 1,454.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 706.00 Hour(s) Report Time: 2,160.00 Hour(s)

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

Total Operating Time:	**1,454.00 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: 01/01/2021 00:00 **To:** 03/31/2021 23:59 **Facility Name:** Malburg Generating Station
Generated: 04/08/2021 05:45 **Location:** Vernon, California

Tag Name: U1_NOx4H_Ppmvdc_1H
Total Operating Time: 1,454.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 706.00 Hour(s) Report Time: 2,160.00 Hour(s)

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

Total Operating Time:	**1,454.00 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 Excess Emissions Report

U1 NOx Startup/Shutdown

From: 01/01/2021 00:00 **To:** 03/31/2021 23:59 **Facility Name:** Malburg Generating Station

Generated: 04/08/2021 05:46 **Location:** Vernon, California

Tag Name: U1_NOxRECLM_LbPerHr_1M

SI = SampleInvalid, * = Excess Emission

Total Operating Time: 1,437.60 Hours

Non-Operating Time: 722.40 Hours Report Time: 2,160.00 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: 01/01/2021 00:00 **To:** 03/31/2021 23:59 **Facility Name:** Malburg Generating Station
Generated: 04/08/2021 05:47 **Location:** Vernon, California
Tag Name: U1_VOC_LbPerHr_1M
SI = SampleInvalid, * = Excess Emission

Total Operating Time: 1,437.60 Hours
Non-Operating Time: 722.40 Hours Report Time: 2,160.00 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 Event Report

U2 CO Startup/Shutdown Events

From: 01/01/2021 00:00 **To:** 03/31/2021 23:59 **Facility Name:** Malburg Generating Station

Generated: 04/08/2021 05:50 **Location:** Vernon, California

Tag Name: U2_CO_LbPerHr_1M SI = SampleInvalid, * = Excess Emission

Total Operating Time: 1,533.77 Hours

Non-Operating Time: 626.23 Hours Report Time: 2,160.00 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: 01/01/2021 00:00 **To:** 03/31/2021 23:59 **Facility Name:** Malburg Generating Station
Generated: 04/08/2021 05:51 **Location:** Vernon, California

Tag Name: U2_NOxNormal_Ppmvdc_1H
Total Operating Time: 1,550.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 610.00 Hour(s) Report Time: 2,160.00 Hour(s)

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

Total Operating Time:	**1,550.00 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: 01/01/2021 00:00 **To:** 03/31/2021 23:59 **Facility Name:** Malburg Generating Station
Generated: 04/08/2021 05:51 **Location:** Vernon, California

Tag Name: U2_VOCNormal_Ppmvdc_1H
Total Operating Time: 1,550.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 610.00 Hour(s) Report Time: 2,160.00 Hour(s)

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

Total Operating Time:	**1,550.00 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: 01/01/2021 00:00 **To:** 03/31/2021 23:59 **Facility Name:** Malburg Generating Station
Generated: 04/08/2021 05:52 **Location:** Vernon, California

Tag Name: U2_CONormal_Ppmvdc_1H
Total Operating Time: 1,550.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 610.00 Hour(s) Report Time: 2,160.00 Hour(s)

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

Total Operating Time:	**1,550.00 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: 01/01/2021 00:00 **To:** 03/31/2021 23:59 **Facility Name:** Malburg Generating Station
Generated: 04/08/2021 05:53 **Location:** Vernon, California

Tag Name: U2_NOx4H_Ppmvdc_1H
Total Operating Time: 1,550.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 610.00 Hour(s) Report Time: 2,160.00 Hour(s)

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

Total Operating Time:	**1,550.00 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 Excess Emissions Report

U2 NOx Startup/Shutdown

From: 01/01/2021 00:00 **To:** 03/31/2021 23:59 **Facility Name:** Malburg Generating Station

Generated: 04/08/2021 05:55 **Location:** Vernon, California

Tag Name: U2_NOxRECLM_LbPerHr_1M

SI = SampleInvalid, * = Excess Emission

Total Operating Time: 1,533.77 Hours

Non-Operating Time: 626.23 Hours Report Time: 2,160.00 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 Event Report

U2 VOC Startup/Shutdown Events

From: 01/01/2021 00:00 **To:** 03/31/2021 23:59 **Facility Name:** Malburg Generating Station
Generated: 04/08/2021 05:57 **Location:** Vernon, California
Tag Name: U2_VOC_LbPerHr_1M
SI = SampleInvalid, * = Excess Emission

Total Operating Time: 1,533.77 Hours
Non-Operating Time: 626.23 Hours Report Time: 2,160.00 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.

Appendix C

Diesel Fuel Oil Specifications

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

Invoice

INVOICE: 1837355-IN

INVOICE DATE: 3/29/2021
DUE DATE: 4/28/2021
SHIP DATE: 3/29/2021
SHIP VIA: 924
ORDER DATE: 3/24/2021
ORDER NUMBER: 1837355
CUSTOMER PO: MGS21780
TERMS: N30
SALEPERSON: Todd Cripps
714-938-5714

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

ACCT NO (Bill-to): 01-0001084

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

ACCT NO (Ship-to) 01-0001084 1L

COLORADO ENERGY MGMT-VERNON
4963 SOTO STREET
VERNON, CA 90058

ITEM CODE	ITEM DESCRIPTION	QUANTITY ORDERED	QUANTITY DELIVERED	PACKAGE DESCRIPTION	EXTENDED QTY	UNIT PRICE	EXT PRICE
CH2530909815	CH GST 2300 ISO 32 253090981	2	2.00	55 G DR	110.00	18.58000	2,043.80
		Whse: 101					
422D055	DYED CARB ULS DIESEL NON TAXABLE USE ONLY - PENALTY FOR TAXABLE USE 15 PPM OR LESS SULFUR - MAY CONTAIN UP TO 5% BIODIESEL	2	2.00	55 G DR	110.00	3.95000	434.50
		Whse: 101					
Federal Lust						0.00100	0.11
Federal Oil Spill						0.00214	0.24
CA - AB 32 - DSL						0.00828	0.91
						3.96142	435.76
DRUMDEPOSITC001	DRUM DEPOSIT FEE	4	4.00	MISC CHRG	4.00	25.00000	100.00
		Whse: 101					
/FUELCHLUBE	FUEL SURCHARGE LUBES						9.92
/RCFLUBE	REG COMPLIANCE FEE LUBES						12.95
MSRTNDRMC001	RETURN DRUM	0	-4.00	MISC CHRG	4.00-	15.00000	60.00-
		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:	2,542.43
Less Discount:	0.00
Freight:	0.00
Sales Tax:	256.52
Invoice Total:	2,798.95

- IN THE EVENT THAT THE ABOVE CHARGES ARE NOT PAID WHEN DUE, SC COMMERCIAL, LLC, DBA 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 means is subject to a 3% surcharge.

Parts

PO 21780

partial

SALES ORDER / DELIVERY TICKET

ORDER NUMBER: 1837355

DATE: 3/24/2021
TERMS: N30
SALES REP: Todd Cripps
PHONE: 714-938-5714

SC Commercial, LLC, DBA SC Fuels
1800 West Katella Ave., Suite 400
P.O. Box 14237, Orange, CA 92863-4159

Ph: (800) 659-5823 Credit Inquiries: (888) SCFUELS Ext. 6017

PLEASE REMIT ALL PAYMENTS TO:
P.O. BOX 14237
ORANGE, CA 92863-1237

PO#: MGS21780
SHIP DATE: 3/29/2021
ROM:
SHIP VIA:
WHSE: 101

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

ACCT NO (Ship-to) 01-0001084 1L
COLORADO ENERGY MGMT-VERNON
4963 SOTO STREET
VERNON, CA 90058
(323) 476-3632

HM	ITEM CODE	ITEM DESCRIPTION	QTY ORDERED	QTY DEL	PACKAGE DESC	EXTENDED QTY
	CH253090981D055	CH GST 2300 ISO 32 253090981	2.00	2	55 G DR	110.00 GALS
X	**NA1993, DIESEL FUEL, 3 PG III / CARGO TANK**					
	422D055	DYED CARB ULS DIESEL NON TAXABLE USE ONLY - PENALTY FOR TAXABLE USE 15 PPM OR LESS SULFUR - MAY CONTAIN UP TO 5% BIODIESEL	2.00	2	55 G DR	110.00 GALS
	DRUMDEPOSITC001	DRUM DEPOSIT FEE	4.00	4	MISC CHRG	4.00 EACH
	/FUELCHLUBE	FUEL SURCHARGE LUBES				
	/RCFLUBE	REG COMPLIANCE FEE LUBES				

4 empty Drums

Received in INFOR
3/29/21
M. Gordon

Rec'd by

Date 3-29-21

Print Name Ethan Slater

Driver's Signature

TRUCK #	B/L #	FOR COMPANY USE ONLY
921		RT ☐ TF ☐ OP ☐

D.O.T. HAZARDOUS MATERIALS PLACARD PROVIDED
BY SHIPPER ☐ CARRIER ☐

THIS IS TO CERTIFY THAT THE ABOVE NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.

ARRIVED DESTINATION	AM/PM	DATE	COMPLETED UNLOADING	AM/PM	DATE
10:32	AM	3/29/21		PM	3/29/21

DRUM CREDIT 4

created by:crippsto
ver. SCF20210324

www.scfuels.com

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

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.