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30 January 2019

Mr. Anwar Ali
Compliance Project Manager
California Energy Commission
Energy Facilities Siting Division
1516 9th Street, MS 2000
Sacramento, CA 95814-5512

Subject: Malburg Generating Station
2018 Q4 and Annual Compliance Report

Dear Mr. Anwar:

On behalf of the owner of the Malburg Generating Station, Bicent (California) Malburg LLC, Colorado Energy has compiled the attached Quarterly and Annual Compliance Report per the California Energy Commission Decision 01-AFC-25. A copy of the 2018 Hazardous Material Business Plan from CERS is also attached.

Please contact me at (303) 607-5590 or kmccormack@heorotpower.com if you have any questions or need additional information.

Sincerely,

Kyle McCormack
Environmental Manager

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QUARTER 4 AND ANNUAL COMPLIANCE REPORT (October - December 2018)

MALBURG GENERATING STATION
4963 SOTO STREET, VERNON, CA 90058

SUBMITTED TO:

CALIFORNIA ENERGY COMMISSION
1516 9TH STREET, SACRAMENTO, CA 95814

January 2019

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INTRODUCTION

This Annual and Fourth Quarterly Compliance Report has been prepared to meet the California Energy Commission (CEC) requirements for the Malburg Generating Station (MGS). This report fulfills various Conditions of Certifications as described in the California Energy Commission's Decision #01-AFC-25, May 2003.

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 quarterly condition of certification and required means of verification which has not been completely satisfied is provided in Section 2. A summary of each annual condition of certification and required means of verification which has not been completely satisfied is provided in Section 3. 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.

1.3 SATISFIED CONDITIONS OF CERTIFICATION

Several Conditions of Certification have been completely satisfied during the construction and startup phases of the project. These conditions were the subject of a communication between MGS and CEC on 30 March 2011 and also a subsequent meeting on 15 April 2011. At this meeting, MGS and CEC staff reached agreement that the following Conditions of Certification have been completely satisfied and, therefore, are not addressed in any report to the CPM:

COM-1, COM-5, COM-7, COM-9, COM-10, COM-11, GEN-1, GEN-2, GEN-3, GEN-4, GEN-5, GEN-6, GEN-7, GEN-8, CIVIL-1, CIVIL-2, CIVIL-3, CIVIL-4, STRUC-1, STRUC-2, STRUC-3, STRUC-4, MECH-1, MECH-2, MECH-3, ELEC-1, TSE-1, TSE-2, TSE-3, TSE-4, TSE-5, TSE-6, TSE-7, TSE-8, TLSN-1, AQ-C1, AQ-C2, AQ-C3, AQ-C4, AQC12, AQ-C14, AQ-36, PUBLIC HEALTH-1, WORKER SAFETY-1, WORKER SAFETY-2, HAZ-2, HAZ-3, HAZ-4, HAZ-5, HAZ-8, WASTE-1, WASTE-2, SOILS & WATER-1, SOILS & WATER-2, SOILS & WATER-3, SOILS & WATER-6, SOILS & WATER-7, CUL-1, CUL-2, CUL-3, CUL-4, CUL-5, CUL-6, CUL-7, PAL-1, PAL-2, PAL-3, PAL-4, PAL-5, PAL-6, PAL-7, LAND-1, LAND-2, TRANS-1, TRANS-2, TRANS-3, TRANS-4, TRANS-5, TRANS-6, TRANS-7, TRANS-9, VIS-4, NOISE-1, NOISE-3, NOISE-4, NOISE-5, NOISE-6, NOISE-7, and NOISE-8.

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 MGS 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, MGS shall refrain from testing the firewater pump on the same day as either gas fire combustion turbines have been started up or shutdown.

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 day 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 as defined by the decision modifications issued in March, 2014 are provided in Table 2-14.

2.5 CONDITION OF CERTIFICATION AQ-C10

As per the condition of certification number AQ-C10, MGS shall operate within the emission limits provided in Tables 2-6 and 2-7.

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

As demonstration of compliance, the maximum hourly and daily emissions of CO, NO_X, PM_{10}, VOC, and SO_X are provided in Tables 2-8 and 2-9. CO and NOx emissions data, provided in Tables 2-8 and 2-9, do not include substituted data. The substitution procedure is followed for reporting emissions to the South Coast Air Quality Management District (SCAQMD) or Environmental Protection Agency when there may be a problem with the Continuous Emission Monitoring System (CEMS). Also, the turbine emissions estimates for PM_{10}, SOx, and VOCs are calculated using the original manufacturer's emission factors and do not represent actual emissions.

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.

As demonstration of compliance, the maximum hourly and daily emissions of ammonia, NO_X, SO_X, CO, PM_{10} and VOC are provided in Tables 2-8 and 2-9. Total Annual Emissions for these pollutants are provided in Table 2-10.

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.

Diesel Fuel was purchased in October of this reporting period.

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.

Diesel Fuel was purchased in October of this reporting period.

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
- VOC 3,236 lbs in any one month
- SO_x 214 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}: 7.397 lb/mmscf, VOC: 1.63 lb/mmscf & SOx: 0.28lb/mmscf.

2.10 CONDITION OF CERTIFICATION AQ-6 AND AQ-7

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

As per the Condition of Certification Number AQ-8, the 80.13 lb/mmscf NOx emission limit(s) shall only apply during interim period to report RECLAIM emissions. The interim period shall not exceed 12 months from the initial start-up date.

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, MGS advises that the lb/mmscf NOx emission limit(s) referenced in the above condition of certification applied only during the interim period which ended 12 months from the initial start-up date. There is no NOx lb/mmscf limit currently in place and therefore no supporting emission calculation is in place.

2.12 CONDITION OF CERTIFICATION AQ-9

As per the Condition of Certification Number AQ-9, the 2 PPM 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 compliant with the emission concentration limit of 2 ppm. All CEMS data for MGS combustion turbines are stored electronically at MGS. As demonstration of compliance, 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 PPM carbon monoxide (CO) emissions limit(s) are averaged over 3 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 lower than the emission concentration limit of 2 ppm. All CEMS data for MGS combustion turbines are stored electronically at MGS. As demonstration of compliance, 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 ppm reactive organic gases (ROG) 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.

ROG emissions are not monitored on an hourly basis and compliance with 2 ppm limit is demonstrated by source testing. The last compliance source test, performed in March 2017, indicated compliance with the emission limits for CT1 and CT2.

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 compliance source test, performed in February 2018, indicated compliance with the emission limits.

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.

As demonstration of compliance, MGS advises that 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 March 2017 showed that the total particulate matter emission from CT1 and CT2 were 0.88 lbs/hr (0.00105 gr/dscf) and 0.57 lbs/hr (0.00079 gr/dscf) with Duct Burners and 0.50 lbs/hr (0.00069 gr/dscf) and 0.62 lbs/hr (0.00087 gr/dscf) without.

2.17 CONDITION OF CERTIFICATION AQ-14

As per the Condition of Certification Number AQ-14, MGS shall not use engine cylinder lubricating oil containing the following specified compounds:

Ash greater than 0.038 weight percent

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 Chevron GST Oil for the MGS turbines. This is an ash less oil. As demonstration of compliance, detailed specifications of Chevron GST Oils are provided in Figure 2-1.

2.18 Condition of certification AQ-15

As per the condition of certification number AQ-15, MGS will limit the operating time of the diesel fueled emergency backup generator and the firewater pump to no more than 199 hours each in any one year.

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 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 330 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.

SECTION 3

ANNUAL COMPLIANCE DETAILS

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

3.1 CONDITION OF CERTIFICATION COM-2

As per the Condition of Certification Number COM-2, the project owner shall grant Energy Commission staff and delegate agencies or consultants unrestricted access to the power plant site.

No specific means of verification of the above condition of certification are listed in the Decision.

As demonstration of compliance, the Malburg Generating Station site remains accessible for Energy Commission staff and delegate agencies or consultants.

3.2 CONDITION OF CERTIFICATION COM-3

As per the Condition of Certification Number COM-3, the project owner shall maintain project files onsite. Energy Commission staff and delegate agencies shall be given unrestricted access to the files.

No specific means of verification of the above condition of certification are listed in the Decision.

As demonstration of compliance, the Malburg Generating Station files remain accessible for Energy Commission staff and delegate agencies or consultants.

3.3 CONDITION OF CERTIFICATION COM-4

As per the Condition of Certification Number COM-4, the project owner is responsible for the delivery and content of all verification submittals to the CPM, whether such condition was satisfied by work performed or the project owner or his agent.

No specific means of verification of the above condition of certification are listed in the Decision.

As demonstration of compliance, MGS acknowledges that it is responsible for the delivery and content of verification submittals to the CPM.

3.4 CONDITION OF CERTIFICATION COM-6

As per the Condition of Certification Number COM-6, the project owner shall submit a compliance matrix (in a spreadsheet format) with each monthly and annual compliance report which includes the status of all compliance conditions of certification.

No specific means of verification of the above condition of certification are listed in the Decision.

As demonstration of compliance, the MGS – CEC Commission Decision Compliance Matrix is provided in Appendix I.

3.5 CONDITION OF CERTIFICATION COM-8

As per the Condition of Certification Number COM-8, after construction ends and throughout the life of the project, the project owner shall submit Annual Compliance Reports (ACRs) which include specific information.

No specific means of verification of the above condition of certification are listed in the Decision.

As demonstration of compliance, MGS submits the following information to comply with the individual requirements:

1. ***An updated compliance matrix which shows the status of all conditions of certification (fully satisfied and/or closed conditions do not need to be included in the matrix after they have been reported as closed);*** An updated Compliance Matrix is provided in Appendix I.
2. ***A summary of the current project operating status and an explanation of any significant changes to facility operations during the year;*** The facility remains in operation and no significant changes have occurred during the year.
3. ***Documents required by specific conditions to be submitted along with the Annual Compliance Report. Each of these items must be identified in the transmittal letter, and should be submitted as attachments to the Annual Compliance Report;*** These documents are submitted as Appendices to the Report and are listed as such in the 'Attachments' section of this transmittal letter.
4. ***A cumulative listing of all post-certification changes approved by the Energy Commission or cleared by the CPM;*** No post-certification changes have been approved during the year.
5. ***An explanation for any submittal deadlines that were missed, accompanied by an estimate of when the information will be provided;*** No submittal deadlines were missed.
6. ***A listing of filings made to, or permits issued by, other governmental agencies during the year;*** Filings to governmental agencies were submitted as required during the year, including Annual Compliance Certification to SCAQMD and EPA, Semi-Annual Monitoring Report to SCAQMD, daily, monthly and electronic NOx reports to AQMD, Quarterly Certification of Emission Reports (QCER) to AQMD, quarterly EDR's to EPA, Annual Emissions Inventory to SCAQMD, Annual Greenhouse Gas Report to CARB and EPA, source testing notification and test report to SCAQMD, Annual Permit Emissions Program (APEP) report to SCAQMD, Annual Storm Water Discharge Report to Los Angeles County Sanitation Districts, and Semi-Annual Industrial WW Monitoring Report to Los Angeles County Sanitation Districts. In November 2017, a filing was made to both the AQMD and CEC, permit revisions are pending.
7. ***A projection of project compliance activities scheduled during the next year;*** Aside from sampling, testing, monitoring and reporting according to various permits and the CEC Decision, no additional project compliance activities are scheduled. In November 2017, a filing was made to both the AQMD and CEC, permit revisions are pending. Upon permit issuance, compliance testing will be required within 180 days.

8. ***A listing of the year's additions to the on-site compliance file***; All test and monitoring results, reports, filings, and other evidence of compliance with various permits and the CEC Decision were added to the plant files. Please refer to Condition #6 for specific items.

9. ***An evaluation of the on-site contingency plan for unplanned facility closure, including any suggestions necessary for bringing the plan up to date;*** As there have been no changes to the configuration or operation of the plant during the year, no changes or suggestions resulted from an evaluation of this plan.

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

- There were no complaints, official warnings or citations received during 2018.

11. ***A listing of all outages planned for the coming year and a listing of all outages that occurred during the previous year, including the anticipated duration and the reason for each outage occurrence.***

- March 5 thru April 29, 2018 CT1, CT2, Major Overhaul.
- December 3 thru December 10, 2018 CT1, CT2, General Semi-Annual Maintenance.
- May 5, 2019 thru May 11, 2019, General Semi-Annual Maintenance.
- November 3, 2019 thru November 8, 2019, General Semi-Annual Maintenance.

3.6 CONDITION OF CERTIFICATION COM-12

As per the Condition of Certification Number COM-12, within 10 days of receipt, the project owner shall report to the CPM, all notices, complaints, and citations.

No specific means of verification of the above condition of certification are listed in the Decision.

As demonstration of compliance, MGS shall report to the CPM all notices, complaints and citations.

3.7 CONDITION OF CERTIFICATION COM-13

As per the Condition of Certification Number COM-13, the project owner shall submit a closure plan to the CPM at least twelve months prior to commencement of a planned closure.

No specific means of verification of the above condition of certification are listed in the Decision.

As demonstration of compliance, MGS shall submit a closure plan to the CPM at least twelve months prior to commencement of a planned closure, but at this time MGS remains in operation.

3.8 CONDITION OF CERTIFICATION COM-14

As per the Condition of Certification Number COM-14, to ensure that public health and safety and the environment are protected in the event of an unplanned temporary closure, the project owner shall submit an on-site contingency plan no less than 60 days prior to commencement of commercial operation. The approved plan must be in place prior to commercial operation of the facility and shall be kept at the site at all times.

For verification of the above condition of certification, the project owner, in consultation with the CPM, will update the on-site contingency plan as necessary. The CPM may require revisions to the on-site contingency plan over the life of the project. In the annual compliance reports submitted to the Energy Commission, the project owner will review the on-site contingency plan, and recommend changes to bring the plan up to date. Any changes to the plan must be approved by the CPM. In the event of an unplanned temporary closure, the project owner shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take all necessary steps to implement the on-site contingency plan.

As demonstration of compliance, MGS has submitted the on-site contingency plan as scheduled. MGS will review the on-site contingency plan as part of preparation for the annual compliance reports, and recommend changes to bring the plan up to date.

During this year, MGS recommends no changes to the plan. In the event of an unplanned temporary closure, MGS shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take all necessary steps to implement the on-site contingency plan.

3.9 CONDITION OF CERTIFICATION COM-15

As per the Condition of Certification Number COM-15, to ensure that public health and safety and the environment are protected in the event of an unplanned permanent closure, the project owner shall submit an on-site contingency plan no less than 60 days prior to commencement of commercial operation.

For verification of the above condition of certification, all of the requirements specified for unplanned temporary closure shall also apply to unplanned permanent closure.

As demonstration of compliance, MGS remains in operation. In the event of an unplanned permanent closure, MGS shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take all necessary steps to implement the on-site contingency plan.

3.10 CONDITION OF CERTIFICATION COM-16

As per the Condition of Certification Number COM-16, the project owner must petition the Energy Commission to delete or change a condition of certification, modify the project design or operational requirements and/or transfer ownership of operational control of the facility.

No specific means of verification of the above condition of certification are listed in the Decision.

A Petition to Amend the Final Decision for the Malburg Generating Station (01-AFC-25C) was submitted on November 17, 2017, and is currently pending.

3.11 CONDITION OF CERTIFICATION AQ-C5

As per the Condition of Certification Number AQ-C5, no chromium containing compounds shall be added to cooling tower circulating water.

For verification of the above condition of certification, MGS shall make the site available for inspection by representatives of the District, CARB and the Commission.

As demonstration of compliance, the Malburg Generating Station site remains accessible for inspection by representatives of the District, CARB and the Commission.

3.12 CONDITION OF CERTIFICATION AQ-C13

As per the Condition of Certification Number AQ-C13, MGS shall submit to the CPM for review and approval any modification proposed by either MGS or issuing agency to any project air permit.

For verification of the above condition of certification, MGS shall submit any proposed air permit modification to the CPM within five working days of its submittal either by MGS to an agency or receipt of proposed modifications from an agency. MGS shall submit all modified air permits to the CPM within 15 days of receipt.

A facility permit to operate was issued to MGS by the SCAQMD dated November 03, 2015. A copy of the permit modifications issued by the district has been sent to the CPM for review.

3.13 CONDITION OF CERTIFICATION AQ-1

As per the Condition of Certification Number AQ-1, except for open abrasive blasting operations, MGS shall not discharge into the atmosphere from any single source of emissions whatsoever any contaminant for a period or periods aggregating more than three minutes in any one hour which is: a) As dark or darker in shade as that designated No. 1 on the Ringlemann Chart, as published by the United States Bureau of Mines; or b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

For verification of the above condition of certification, MGS shall make the Malburg Generating Facility site accessible for inspection to the District, CARB and Commission.

As demonstration of compliance, the Malburg Generating Station site remains accessible for Energy Commission staff and delegate agencies or consultants.

3.14 CONDITION OF CERTIFICATION AQ-4

As per the Condition of Certification Number AQ-4, accident release prevention requirements of Section 112 (r)(7): a). MGS shall comply with the accidental release prevention requirements pursuant to 40CFR Part 68 and shall submit to the Executive Officer and the CPM, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the

registration and admission of a risk management plan (RMP). b). The City of Vernon shall submit any additional relevant information requested by the Executive Officer, designated agency or CPM.

For verification of the above condition of certification, MGS shall submit for approval to the CPM the above required statement of compliance and any further information requested on an annual basis as part of the annual compliance report.

As demonstration of compliance, MGS is compliant with all applicable requirements of 40 CFR Part 68, including the registration and admission of a risk management plan (RMP). MGS most recently updated its Risk Management Plan in July 2014.

3.15 CONDITION OF CERTIFICATION AQ-16

As per the Condition of Certification Number AQ-16, MGS shall install and maintain a pressure relief valve set at 25 psig in the ammonia storage tank.

For verification of the above condition of certification, MGS shall make the ammonia storage tank available for inspection by the District, Commission or CARB.

As demonstration of compliance, the Malburg Generating Station ammonia storage tank remains available for inspection by the District, Commission or CARB.

3.16 CONDITION OF CERTIFICATION AQ-17

As per the Condition of Certification Number AQ-17, MGS shall install and maintain a non-resettable elapsed time meter into the firewater pump to accurately indicate the elapsed operating time of the engine.

For verification of the above condition of certification, MGS shall make the firewater pump available for inspection by the District, Commission or CARB.

As demonstration of compliance, the Malburg Generating Station firewater pump remains available for inspection by the District, Commission or CARB.

3.17 CONDITION OF CERTIFICATION AQ-18

As per the Condition of Certification Number AQ-18, MGS shall install and maintain a non-resettable totalizing fuel meter to accurately indicate the fuel usage of the turbines.

For verification of the above condition of certification, MGS shall make the firewater pump available for inspection by the District, Commission or CARB.

As demonstration of compliance, the Malburg Generating Station firewater pump remains available for inspection by the District, Commission or CARB.

3.18 CONDITION OF CERTIFICATION AQ-19

As per the Condition of Certification Number AQ-19, MGS shall install and maintain a flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia (NH3). MGS shall also install and maintain a device to continuously record the

parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

For verification of the above condition of certification, MGS shall submit to CPM for approval the design drawing that clearly show the flow meter and recording device for the ammonia injection grid no less than 90 days prior to installation of the ammonia injection grid. MGS shall submit to the CPM for approval the annual calibration report for the flow meter and recording device as part of the annual compliance report.

As demonstration of compliance, MGS has submitted to CPM for approval the design drawing that clearly show the flow meter and recording device for the ammonia injection grid as scheduled. MGS will include with each annual compliance report the annual calibration records for the NH3 flow meter. The calibration report for the NH3 Flow Meter for the compliance year is provided in Appendix J. The information demonstrates that the NH3 Flow Meter has been certified.

3.19 CONDITION OF CERTIFICATION AQ-20

As per the Condition of Certification Number AQ-20, MGS shall install and maintain a temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the SCR reactor. MGS shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.
For verification of the above condition of certification, MGS shall submit to CPM for approval the design drawing that clearly show the temperature gauge and recording device for the inlet to the SCR reactor no less than 90 days prior to installation of the SCR. MGS shall submit to the CPM for approval the annual calibration report for the temperature gauge and recording device as part of the annual compliance report.

As demonstration of compliance, MGS has submitted to CPM for approval the design drawing that clearly show the temperature gauge and recording device for the inlet to the SCR reactor as scheduled. MGS will include with each annual compliance report the annual calibration records for the SCR temperature gauge. The calibration report for the SCR Temperature Gauge for the compliance year is provided in Appendix K. The information demonstrates that the SCR Temperature Gauge has been certified.

3.20 CONDITION OF CERTIFICATION AQ-21

As per the Condition of Certification Number AQ-21, MGS shall install and maintain a pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches of water column. MGS shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

For verification of the above condition of certification, MGS shall submit to CPM for approval the design drawing that clearly show the pressure gauge and recording device across the SCR reactor no less than 90 days prior to installation of the SCR. The City of Vernon shall submit to the CPM for approval the annual calibration report for the pressure gauge and recording device as part of the annual compliance report.

As demonstration of compliance, MGS has submitted to CPM for approval the design drawing that clearly show the pressure gauge and recording device across the SCR reactor as scheduled. MGS will include with each annual compliance report the annual calibration records for the SCR pressure gauge. The calibration report for the SCR Pressure Gauge for the compliance year is provided in Appendix L. The information demonstrates that the SCR Pressure Gauge has been certified.

3.21 CONDITION OF CERTIFICATION AQ-22

As per the Condition of Certification Number AQ-22, MGS shall conduct source tests for the pollutants identified below:

- CO Emissions
- NOx Emissions
- VOC Emissions
- PM Emissions
- SOx Emissions
- NH3 Emissions

For verification of the above condition of certification, MGS shall submit for approval to the District and the CPM the required initial source testing protocol no less than 45 days prior to the date of the source test. MGS shall notify the District and CPM of the date and time of the source test no less than 10 days prior to the test. MGS shall submit to the District and CPM for approval the results of the initial source test no later than 60 days following the date of the source test.

As demonstration of compliance, MGS submits notification of test dates to the District and CPM no less than 10 days prior to the date of the source test as required in the RECLAIM/Title V. MGS submits the results of the source test to the District and CPM no later than 60 days following the date of the source test.

3.22 CONDITION OF CERTIFICATION AQ-23

As per the Condition of Certification Number AQ-23, MGS shall conduct source tests for the pollutants identified below:

- VOC Emissions
- SOx Emissions
- PM Emissions

For verification of the above condition of certification, MGS shall submit for approval to the District and the CPM the required source testing protocol no less than 45 days prior to the date of the source test when required. MGS shall notify the District and CPM of the date and time of the source test no less than 10 days prior to the test. MGS shall submit to the District and CPM for approval the results of the source test no later than 60 days following the date of the source test.

As demonstration of compliance, MGS submits notification of test dates to the District and CPM no less than 10 days prior to the date of the source test as required in the

RECLAIM/Title V. MGS submits the results of the source test to the District and CPM no later than 60 days following the date of the source test.

3.23 CONDITION OF CERTIFICATION AQ-24

As per the Condition of Certification Number AQ-24, MGS shall conduct source testing for the pollutant identified below:

-NH3 Emissions

For verification of the above condition of certification, MGS shall submit for approval to the District and the CPM the required source testing protocol no less than 45 days prior to the date of the source test. MGS shall notify the District and CPM of the date and time of the source test no less than 10 days prior to the test. MGS shall submit to the District and CPM for approval the results of the source test no later than 60 days following the date of the source test.

As demonstration of compliance, MGS submits notification of test dates to the District and CPM no less than 10 days prior to the date of the source test as required in the RECLAIM/Title V. MGS submits the results of the source test to the District and CPM no later than 60 days following the date of the source test.

3.24 CONDITION OF CERTIFICATION AQ-25

As per the Condition of Certification Number AQ-25, MGS shall install and maintain a CEMS in each exhaust stack of the combustion turbine-HRSG trains to measure listed parameters.

For verification of the above condition of certification, MGS shall make the Malburg Generation Station available for inspection by the District, Commission or CARB.

As demonstration of compliance, the Malburg Generating Station site remains available for inspection by the District, Commission or CARB.

3.25 CONDITION OF CERTIFICATION AQ-26

As per the Condition of Certification Number AQ-26, MGS shall install and maintain a CEMS to measure listed parameters.

For verification of the above condition of certification, MGS shall make the Malburg Generation Station available for inspection by the District, Commission or CARB.

As demonstration of compliance, the Malburg Generating Station site remains available for inspection by the District, Commission or CARB.

3.26 CONDITION OF CERTIFICATION AQ-28

As per the Condition of Certification Number AQ-28, MGS shall vent combustion turbines and HRSGs to the CO oxidation/SCR control system whenever the turbines are in operation.

For verification of the above condition of certification, MGS shall make the Malburg Generation Station available for inspection by the District, Commission or CARB.

As demonstration of compliance, the Malburg Generating Station site remains available for inspection by the District, Commission or CARB.

3.27 CONDITION OF CERTIFICATION AQ-29

As per the Condition of Certification Number AQ-29, MGS shall vent ammonia storage tank, during filling, only to the vessel from which it is being filled.

For verification of the above condition of certification, MGS shall make the Malburg Generation Station available for inspection by the District, Commission or CARB.

As demonstration of compliance, the Malburg Generating Station site remains available for inspection by the District, Commission or CARB.

3.28 CONDITION OF CERTIFICATION AQ-30

As per the Condition of Certification Number AQ-30, for the purpose of the following condition number(s), “continuously record” shall be defined as recording at least once every hour and shall be calculated upon the average of the continuous monitoring for that hour. Condition of Certification **AQ-17** Condition of Certification **AQ-18**

For verification of the above condition of certification, MGS shall make the Malburg Generation Station available for inspection by the District, Commission or CARB.

As demonstration of compliance, the Malburg Generating Station site remains available for inspection by the District, Commission or CARB.

3.29 CONDITION OF CERTIFICATION AQ-31

As per the Condition of Certification Number AQ-31, for the purpose of the following condition number(s), “continuously record” shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that month. Condition of Certification **AQ-19**

For verification of the above condition of certification, MGS shall make the Malburg Generation Station available for inspection by the District, Commission or CARB.

As demonstration of compliance, the Malburg Generating Station site remains available for inspection by the District, Commission or CARB.

3.30 CONDITION OF CERTIFICATION AQ-32

As per Condition of Certification AQ-32, the MGS electric generating equipment shall not be operated unless the City of Vernon demonstrates to the Executive Officer that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be operated unless the City of Vernon demonstrates to the Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility hold

sufficient RTCs in an amount equal to the annual emission increase. The City of Vernon shall submit all such information to the CPM for approval.

For verification of the above condition of certification, MGS shall submit all identified evidence demonstrating compliance to the CPM on an annual basis as part of the annual compliance report.

As demonstration of compliance, the NOx RECLAIM annual emission allocation information received from the SCAQMD for the compliance year for the Bicent (California) Malburg LLC facility are provided in Appendix G. The information demonstrates that the MGS facility held sufficient NOx RTCs to offset the annual emission increase.

3.31 CONDITION OF CERTIFICATION AQ-33

As per the Condition of Certification Number AQ-33, MGS shall provide to the District a source test report in accordance with listed specifications.

For verification of the above condition of certification, MGS shall submit to the CPM the required source test of Conditions of Certification **AQ-21**, **-22 and -23** in compliance with this condition.

As demonstration of compliance, MGS submitted to the CPM a copy of the 2018 Source Test Reports on March 27, 2018.

3.32 CONDITION OF CERTIFICATION AQ-34

As per the Condition of Certification Number AQ-34, MGS shall keep records, in a manner approved by the District, for listed parameters or items.

For verification of the above condition of certification, MGS shall make these records available to the CPM upon request.

As demonstration of compliance, MGS will make the listed records available to the CPM upon request.

3.33 CONDITION OF CERTIFICATION AQ-35

As per the Condition of Certification Number AQ-35, MGS shall keep records, in a manner approved by the District, for the date of operation, the elapsed time, in hour and the reason for operation of the emergency diesel powered generators and/or the firewater pump.

For verification of the above condition of certification, the CEC requires MGS to submit all identified evidence demonstrating compliance to the CPM on an annual basis as part of the compliance report.

As demonstration of compliance, the date of operation, the elapsed time, in hour and the reason for operation of are provided in Table 2-5. MGS refrained from testing the diesel fired emergency firewater pump on the same day the combustion turbines were either started or shutdown.

3.34 CONDITION OF CERTIFICATION HAZ-1

As per Condition of Certification HAZ-1, the project owner shall not use any hazardous materials not listed in Appendix C of the Commission Decision Document, or in greater quantities than those identified by chemical name in Appendix C, unless approved in advance by the City of Vernon and the CPM.

For verification of the above condition of certification, the project owner shall provide to the CPM, in the annual compliance report, a list of hazardous materials contained at the facility in reportable quantities.

As demonstration of compliance, CEM provides the following list of hazardous materials stored at the facility during the compliance year in reportable quantities.

- Aqueous Ammonia 19% Concentration

3.35 CONDITION OF CERTIFICATION HAZ-6

As per Condition of Certification HAZ-6, the project owner shall require that the gas pipeline undergo a complete design review and detailed inspection every five years.

For verification of the above condition of certification, at least 30 days prior to the initial flow of gas in the pipeline, the project owner shall provide outline of the plan to accomplish a full and comprehensive pipeline design review to the CPM for review and approval. The full and complete plan shall be amended, as appropriate, and submitted to the CPM for review and approval, not later than one year before the plan is implemented by the project owner.

As demonstration of compliance, the original documents prior to initial gas flow were submitted as scheduled. The requirement for a follow up review and inspection was satisfied on January 29, 2013. Verification of the five year inspection due by the City of Vernon is pending.

3.36 CONDITION OF CERTIFICATION HAZ-7

As per Condition of Certification HAZ-7, the project owner shall require that the gas pipeline undergo a detailed inspection after any significant seismic event in the area where surface rupturing occurs within one mile of the pipeline, or every 5 years.

For verification of the above condition of certification, at least 30 days prior to the initial flow of gas in the pipeline, the project owner shall provide a detailed plan to accomplish a full and comprehensive pipeline inspection in the event of an earthquake to the CPM for review and approval. This plan shall be reviewed and amended, as appropriate, and submitted to the CPM for review and approval, at least every five years.

As demonstration of compliance, the original documents prior to initial gas flow were submitted as scheduled. MGS certifies that there was no significant seismic activity in the compliance year. The requirement for a follow up review and inspection was satisfied on January 29, 2013. Verification of the five year inspection due by the City of Vernon is pending.

3.37 CONDITION OF CERTIFICATION WASTE-3

As per the Condition of Certification Number WASTE-3, MGS shall upon becoming aware of any impending waste management enforcement action by any local, state or federal authority, notify the CPM of any such action taken or proposed to be taken against the project itself, or against any waste haulers or disposal facility or treatment operator with which the MGS contracts.

For verification of the above condition of certification, the project owner shall notify the CPM in writing within 10 days of becoming aware of an impending enforcement action. The CPM shall notify the project owner of any changes that will be required in the manner in which project-related wastes are managed.

As demonstration of compliance, MGS hereby certifies it became aware of no impending action taken or proposed for any waste management activity related to MGS in the compliance year.

3.38 CONDITION OF CERTIFICATION WASTE-4

As per the Condition of Certification Number WASTE-4, the project owner shall prepare a Construction Waste Management Plan and an Operation Waste Management Plan for all wastes generated during construction and operation of the facility, respectively, and shall submit both plans to the City of Vernon, Environmental Health Department and the City of Vernon Fire Department for comment and to the CPM for review and approval. The plans shall contain, at a minimum, the following: A description of all waste streams, including projections of frequency, amounts generated and hazard classifications; and methods of managing each waste, including treatment methods and companies contracted with for treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/reduction plans.

For verification of the above condition of certification, no less than 30 days prior to the start of site mobilization, the project owner shall submit the Construction Waste Management Plan to the City of Vernon Environmental Health Department, City of Vernon Fire Department, and CPM. The operation waste management plan shall be submitted no less than thirty (30) days prior to the start of project operation. The project owner shall submit any required revisions within 20 days of notification by the CPM. In the Annual Compliance Reports, the project owner shall document the actual waste management methods used during the year compared to the planned management methods.

As demonstration of compliance, submittals of the Construction Waste Management Plan and the Operation Waste Management Plan were submitted as scheduled prior to the start of project operation. No notification has been received by MGS from the CPM that revisions to the Operation Waste Management Plan are required. Actual waste management methods used during the year were consistent with planned management methods.

3.39 CONDITION OF CERTIFICATION SOIL & WATER-4

As per Condition of Certification SOIL & WATER-4, the project owner shall install metering devices and record on a monthly basis the amount of water, listed by source (potable and reclaimed) used by the project. The annual summary shall include the monthly range and monthly average of daily usage in gallons per day, and total water used by the project on a monthly and annual basis in acre-feet. The annual summary shall also include the yearly range and yearly average water use by the project.

For verification of the above condition of certification, the project owner shall submit an annual water use summary to the CPM as part of its annual compliance report for the life of the project.

As demonstration of compliance, the compliance year water use summary is provided in Tables 2-19 and 2-20.

3.40 CONDITION OF CERTIFICATION SOIL & WATER-5

As per Condition of Certification Number SOIL & WATER-5, the project owner shall not use potable water for process cooling water for more than 9 days (216 hours) per calendar year.

For verification of the above condition of certification, the project owner shall include a detailed summary of all potable water and reclaimed water used for process water in the Annual Compliance Report.

As demonstration of compliance, a summary of potable and reclaimed water used during the compliance year is provided in Tables 2-19 and 2-20.

3.41 CONDITION OF CERTIFICATION CUL-8

As per Condition of Certification CUL-8, the project owner shall ensure that Station A is maintained in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (1995) (36 CFR Part 68). The project owner shall provide a summary of maintenance activities completed within each calendar year.

For verification of the above condition of certification, in each annual compliance report, the project owner shall include the summary of Station A maintenance activities completed within the last calendar year.

As demonstration of compliance, a Station A Maintenance Summary Report for the compliance year is provided in Appendix M.

3.42 CONDITION OF CERTIFICATION TRANS-8

As per Condition of Certification TRANS-8, the project owner shall only use the preferred and alternate truck travel routes for deliveries of aqueous ammonia to the MGS site. The preferred route shall be from Interstate 710, exiting at the Bandini Boulevard. Trucks will then travel west along Bandini Boulevard, south on Soto Avenue, and finally west on 50th Street to the MGS. The City shall use this route unless it notifies the CPM otherwise and the CPM approves.

For verification of the above condition of certification, the project owner may alter the final truck travel route only upon prior approval of the CPM.

As demonstration of compliance, the originally mandated route and alternate route have been communicated to the aqueous ammonia supplier and use of these routes is mandated by MGS. MGS may alter the final truck travel route only upon prior approval of the CPM.

3.43 CONDITION OF CERTIFICATION VIS-1

As per Condition of Certification VIS-1, the project owner shall design and install all permanent lighting such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare, and illumination of the project, the vicinity and the nighttime sky is minimized.

For verification of the above condition of certification, at least 60 days prior to ordering any permanent exterior lighting, the project owner shall submit to the CPM for review and comment written documentation describing the lighting control measures and fixtures, hoods, shields proposed for use, and incorporate the CPM's comments in lighting equipment orders. Prior to first turbine roll, the project owner shall notify the CPM that the lighting has been completed and is ready for inspection. If the CPM notifies the project owner that modifications to the lighting are needed to minimize impacts, within 30 days of receiving that notification the project owner shall implement the modifications and notify the CPM that the modifications have been completed. The project owner shall report any complaints about permanent lighting and provide documentation of resolution in the Annual Compliance Report, accompanied by any lighting complaint resolution forms for that year.

As demonstration of compliance, written documentation describing the lighting control measures was submitted as scheduled prior to first turbine roll. The CPM was notified that the lighting had been completed and was ready for inspection. No subsequent notification has been received from the CPM that modifications to the lighting are needed to minimize impacts. MGS certifies that there were no lighting related complaints in the compliance year.

3.44 CONDITION OF CERTIFICATION VIS-2

As per Condition of Certification VIS-2, the project owner shall paint or treat the surfaces of all project structures and buildings visible to the public in a gray color to blend with the existing Station "A" building. Surfaces shall be treated with finishes that minimize glare. The project owner shall ensure proper treatment maintenance for the life of the project. For verification of the above condition of certification, at least 30 days prior to the start of commercial operation, the project owner shall notify the CPM that all buildings and structures are ready for inspection. The project owner shall provide a status report regarding treatment maintenance in the Annual Compliance Report.

As demonstration of compliance, the CPM was notified as scheduled that all buildings and structures were ready for inspection. All project structures on the MGS site are matching in color to the pre-existing structure of Station 'A'. Following maintenance activities, a gray color coating was applied where required.

Table 2-1

Malburg Generating Station
Cooling Tower TDS Sampling Results
Quarter 4, 2018

Starting	Ending	TDS (ppm)
9/30/2018	10/7/2018	4540
10/7/2018	10/14/2018	4340
10/14/2018	10/21/2018	4980
10/21/2018	10/28/2018	4500
10/28/2018	11/4/2018	4340
11/4/2018	11/11/2018	4620
11/11/2018	11/18/2018	4480
11/18/2018	11/25/2018	4700
11/25/2018	12/2/2018	4750
12/2/2018	12/9/2018	OFFLINE
12/9/2018	12/16/2018	OFFLINE
12/16/2018	12/23/2018	OFFLINE
12/23/2018	12/30/2018	OFFLINE

Table 2-2

Malburg Generating Station
Cooling Tower Daily PM10 Emissions During Oct. 2018

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	36,339,840	4540	**1.37**
2	36,339,840	4540	**1.37**
3	36,339,840	4540	**1.37**
4	36,339,840	4540	**1.37**
5	36,339,840	4540	**1.37**
6	36,339,840	4540	**1.37**
7	36,339,840	4340	**1.31**
8	36,339,840	4340	**1.31**
9	36,339,840	4340	**1.31**
10	36,339,840	4340	**1.31**
11	36,339,840	4340	**1.31**
12	36,339,840	4340	**1.31**
13	36,339,840	4340	**1.31**
14	36,339,840	4980	**1.51**
15	36,339,840	4980	**1.51**
16	36,339,840	4980	**1.51**

Date	Circulation Rate (gal/day)	TDS (ppm)	PM_{10} (lbs/day)
17	36,339,840	4980	**1.51**
18	36,339,840	4980	**1.51**
19	36,339,840	4980	**1.51**
20	36,339,840	4980	**1.51**
21	36,339,840	4500	**1.36**
22	36,339,840	4500	**1.36**
23	36,339,840	4500	**1.36**
24	36,339,840	4500	**1.36**
25	36,339,840	4500	**1.36**
26	36,339,840	4500	**1.36**
27	36,339,840	4500	**1.36**
28	36,339,840	4340	**1.31**
29	36,339,840	4340	**1.31**
30	36,339,840	4340	**1.31**
31	36,339,840	4340	**1.31**

Table 2-3

Malburg Generating Station
Cooling Tower Daily PM10 Emissions During Nov. 2018

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	36,339,840	4340	**1.31**
2	36,339,840	4340	**1.31**
3	36,339,840	4340	**1.31**
4	36,339,840	4620	**1.40**
5	36,339,840	4620	**1.40**
6	36,339,840	4620	**1.40**
7	36,339,840	4620	**1.40**
8	36,339,840	4620	**1.40**
9	36,339,840	4620	**1.40**
10	36,339,840	4620	**1.40**
11	36,339,840	4480	**1.36**
12	36,339,840	4480	**1.36**
13	36,339,840	4480	**1.36**
14	36,339,840	4480	**1.36**
15	36,339,840	4480	**1.36**
16	36,339,840	4480	**1.36**

Date	Circulation Rate (gal/day)	TDS (ppm)	PM_{10} (lbs/day)
17	36,339,840	4480	**1.36**
18	36,339,840	4700	**1.42**
19	36,339,840	4700	**1.42**
20	36,339,840	4700	**1.42**
21	36,339,840	4700	**1.42**
22	36,339,840	4700	**1.42**
23	36,339,840	4700	**1.42**
24	36,339,840	4700	**1.42**
25	36,339,840	4750	**1.44**
26	36,339,840	4750	**1.44**
27	36,339,840	4750	**1.44**
28	36,339,840	4750	**1.44**
29	36,339,840	4750	**1.44**
30	36,339,840	4750	**1.44**

Need to find the actual start date for Circ Pumps

Table 2-4

Malburg Generating Station
Cooling Tower Daily PM10 Emissions During Dec. 2018

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	36,339,840	4750	**1.44**
2	36,339,840	OFFLINE	**0.00**
3	36,339,840	OFFLINE	**0.00**
4	36,339,840	OFFLINE	**0.00**
5	36,339,840	OFFLINE	**0.00**
6	36,339,840	OFFLINE	**0.00**
7	36,339,840	OFFLINE	**0.00**
8	36,339,840	OFFLINE	**0.00**
9	36,339,840	OFFLINE	**0.00**
10	36,339,840	OFFLINE	**0.00**
11	36,339,840	OFFLINE	**0.00**
12	36,339,840	OFFLINE	**0.00**
13	36,339,840	OFFLINE	**0.00**
14	36,339,840	OFFLINE	**0.00**
15	36,339,840	OFFLINE	**0.00**
16	36,339,840	OFFLINE	**0.00**

Date	Circulation Rate (gal/day)	TDS (ppm)	PM_{10} (lbs/day)
17	36,339,840	OFFLINE	**0.00**
18	36,339,840	OFFLINE	**0.00**
19	36,339,840	OFFLINE	**0.00**
20	36,339,840	OFFLINE	**0.00**
21	36,339,840	OFFLINE	**0.00**
22	36,339,840	OFFLINE	**0.00**
23	36,339,840	OFFLINE	**0.00**
24	36,339,840	OFFLINE	**0.00**
25	36,339,840	OFFLINE	**0.00**
26	36,339,840	OFFLINE	**0.00**
27	36,339,840	OFFLINE	**0.00**
28	36,339,840	OFFLINE	**0.00**
29	36,339,840	OFFLINE	**0.00**
30	36,339,840	OFFLINE	**0.00**
31	36,339,840	OFFLINE	**0.00**

Table 2-5

Heorot Power Management
Malburg Generating Station
Diesel Fuel Fired Emergency Firewater Pump Testing Times
During Quarter 4, 2018

Date	Time	Main / Test Emerg.	Hours of Operation	Fuel Used (gals)	Initials
Oct. 08, 2018	23:29	Testing	0.4	3.6	JPFO
Oct. 14, 2018	23:28	Testing	0.5	4.5	JAFO
Oct. 21, 2018	23:28	Testing	0.5	4.5	VFFO
Oct. 28, 2018	23:24	Testing	0.6	5.4	STFO
Nov. 04, 2018	23:10	Testing	0.4	3.6	JPFO
Nov. 11, 2018	23:17	Testing	0.5	4.5	STFO
Nov. 18, 2018	23:23	Testing	0.5	4.5	STFO
Nov. 25, 2018	23:15	Testing	0.5	4.5	MFFO
Dec. 02, 2018	00:00	DNR	0.0	0.0	0
Dec. 09, 2018	00:00	DNR	0.0	0.0	0
Dec. 16, 2018	23:24	Testing	0.6	5.4	STFO
Dec. 23, 2018	23:25	Testing	0.5	4.5	SCTFO
Dec. 30, 2018	23:30	Testing	0.4	3.6	JPO

Note: Event 'DNR' - Did Not Run

Table 2-6

AQ-C10 Emission Limits, lbs/hr

Pollutant	Gas Turbines (2)	Cooling Tower	Firewater Pump	Facility Total
CO	140	--	0.59	140
NOx	55	--	1.73	55
PM_{10}	7.78	0.26	0.08	8.12
VOC	3.3	--	0.05	3.35
SOx	0.3	--	0.002	0.3
Ammonia	7.6	--	--	7.6

Table 2-7

AQ-C10 Emission Limits, lbs/day

Pollutant	Gas Turbines (2)	Cooling Tower	Firewater Pump	Facility Total
CO	245	--	0.59	245
NOx	230	--	1.73	230
PM_{10}	158	6.2	0.08	164.28
VOC	36	--	0.05	36.05
SOx	6	--	0.002	6
Ammonia	182.4	--	--	182.4

Table 2-8

Malburg Generating Station
Maximum Hourly Emissions
During Quarter 4, 2018

Contaminant	Gas Turbines (2)		Cooling Tower		Firewater Pump		Facility[a]
	Date & Hour	Emission	Date & Hour	Emission	Date & Hour	Emission	Total
CO lbs	11/10/18 17:00	31.96	N/A	N/A	10/28/18 23:24	0.092	32.05
NOx lbs	11/17/18 16:00	31.70	N/A	N/A	10/28/18 23:24	0.918	32.62
PM lbs	11/27/18 12:00	6.47	10/14/2018	0.06	10/28/18 23:24	0.022	6.55
VOC lbs	11/27/18 12:00	1.43	N/A	N/A	10/28/18 23:24	0.022	1.45
SO2 lbs	10/20/18 17:00	0.24	N/A	N/A	10/28/18 23:24	0.002	0.24
NH3 lbs	11/13/18 20:00	7.49	N/A	N/A	10/28/18 23:24		7.49

a: Although the maximum gas turbines, cooling tower, and firewater pump emissions did not occur during the same hour, the facility total equals the sum of each device's maximum hourly emissions.

Table 2-9

Malburg Generating Station
Maximum Daily Emissions
During Quarter 4, 2018

Contaminant	Gas Turbines (2)		Cooling Tower		Firewater Pump		Facility[a]
	Date & Hour	Emission	Date & Hour	Emission	Date & Hour	Emission	Total
CO lbs	11/17/2018	72.76	N/A	N/A	10/28/18 23:24	0.092	72.85
NOx lbs	11/17/2018	118.92	N/A	N/A	10/28/18 23:24	0.918	119.84
PM lbs	11/27/2018	126.46	10/14/2018	1.51	10/28/18 23:24	0.022	127.99
VOC lbs	11/27/2018	27.83	N/A	N/A	10/28/18 23:24	0.022	27.85
SO2 lbs	11/27/2018	4.77	N/A	N/A	10/28/18 23:24	0.002	4.77
NH3 lbs	11/13/2018	145.20	N/A	N/A	10/28/18 23:24		145.20

a: Although the maximum gas turbines, cooling tower, and firewater pump emissions did not occur during the same hour, the facility total equals the sum of each device's maximum hourly emissions.

Table 2-10

Malburg Generating Station
2018 Annual Emissions for MGS

Contaminant	Gas Turbines (2)	Cooling Tower	Firewater Pump	Facility
CO lbs	9975	N/A	13.37	9988
NOx lbs	28810	N/A	95.41	28905
PM10 lbs	29679	492	6.09	30177
VOC lbs	6322	N/A	7.49	6330
SOx lbs	1091	N/A	2.20	1093
NH3 lbs	20678	N/A	N/A	20678

Table 2-11

Malburg Generating Station
Total Monthly Emissions
Oct-2018

Contaminant	Gas Turbines (2)
CO lbs	972
PM lbs	3,239
VOC lbs	712
SOx lbs	123

Table 2-12

Malburg Generating Station
Total Monthly Emissions
Nov-2018

Contaminant	Gas Turbines (2)
CO lbs	1,015
PM lbs	3,245
VOC lbs	714
SOx lbs	123

Table 2-13

Malburg Generating Station
Total Monthly Emissions
Dec-2018

Contaminant	Gas Turbines (2)
CO lbs	66
PM lbs	209
VOC lbs	46
SOx lbs	8

Table 2-14

Malburg Generating Station
Combustion Turbines Startup and Shutdown Events
During Quarter 4, 2018

Date	Device	Startup Duration (hrs:min)	Shutdown Duration (hrs:min)	Code
11/16/2018	CT1		:30	
11/17/2018	CT1	1:30		
12/02/2018	CT1		:30	
10/01/2018	CT2		:30	
10/02/2018	CT2	1:30		
10/15/2018	CT2		:30	
10/16/2018	CT2	1:30		
11/09/2018	CT2		:30	
11/10/2018	CT2	1:30		
12/02/2018	CT2		:30	

*Trip
**Testing under Variance Conditions
U=Unsuccessful Start
W=Warm Start 1 trip
C=Cold Start

Table 2-15

Malburg Generating Station
Combustion Turbines and Duct Burner Gas Usage
During Quarter 4,2018

Month	CT-1 / DB-1 Gas Usage (mmscf)	CT-2 / DB-2 Gas Usage (mmscf)
Oct-18	226.51	211.36
Nov-18	219.65	219.10
Dec-18	14.15	14.14

Table 2-17

Malburg Generating Station
Diesel Fuel Usages

Year 2018

Month	Hours of Operation			Fuel Used 9 gal/hr (gals)	Emissions Factor (lbs/Mgal)				
					NOX	SOX	CO	PM10	VOC
	Maintenance	Testing	Emergency		469	11	66.9	30.5	37.5
January	0.0	2.0	0.0	18.0	8.44	0.20	1.20	0.55	0.68
February	0.0	1.7	0.0	15.3	7.18	0.17	1.02	0.47	0.57
March	0.0	1.0	0.0	9.0	4.22	0.10	0.60	0.27	0.34
April	0.0	1.5	0.0	13.5	6.33	0.15	0.90	0.41	0.51
May	0.0	2.0	0.0	18.0	8.44	0.20	1.20	0.55	0.68
June	0.0	2.1	0.0	18.9	8.86	0.21	1.26	0.58	0.71
July	0.0	2.5	0.0	22.5	10.55	0.25	1.51	0.69	0.84
August	0.0	1.5	0.0	13.5	6.33	0.15	0.90	0.41	0.51
September	0.0	2.5	0.0	22.5	10.55	0.25	1.51	0.69	0.84
October	0.0	2.0	0.0	18.0	8.44	0.20	1.20	0.55	0.67
November	0.0	1.9	0.0	17.1	8.02	0.19	1.14	0.52	0.64
December	0.0	1.5	0.0	13.5	6.33	0.15	0.90	0.41	0.51
TOTAL	**0.0**	**22.2**	**0.0**	**199.8**	**93.71**	**2.20**	**13.37**	**6.09**	**7.49**

Note: Operations for maintenance and testing shall not exceed 50 hours in any one calendar year per air permit condition C1.5 (Sec. H, pg. 16)

Table 2-18

Yearly Water Use Totals

Year	Reclaim Water Used (gal)	(cu. ft.)	(acre-feet)
2018	183,802,933	24,569,300	564.034
2017	233,471,537	31,208,600	716.451
2016	260,574,452	34,831,500	799.621
2015	249,217,545	33,313,400	764.770
2014	286,933,755	38,355,000	880.510
2013	257,708,480	34,448,400	790.826
2012	231,756,143	30,979,300	711.187
Average	**257,238,075**		

Year	Potable Water Used (gal)	(cu. ft.)	(acre-feet)
2018	70,321	9,400	0.216
2017	1,220,899	163,200	3.747
2016	195,254	26,100	0.599
2015	412,203	55,100	1.265
2014	58,352	7,800	0.179
2013	0	0	0.000
2012	3,288,648	439,600	10.092
Average	**790,891**		

Table 2-19

Malburg Generating Station
Potable Water Usage
Year : 2018

Month	Water Used			Average Water Usage (gpd)	Days used For Process Cooling
	(gal)	(cu. ft.)	(acre-feet)		
JANUARY	0	0	0.000	0	0.0
FEBRUARY	748	100	0.002	30	0.0
MARCH	15,710	2,100	0.048	510	0.0
APRIL	8,977	1,200	0.028	300	0.0
MAY	2,244	300	0.007	70	0.0
JUNE	748	100	0.002	20	0.0
JULY	32,916	4,400	0.101	1,060	0.0
AUGUST	2,992	400	0.009	100	0.0
SEPTEMBER	1,496	200	0.005	50	0.0
OCTOBER	1,496	200	0.005	50	0.0
NOVEMBER	1,496	200	0.005	50	0.0
DECEMBER	1,496	200	0.005	50	0.0
Yearly TOTAL	**70,319**	**9,400**	**0.22**		**0.0**
MONTHLY AVERAGE	**6,000**	**783**	**0.018**		

Table 2-20

Malburg Generating Station
Reclaimed Water Usage During 2018

Month	Water Used (gal)	(cu. ft.)	(acre-feet)	Average Water Usage (gpd)
JANUARY	18,839,402	2,518,300	57.81	607,720
FEBRUARY	19,688,496	2,631,800	60.42	703,160
MARCH	6,047,640	808,400	18.56	195,090
APRIL	2,947,514	394,000	9.04	98,250
MAY	9,894,371	1,322,600	30.36	319,170
JUNE	15,030,825	2,009,200	46.12	501,030
JULY	21,694,152	2,899,900	66.57	699,810
AUGUST	20,070,775	2,682,900	61.59	647,440
SEPTEMBER	19,636,129	2,624,800	60.26	654,540
OCTOBER	22,187,150	2,965,800	68.09	715,710
NOVEMBER	19,748,344	2,639,800	60.60	658,280
DECEMBER	8,018,136	1,071,800	24.61	258,650
Yearly TOTAL	**183,802,934**	**24,569,300**	**564.03**	
MONTHLY AVERAGE	**15,317,000**	**2,047,442**	**47.003**	**504,900**

FIGURE 2-1

Chevron GST Oil Specifications

SC Fuels
P.O. Box 14237
Orange, CA 92863-1237
Tel: 800-659-5823
Fax: 714-992-7377
Credit Inquiries: 888-364-0121

DELIVERY TICKET

Order#: 1291140
Order Date: 10/25/2018
Delv Req Date: 10/29/2018
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 MANAGEMENT LLC
4963 SOTO STREET
VERNON, CA 90058
(323) 476-3632

Confirm To: ASHLEY HURD
Customer PO: MGS14841 Ship Via: Whse: 101 Terms: N30

HM	Product Code / Desc / Svc Type	Qty Ordered / Package Desc	Ext Qty Ordered	Qty Delivered	Unit Price	Extended Amount
X	UN1202, DIESEL FUEL, NONTAXABLE USE ONLY, PENALITY FOR TAXABLE USE					
	422D055 30 CARB ULTRA L.S. DYED DIESEL	2.00 55 GAL DRM	110.00 GALS	2|SS	3.79000	416.90
	Federal Lust				0.00100	0.11
	Federal Oil Spill				0.00214	0.24
	CA - AB 32 - DSL				0.00271	0.30
					3.79585	417.55
	CH235120981D055 30 DELO 400 SAE 40 55G	1.00 55 GAL DRM	55.00 GALS	1|SS	13.93000	766.15
	CA Oil Recycling Fee				0.24000	13.20
	CA Lube Fee				0.05000	2.75
					14.22000	782.10
	DRUMDEPOSITC001 30 DRUM DEPOSIT FEE	3.00 MISC CHRG	3.00 EACH	3.0	25.00000	75.00
	/FUELCH 30 FUEL SURCHARGE		0.00			9.92
	/RCF 30 REGULATORY COMPLIANCE FEE		0.00			12.95

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

Figure 2-2

Cooling Tower PM10 Guidance

Calculating Realistic PM_{10} Emissions from Cooling Towers

Abstract No. 216 Session No. AM-1b

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ABSTRACT

Particulate matter less than 10 micrometers in diameter (PM_{10}) emissions from wet cooling towers may be calculated using the methodology presented in EPA's AP-42[1] , which assumes that all total dissolved solids (TDS) emitted in "drift" particles (liquid water entrained in the air stream and carried out of the tower through the induced draft fan stack.) are PM_{10}. However, for wet cooling towers with medium to high TDS levels, this method is overly conservative, and predicts significantly higher PM_{10} emissions than would actually occur, even for towers equipped with very high efficiency drift eliminators (e.g., 0.0006% drift rate). Such over-prediction may result in unrealistically high PM_{10} modeled concentrations and/or the need to purchase expensive Emission Reduction Credits (ERCs) in PM_{10} non-attainment areas. Since these towers have fairly low emission points (10 to 15 m above ground), over-predicting PM_{10} emission rates can easily result in exceeding federal Prevention of Significant Deterioration (PSD) significance levels at a project's fenceline. This paper presents a method for computing realistic PM_{10} emissions from cooling towers with medium to high TDS levels.

INTRODUCTION

Cooling towers are heat exchangers that are used to dissipate large heat loads to the atmosphere. Wet, or evaporative, cooling towers rely on the latent heat of water evaporation to exchange heat between the process and the air passing through the cooling tower. The cooling water may be an integral part of the process or may provide cooling via heat exchangers, for example, steam condensers. Wet cooling towers provide direct contact between the cooling water and air passing through the tower, and as part of normal operation, a very small amount of the circulating water may be entrained in the air stream and be carried out of the tower as "drift" droplets. Because the drift droplets contain the same chemical impurities as the water circulating through the tower, the particulate matter constituent of the drift droplets may be classified as an emission. The magnitude of the drift loss is influenced by the number and size of droplets produced within the tower, which are determined by the tower fill design, tower design, the air and water patterns, and design of the drift eliminators.

AP-42 METHOD OF CALCULATING DRIFT PARTICULATE

EPA's AP-42[1] provides available particulate emission factors for wet cooling towers, however, these values only have an emission factor rating of "E" (the lowest level of confidence acceptable). They are also rather high, compared to typical present-day manufacturers' guaranteed drift rates, which are on the order of 0.0006%. (Drift emissions are typically

expressed as a percentage of the cooling tower water circulation rate). AP-42 states that "a *conservatively high* PM_{10} emission factor can be obtained by (a) multiplying the total liquid drift factor by the TDS fraction in the circulating water, and (b) assuming that once the water evaporates, all remaining solid particles are within the PM_{10} range." (Italics per EPA).

If TDS data for the cooling tower are not available, a source-specific TDS content can be estimated by obtaining the TDS for the make-up water and multiplying it by the cooling tower cycles of concentration. [The cycles of concentration is the ratio of a measured parameter for the cooling tower water (such as conductivity, calcium, chlorides, or phosphate) to that parameter for the make-up water.]

Using AP-42 guidance, the total particulate emissions (PM) (after the pure water has evaporated) can be expressed as:

$$PM = \text{Water Circulation Rate} \times \text{Drift Rate} \times TDS \qquad [1]$$

For example, for a typical power plant wet cooling tower with a water circulation rate of 146,000 gallons per minute (gpm), drift rate of 0.0006%, and TDS of 7,700 parts per million by weight (ppmw):

$$PM = 146{,}000 \text{ gpm} \times 8.34 \text{ lb water/gal} \times 0.0006/100 \times 7{,}700 \text{ lb solids}/10^6 \text{ lb water} \times 60 \text{ min/hr} = \underline{3.38 \text{ lb/hr}}$$

On an annual basis, this is equivalent to almost 15 tons per year (tpy). Even for a state-of-the-art drift eliminator system, this is not a small number, especially if assumed to all be equal to PM_{10}, a regulated criteria pollutant. However, as the following analysis demonstrates, only a very small fraction is actually PM_{10}.

COMPUTING THE PM_{10} FRACTION

Based on a representative drift droplet size distribution and TDS in the water, the amount of solid mass in each drop size can be calculated. That is, for a given initial droplet size, assuming that the mass of dissolved solids condenses to a spherical particle after all the water evaporates, and assuming the density of the TDS is equivalent to a representative salt (e.g., sodium chloride), the diameter of the final solid particle can be calculated. Thus, using the drift droplet size distribution, the percentage of drift mass containing particles small enough to produce PM_{10} can be calculated. This method is conservative as the final particle is assumed to be perfectly spherical; hence as small a particle as can exist.

The droplet size distribution of the drift emitted from the tower is critical to performing the analysis. Brentwood Industries, a drift eliminator manufacturer, was contacted and agreed to provide drift eliminator test data from a test conducted by Environmental Systems Corporation (ESC) at the Electric Power Research Institute (EPRI) test facility in Houston, Texas in 1988 (Aull[2], 1999). The data consist of water droplet size distributions for a drift eliminator that achieved a tested drift rate of 0.0003 percent. As we are using a 0.0006 percent drift rate, it is reasonable to expect that the 0.0003 percent drift rate would produce smaller droplets, therefore,

this size distribution data can be assumed to be conservative for predicting the fraction of PM_{10} in the total cooling tower PM emissions.

In calculating PM_{10} emissions the following assumptions were made:

- Each water droplet was assumed to evaporate shortly after being emitted into ambient air, into a single, solid, spherical particle.
- Drift water droplets have a density (ρ_w) of water; $1.0\ g/cm^3$ or $1.0 * 10^{-6}\ \mu g/\mu m^3$.
- The solid particles were assumed to have the same density (ρ_{TDS}) as sodium chloride, (i.e., 2.2 g/cm^3).

Using the formula for the volume of a sphere, $V = 4\pi r^3/3$, and the density of pure water, $\rho_w = 1.0\ g/cm^3$, the following equations can be used to derive the solid particulate diameter, D_p, as a function of the TDS, the density of the solids, and the initial drift droplet diameter, D_d :

Volume of drift droplet = $(4/3)\pi(D_d/2)^3$ [2]

Mass of solids in drift droplet = (TDS)(ρ_w)(Volume of drift droplet) [3]

substituting,

Mass of solids in drift = (TDS)(ρ_w) $(4/3)\pi(D_d/2)^3$ [4]

Assuming the solids remain and coalesce after the water evaporates, the mass of solids can also be expressed as:

Mass of solids = (ρ_{TDS}) (solid particle volume) = (ρ_{TDS})$(4/3)\pi(D_p/2)^3$ [5]

Equations [4] and [5] are equivalent:

$(\rho_{TDS})(4/3)\pi(D_p/2)^3 = (TDS)(\rho_w)(4/3)\pi(D_d/2)^3$ [6]

Solving for D_p:

$D_p = D_d\ [(TDS)(\rho_w/\rho_{TDS})]^{1/3}$ [7]

Where,

TDS is in units of ppmw
D_p = diameter of solid particle, micrometers (μm)
D_d = diameter of drift droplet, μm

Using formulas [2] – [7] and the particle size distribution test data, Table 1 can be constructed for drift from a wet cooling tower having the same characteristics as our example; 7,700 ppmw TDS and a 0.0006% drift rate. The first and last columns of this table are the particle size distribution derived from test results provided by Brentwood Industries. Using straight-line interpolation for a solid particle size 10 μm in diameter, we conclude that approximately 14.9 percent of the mass emissions are equal to or smaller than PM_{10}. The balance of the solid

particulate are particulate greater than 10 μm. Hence, PM_{10} emissions from this tower would be equal to PM emissions x 0.149, or 3.38 lb/hr x 0.149 = 0.50 lb/hr. The process is repeated in Table 2, with all parameters equal except that the TDS is 11,000 ppmw. The result is that approximately 5.11 percent are smaller at 11,000 ppm. Thus, while total PM emissions are larger by virtue of a higher TDS, overall PM_{10} emissions are actually lower, because more of the solid particles are larger than 10 μm.

Table 1. Resultant Solid Particulate Size Distribution (TDS = 7700 ppmw)

EPRI Droplet Diameter (μm)	Droplet Volume (μm^3) [2][1]	Droplet Mass (μg) [3]	Particle Mass (Solids) (μg) [4]	Solid Particle Volume (μm^3)	Solid Particle Diameter (μm) [7]	EPRI % Mass Smaller
10	524	5.24E-04	4.03E-06	1.83	1.518	0.000
20	4189	4.19E-03	3.23E-05	14.66	3.037	0.196
30	14137	1.41E-02	1.09E-04	49.48	4.555	0.226
40	33510	3.35E-02	2.58E-04	117.29	6.073	0.514
50	65450	6.54E-02	5.04E-04	229.07	7.591	1.816
60	113097	1.13E-01	8.71E-04	395.84	9.110	5.702
70	179594	1.80E-01	1.38E-03	628.58	10.628	21.348
90	381704	3.82E-01	2.94E-03	1335.96	13.665	49.812
110	696910	6.97E-01	5.37E-03	2439.18	16.701	70.509
130	1150347	1.15E+00	8.86E-03	4026.21	19.738	82.023
150	1767146	1.77E+00	1.36E-02	6185.01	22.774	88.012
180	3053628	3.05E+00	2.35E-02	10687.70	27.329	91.032
210	4849048	4.85E+00	3.73E-02	16971.67	31.884	92.468
240	7238229	7.24E+00	5.57E-02	25333.80	36.439	94.091
270	10305995	1.03E+01	7.94E-02	36070.98	40.994	94.689
300	14137167	1.41E+01	1.09E-01	49480.08	45.549	96.288
350	22449298	2.24E+01	1.73E-01	78572.54	53.140	97.011
400	33510322	3.35E+01	2.58E-01	117286.13	60.732	98.340
450	47712938	4.77E+01	3.67E-01	166995.28	68.323	99.071
500	65449847	6.54E+01	5.04E-01	229074.46	75.915	99.071
600	113097336	1.13E+02	8.71E-01	395840.67	91.098	100.000

[1] Bracketed numbers refer to equation number in text.

The percentage of PM_{10}/PM was calculated for cooling tower TDS values from 1000 to 12000 ppmw and the results are plotted in Figure 1. Using these data, Figure 2 presents predicted PM_{10} emission rates for the 146,000 gpm example tower. As shown in this figure, the PM emission rate increases in a straight line as TDS increases, however, the PM_{10} emission rate increases to a maximum at around a TDS of 4000 ppmw, and then begins to decline. The reason is that at higher TDS, the drift droplets contain more solids and therefore, upon evaporation, result in larger solid particles for any given initial droplet size.

CONCLUSION

The emission factors and methodology given in EPA's AP-42[1] Chapter 13.4 *Wet Cooling Towers*, do not account for the droplet size distribution of the drift exiting the tower. This is a critical factor, as more than 85% of the mass of particulate in the drift from most cooling towers will result in solid particles larger than PM_{10} once the water has evaporated. Particles larger than PM_{10} are no longer a regulated air pollutant, because their impact on human health has been shown to be insignificant. Using reasonable, conservative assumptions and a realistic drift

droplet size distribution, a method is now available for calculating realistic PM_{10} emission rates from wet mechanical draft cooling towers equipped with modern, high-efficiency drift eliminators and operating at medium to high levels of TDS in the circulating water.

Table 2. Resultant Solid Particulate Size Distribution (TDS = 11000 ppmw)

EPRI Droplet Diameter (μm)	Droplet Volume (μm^3) [2][1]	Droplet Mass (μg) [3]	Particle Mass (Solids) (μg) [4]	Solid Particle Volume (μm^3)	Solid Particle Diameter (μm) [7]	EPRI % Mass Smaller
10	524	5.24E-04	5.76E-06	2.62	1.710	0.000
20	4189	4.19E-03	4.61E-05	20.94	3.420	0.196
30	14137	1.41E-02	1.56E-04	70.69	5.130	0.226
40	33510	3.35E-02	3.69E-04	167.55	6.840	0.514
50	65450	6.54E-02	7.20E-04	327.25	8.550	1.816
60	113097	1.13E-01	1.24E-03	565.49	10.260	5.702
70	179594	1.80E-01	1.98E-03	897.97	11.970	21.348
90	381704	3.82E-01	4.20E-03	1908.52	15.390	49.812
110	696910	6.97E-01	7.67E-03	3484.55	18.810	70.509
130	1150347	1.15E+00	1.27E-02	5751.73	22.230	82.023
150	1767146	1.77E+00	1.94E-02	8835.73	25.650	88.012
180	3053628	3.05E+00	3.36E-02	15268.14	30.780	91.032
210	4849048	4.85E+00	5.33E-02	24245.24	35.909	92.468
240	7238229	7.24E+00	7.96E-02	36191.15	41.039	94.091
270	10305995	1.03E+01	1.13E-01	51529.97	46.169	94.689
300	14137167	1.41E+01	1.56E-01	70685.83	51.299	96.288
350	22449298	2.24E+01	2.47E-01	112246.49	59.849	97.011
400	33510322	3.35E+01	3.69E-01	167551.61	68.399	98.340
450	47712938	4.77E+01	5.25E-01	238564.69	76.949	99.071
500	65449847	6.54E+01	7.20E-01	327249.23	85.499	99.071
600	113097336	1.13E+02	1.24E+00	565486.68	102.599	100.000

Figure 1: Percentage of Drift PM that Evaporates to PM10

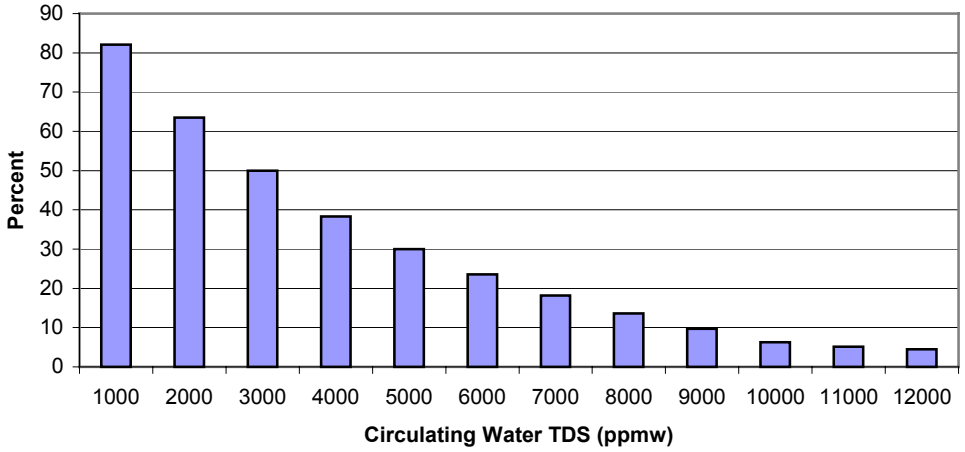
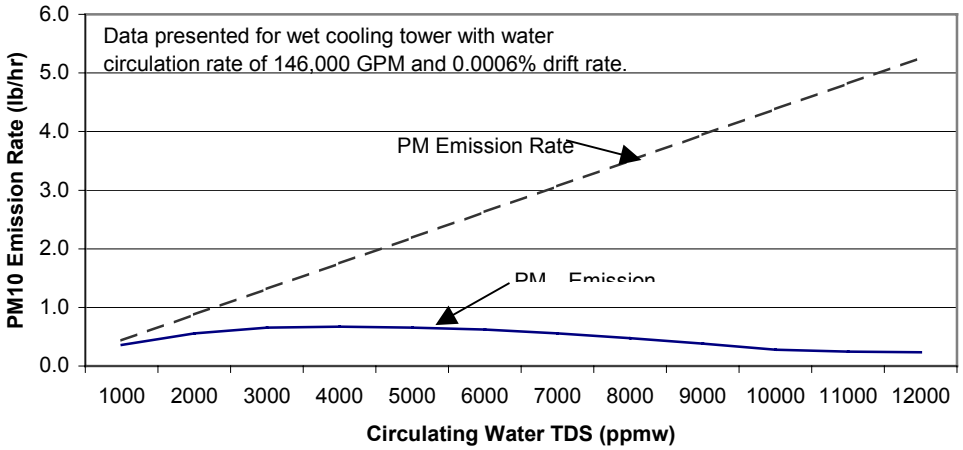


Figure 2: PM_{10} Emission Rate vs. TDS



REFERENCES

1. EPA, 1995. Compilation of Air pollutant Emission Factors, AP-42 Fifth edition, Volume I: *Stationary Point and Area Sources*, Chapter 13.4 Wet Cooling Towers, http://www.epa.gov/ttn/chief/ap42/, United States Environmental Protection Agency, Office of Air Quality Planning and Standards, January.

2. Aull, 1999. Memorandum from R. Aull, Brentwood Industries to J. Reisman, Greystone, December 7, 1999.

KEY WORDS

Drift
Drift eliminators
Cooling tower
PM_{10} emissions
TDS

APPENDIX A

COOLING TOWER BLOW DOWN REPORTS

POSITIVE LAB SERVICE

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

October 09, 2018

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

Report No.: 1810018
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 October 03, 2018.

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: 10/09/18
Submitted: 10/03/18
PLS Report No.: 1810018

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

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (1810018-01) Sampled: 10/03/18 09:05 Received: 10/03/18 09:05

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4540**		1	mg/L	5.0	- SM 2540C	10/03/18	10/04/18	am	BJ80408

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BJ80408 - -										
Blank	**Prepared: 10/03/18 Analyzed: 10/04/18**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 10/03/18 Analyzed: 10/04/18**									
Total Dissolved Solids	350	5.0	mg/L	356.0		98.3	80-120			
Duplicate **Source: 1810018-01**	**Prepared: 10/03/18 Analyzed: 10/04/18**									
Total Dissolved Solids	4620	5.0	mg/L		4540			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)

105491

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: 10-3-18 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 1810018

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

AIRBILL NO: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 1.3°C

PROJECT MANAGER: Tom Bamhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: Tom Bam (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		10/3/18	0905	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: 10-3-18 Time: 1520

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 12, 2018

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

Report No.: 1810051
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 October 08, 2018.

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: 10/12/18
Submitted: 10/08/18
PLS Report No.: 1810051

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (1810051-01) Sampled: 10/08/18 09:20 Received: 10/08/18 09:20

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4340**		1	mg/L	5.0	- SM 2540C	10/10/18	10/11/18	am	BJ81207

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BJ81207 - -										
Blank	**Prepared: 10/10/18 Analyzed: 10/11/18**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 10/10/18 Analyzed: 10/11/18**									
Total Dissolved Solids	359	5.0	mg/L	356.0		101	80-120			
Duplicate **Source: 1810051-01**	**Prepared: 10/10/18 Analyzed: 10/11/18**									
Total Dissolved Solids	4320	5.0	mg/L		4340			0.462	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)

104180

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: 10-8-12 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 161005

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

ADDRESS:

PROJECT MANAGER: Tom Bainhart PHONE NO: FAX NO:

SAMPLER NAME: Jon 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:

AIRBILL NO: _____

COOLER TEMP: 0.8°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		10-8-12	0920	Cooling Tower Blowdown	X				1	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: 10-8-12 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

October 23, 2018

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

Report No.: 1810134
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 October 17, 2018.

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: 10/23/18
Submitted: 10/17/18
PLS Report No.: 1810134

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (1810134-01) Sampled: 10/17/18 08:50 Received: 10/17/18 08:50

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4980**		1	mg/L	5.0	- SM 2540C	10/22/18	10/23/18	am	BJ82330

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BJ82330 - -										
Blank	**Prepared: 10/22/18 Analyzed: 10/23/18**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 10/22/18 Analyzed: 10/23/18**									
Total Dissolved Solids	365	5.0	mg/L	356.0		103	80-120			
Duplicate **Source: 1810134-01**	**Prepared: 10/22/18 Analyzed: 10/23/18**									
Total Dissolved Solids	5010	5.0	mg/L		4980			0.566	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)

104416

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: 10-17-08 PAGE ____ OF ____

LOG BOOK NO. ____ FILE NO. ____ LAB NO. 181 634

CLIENT NAME: CEM

Project Name/No. Malburg Generating Station Weekly

P.O. NO.

AIRBILL NO: ____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 26°c

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: John 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, O = Other:

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

	SAMPLE NO.	DATE SAMPLED	TIME SAMPLED	SAMPLE DESCRIPTION	MATRIX: WATER	SOIL	SLUDGE	OTHER	TAT	CONTAINER: #	TYPE	TRS								SAMPLE CONDITION/ CONTAINER /COMMENTS:
1		10/17/08	0850	Loading 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: 10/17/08 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

October 29, 2018

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

Report No.: 1810182
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 October 24, 2018.

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: 10/29/18
Submitted: 10/24/18
PLS Report No.: 1810182

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (1810182-01) Sampled: 10/24/18 08:50 Received: 10/24/18 08:50

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	10/25/18	10/26/18	am	BJ82617

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BJ82617 - -										
Blank	**Prepared: 10/25/18 Analyzed: 10/26/18**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 10/25/18 Analyzed: 10/26/18**									
Total Dissolved Solids	345	5.0	mg/L	356.0		96.9	80-120			
Duplicate **Source: 1810182-01**	**Prepared: 10/25/18 Analyzed: 10/26/18**									
Total Dissolved Solids	4530	5.0	mg/L		4500			0.626	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)

104421

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: 10.24.18 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 181018L

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

AIRBILL NO: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 1.3°c

PROJECT MANAGER: Tom Bainbart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: Tom Bainbart (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		10.24.18	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 Tamayo Date: 10.24.18 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

November 02, 2018

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

Report No.: 1810213
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 October 29, 2018.

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: 11/02/18
Submitted: 10/29/18
PLS Report No.: 1810213

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (1810213-01) Sampled: 10/29/18 10:00 Received: 10/29/18 10:00

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4340**		1	mg/L	5.0	- SM 2540C	11/01/18	11/02/18	cg	BK80219

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BK80219 - -										
Blank	**Prepared: 11/01/18 Analyzed: 11/02/18**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 11/01/18 Analyzed: 11/02/18**									
Total Dissolved Solids	370	5.0	mg/L	356.0		104	80-120			
Duplicate **Source: 1810213-01**	**Prepared: 11/01/18 Analyzed: 11/02/18**									
Total Dissolved Solids	4330	5.0	mg/L		4340			0.185	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)

104431

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: 10/29/13 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 131023

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

AIRBILL NO: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 4.0°C

PROJECT MANAGER: Tom Barhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: John 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, 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		10-29-13	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:

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) Date: 10-29-13 Time: 1040

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

November 12, 2018

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

Report No.: 1811035
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 November 06, 2018.

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: 11/12/18
Submitted: 11/06/18
PLS Report No.: 1811035

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (1811035-01) Sampled: 11/06/18 08:20 Received: 11/06/18 08:20

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4620**		1	mg/L	5.0	- SM 2540C	11/08/18	11/09/18	am	BK80905

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BK80905 - -										
Blank	**Prepared: 11/08/18 Analyzed: 11/09/18**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 11/08/18 Analyzed: 11/09/18**									
Total Dissolved Solids	370	5.0	mg/L	356.0		104	80-120			
Duplicate Source: 1811035-01	**Prepared: 11/08/18 Analyzed: 11/09/18**									
Total Dissolved Solids	4610	5.0	mg/L		4620			0.253	5	
Duplicate Source: 1811054-05	**Prepared: 11/08/18 Analyzed: 11/09/18**									
Total Dissolved Solids	940	5.0	mg/L		940			0.00	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)

104442

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: 11-6-18 PAGE 1 OF 1

LOG BOOK NO.: _____ FILE NO.: _____ LAB NO. 1811035

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

AIRBILL NO.: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 1.6°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		11/6/18	0900	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: 11-6-18 Time: 1005

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

November 16, 2018

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

Report No.: 1811112
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 November 12, 2018.

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: 11/16/18
Submitted: 11/12/18
PLS Report No.: 1811112

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

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (1811112-01) Sampled: 11/12/18 09:05 Received: 11/12/18 09:05

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4480**		1	mg/L	5.0	- SM 2540C	11/14/18	11/15/18	am	BK81506

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BK81506 - -										
Blank	**Prepared: 11/14/18 Analyzed: 11/15/18**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 11/14/18 Analyzed: 11/15/18**									
Total Dissolved Solids	367	5.0	mg/L	356.0		103	80-120			
Duplicate **Source: 1811112-01**	**Prepared: 11/14/18 Analyzed: 11/15/18**									
Total Dissolved Solids	4550	5.0	mg/L		4480			1.59	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)

106538

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: 11-12-13 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 811112

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

AIRBILL NO: _____

ADDRESS:

ANALYSES REQUESTED:

COOLER TEMP: 1.1°

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

PRESERVATIVE:

SAMPLER NAME: Tom Davis (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		11-12-13	0905	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 Tavera Date: 11-12-13 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

November 28, 2018

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

Report No.: 1811191
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 November 20, 2018.

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: 11/28/18
Submitted: 11/20/18
PLS Report No.: 1811191

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (1811191-01) Sampled: 11/20/18 09:35 Received: 11/20/18 09:35

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	11/20/18	11/21/18	am	BK82706

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BK82706 - -										
Blank	**Prepared: 11/20/18 Analyzed: 11/21/18**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 11/20/18 Analyzed: 11/21/18**									
Total Dissolved Solids	365	5.0	mg/L	356.0		103	80-120			
Duplicate **Source: 1811174-01**	**Prepared: 11/20/18 Analyzed: 11/21/18**									
Total Dissolved Solids	6730	5.0	mg/L		6650			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

Authorized Signature(s)

106554

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: 11/2/18 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 1811191

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

ADDRESS:

PROJECT MANAGER: Tom Bainbart PHONE NO: FAX NO:

SAMPLER NAME: Jim Baise (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: 16°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		11/2/18	0935	Cooling Tower Blowdown	X				N	1	P	Y								
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished By: (Signature and Printed Name) Received By: (Signature and Printed Name) J. Gutierrez Date: 11/2/18 Time: 1400

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

November 30, 2018

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

Report No.: 1811235
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 November 26, 2018.

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: 11/30/18
Submitted: 11/26/18
PLS Report No.: 1811235

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

Project: Malburg Generating Station Weekly

Sample ID: Cooling Tower Blowdown Water (1811235-01) Sampled: 11/26/18 11:50 Received: 11/26/18 11:50

Analyte	Results	Flag	D.F.	Units	PQL	Prep/Test Method	Prepared	Analyzed	By	Batch
Total Dissolved Solids	**4750**		1	mg/L	5.0	- SM 2540C	11/29/18	11/30/18	ai	BK83018

Quality Control Data

Analyte	Result	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch BK83018 - -										
Blank	**Prepared: 11/29/18 Analyzed: 11/30/18**									
Total Dissolved Solids	ND	5.0	mg/L							
LCS	**Prepared: 11/29/18 Analyzed: 11/30/18**									
Total Dissolved Solids	353	5.0	mg/L	356.0		99.2	80-120			
Duplicate Source: 1811235-01	**Prepared: 11/29/18 Analyzed: 11/30/18**									
Total Dissolved Solids	4770	5.0	mg/L		4750			0.489	5	
Duplicate Source: 1811268-04	**Prepared: 11/29/18 Analyzed: 11/30/18**									
Total Dissolved Solids	4390	5.0	mg/L		4380			0.267	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)

106560

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: 112618 PAGE 1 OF 1

LOG BOOK NO. _____ FILE NO. _____ LAB NO. 181535

CLIENT NAME: Colorado Energy Project Name/No. Malburg Generating Station weekly P.O. NO.

ADDRESS:

PROJECT MANAGER: Tom Barnhart PHONE NO: FAX NO:

SAMPLER NAME: John Baise (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: 1.1°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		112618	1150	Loading Pier Blowdown	Y				N	1	P	Y								
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
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) 112618 1745

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 EMISSIONS REPORTS

Startup/Shutdown Excess Emissions Report

U1 CO Startup/Shutdown

From: 10/01/2018 00:00 **To:** 12/31/2018 23:59 **Facility Name:** Malburg Generating Station
Generated: 01/02/2019 09:58 **Location:** Vernon, California
Tag Name: U1_CO_LbPerHr_1M SI = SampleInvalid, * = Excess Emission
Total Operating Time: 1,496.53 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: 10/01/2018 00:00 **To:** 12/31/2018 23:59 **Facility Name:** Malburg Generating Station
Generated: 01/02/2019 09:59 **Location:** Vernon, California
Tag Name: U1_NOx_LbPerHr_1M SI = SampleInvalid, * = Excess Emission
Total Operating Time: 1,496.53 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: 10/01/2018 00:00 **To:** 12/31/2018 23:59 **Facility Name:** Malburg Generating Station
Generated: 01/02/2019 10:00 **Location:** Vernon, California
Tag Name: U1_VOC_LbPerHr_1M SI = SampleInvalid, * = Excess Emission
Total Operating Time: 1,496.53 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 - CO ppmvdc 3-hour Rolling during Normal Operation

From: 10/01/2018 00:00 **To:** 12/31/2018 23:59 **Facility Name:** Malburg Generating Station
Generated: 01/02/2019 09:49 **Location:** Vernon, California

Tag Name: U1_CO_3HrRoll_Ppmvdc_1H
Total Operating Time: 1,499.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 709.00 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:	**1,499.00 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 - NOx ppmvdc 1-hour during Normal Operation

From: 10/01/2018 00:00 **To:** 12/31/2018 23:59 **Facility Name:** Malburg Generating Station
Generated: 01/02/2019 09:47 **Location:** Vernon, California

Tag Name: U1_NOxNormal_Ppmvdc_1H
Total Operating Time: 1,499.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 709.00 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:	**1,499.00 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: 10/01/2018 00:00 **To:** 12/31/2018 23:59 **Facility Name:** Malburg Generating Station
Generated: 01/02/2019 09:51 **Location:** Vernon, California

Tag Name: U1_VOCNormal_Ppmvdc_1H
Total Operating Time: 1,499.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 709.00 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:	**1,499.00 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: 10/01/2018 00:00 **To:** 12/31/2018 23:59 **Facility Name:** Malburg Generating Station
Generated: 01/02/2019 10:05 **Location:** Vernon, California
Tag Name: U2_CO_LbPerHr_1M
SI = SampleInvalid, * = Excess Emission
Total Operating Time: 1,459.60 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: 10/01/2018 00:00 **To:** 12/31/2018 23:59 **Facility Name:** Malburg Generating Station
Generated: 01/02/2019 10:12 **Location:** Vernon, California
Tag Name: U2_VOC_LbPerHr_1M
SI = SampleInvalid, * = Excess Emission
Total Operating Time: 1,459.60 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

U2 NOx Startup/Shutdown

From: 10/01/2018 00:00 **To:** 12/31/2018 23:59 **Facility Name:** Malburg Generating Station
Generated: 01/02/2019 10:11 **Location:** Vernon, California
Tag Name: U2_NOx_LbPerHr_1M SI = SampleInvalid, * = Excess Emission
Total Operating Time: 1,459.60 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 - CO ppmvdc 3-hour Rolling during Normal Operation

From: 10/01/2018 00:00 **To:** 12/31/2018 23:59 **Facility Name:** Malburg Generating Station
Generated: 01/02/2019 10:03 **Location:** Vernon, California

Tag Name: U2_CO_3HrRoll_Ppmvdc_1H
Total Operating Time: 1,465.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 743.00 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:	**1,465.00 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 - NOx ppmvdc 1-hour during Normal Operation

From: 10/01/2018 00:00 **To:** 12/31/2018 23:59 **Facility Name:** Malburg Generating Station
Generated: 01/02/2019 10:04 **Location:** Vernon, California

Tag Name: U2_NOxNormal_Ppmvdc_1H
Total Operating Time: 1,465.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 743.00 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:	**1,465.00 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: 10/01/2018 00:00 **To:** 12/31/2018 23:59 **Facility Name:** Malburg Generating Station
Generated: 01/02/2019 10:04 **Location:** Vernon, California

Tag Name: U2_VOCNormal_Ppmvdc_1H
Total Operating Time: 1,465.00 Hour(s) **No Exclusions Allowed**
Non-Operating Time: 743.00 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:	**1,465.00 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

Potable Water Usage Logs

No Potable water was used for cooling for the year 2018

APPENDIX G

MGS RECLAIM ANNUAL EMISSION ALLOCATION

FACILITY PERMIT TO OPERATE
BICENT (CALIFORNIA) MALBURG LLC

SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

The annual allocation of NOx RECLAIM Trading Credits (RTCs) for this facility is calculated pursuant to Rule 2002. Total NOx emission shall not exceed such annual allocations unless the operator obtains RTCs corresponding to the facility's increased emissions in compliance with Rules 2005 and 2007.

The level of Starting Allocation plus Non-Tradable Credits used to determine compliance with Rule 2005(c)(4) and applicability of Rule 2005(e) - Trading Zone Restrictions is listed on the last page of this Section.

The following table lists the annual allocations that were issued to this facility and the amounts of RTCs held by this facility on the day of printing this Section.

RECLAIM POLLUTANT ANNUAL ALLOCATION (POUNDS)

Year Begin (month/year)	Year End	Zone	NOx RTC Initially Allocated	NOx RTC[1] Holding as of 07/01/2018 (pounds)	Non-Tradable[2] Non-Usable RTCs (pounds)
7/2015	6/2016	Coastal	28480	7517	0
1/2016	12/2016	Coastal	0	7645	1854
7/2016	6/2017	Coastal	28480	5699	1854
1/2017	12/2017	Coastal	0	29794	0
7/2017	6/2018	Coastal	28480	25012	0
1/2018	12/2018	Coastal	0	30734	940
7/2018	6/2019	Coastal	28480	24072	940
1/2019	12/2019	Coastal	0	23132	940
7/2019	6/2020	Coastal	28480	23132	940
1/2020	12/2020	Coastal	0	21279	1854
7/2020	6/2021	Coastal	28480	21278	1854
1/2021	12/2021	Coastal	0	19398	1881
7/2021	6/2022	Coastal	28480	19397	1881
1/2022	12/2022	Coastal	0	15663	3735
7/2022	6/2023	Coastal	28480	15663	3734
1/2023	12/2023	Coastal	0	15663	0
7/2023	6/2024	Coastal	28480	15663	0

Footnotes:

1. This number may change due to pending trades, emissions reported under Quarterly Certification of Emissions Report (QCER) and Annual Permit Emission Program (APEP) Report required pursuant to Rule 2004, or deductions made pursuant to Rule 2010(b). The most recent total RTC information can be obtained from the District's RTC Listing.

2. The use of such credits is subject to restrictions set forth in paragraph (f)(1) of Rule 2002.

FACILITY PERMIT TO OPERATE
BICENT (CALIFORNIA) MALBURG LLC

SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

The annual allocation of NOx RECLAIM Trading Credits (RTCs) for this facility is calculated pursuant to Rule 2002. Total NOx emission shall not exceed such annual allocations unless the operator obtains RTCs corresponding to the facility's increased emissions in compliance with Rules 2005 and 2007.

The level of Starting Allocation plus Non-Tradable Credits used to determine compliance with Rule 2005(c)(4) and applicability of Rule 2005(e) - Trading Zone Restrictions is listed on the last page of this Section.

The following table lists the annual allocations that were issued to this facility and the amounts of RTCs held by this facility on the day of printing this Section.

RECLAIM POLLUTANT ANNUAL ALLOCATION (POUNDS)

Year Begin (month/year)	Year End	Zone	NOx RTC Initially Allocated	NOx RTC[1] Holding as of 07/01/2018 (pounds)	Non-Tradable[2] Non-Usable RTCs (pounds)
1/2024	12/2024	Coastal	0	15663	0
7/2024	6/2025	Coastal	28480	15663	0
1/2025	12/2025	Coastal	0	15663	0
7/2025	6/2026	Coastal	28480	15663	0
1/2026	12/2026	Coastal	0	15663	0
7/2026	6/2027	Coastal	28480	15663	0
1/2027	12/2027	Coastal	0	15663	0
7/2027	6/2028	Coastal	28480	15663	0
1/2028	12/2028	Coastal	0	15663	0
7/2028	6/2029	Coastal	28480	15663	0
1/2029	12/2029	Coastal	0	15663	0
7/2029	6/2030	Coastal	28480	15663	0
1/2030	12/2030	Coastal	0	15663	0
7/2030	6/2031	Coastal	28480	15663	0
1/2031	12/2031	Coastal	0	15663	0
7/2031	6/2032	Coastal	28480	15663	0
1/2032	12/2032	Coastal	0	15663	0

Footnotes:

1. This number may change due to pending trades, emissions reported under Quarterly Certification of Emissions Report (QCER) and Annual Permit Emission Program (APEP) Report required pursuant to Rule 2004, or deductions made pursuant to Rule 2010(b). The most recent total RTC information can be obtained from the District's RTC Listing.

2. The use of such credits is subject to restrictions set forth in paragraph (f)(1) of Rule 2002.

FACILITY PERMIT TO OPERATE
BICENT (CALIFORNIA) MALBURG LLC

SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

The annual allocation of NOx RECLAIM Trading Credits (RTCs) for this facility is calculated pursuant to Rule 2002. Total NOx emission shall not exceed such annual allocations unless the operator obtains RTCs corresponding to the facility's increased emissions in compliance with Rules 2005 and 2007.

The level of Starting Allocation plus Non-Tradable Credits used to determine compliance with Rule 2005(c)(4) and applicability of Rule 2005(e) - Trading Zone Restrictions is listed on the last page of this Section.

The following table lists the annual allocations that were issued to this facility and the amounts of RTCs held by this facility on the day of printing this Section.

RECLAIM POLLUTANT ANNUAL ALLOCATION (POUNDS)

Year Begin (month/year)	Year End (month/year)	Zone	NOx RTC Initially Allocated	NOx RTC[1] Holding as of 07/01/2018 (pounds)	Non-Tradable[2] Non-Usable RTCs (pounds)
7/2032	6/2033	Coastal	28480	15663	0
1/2033	12/2033	Coastal	0	15663	0

Footnotes:

1. This number may change due to pending trades, emissions reported under Quarterly Certification of Emissions Report (QCER) and Annual Permit Emission Program (APEP) Report required pursuant to Rule 2004, or deductions made pursuant to Rule 2010(b). The most recent total RTC information can be obtained from the District's RTC Listing.

2. The use of such credits is subject to restrictions set forth in paragraph (f)(1) of Rule 2002.

FACILITY PERMIT TO OPERATE
BICENT (CALIFORNIA) MALBURG LLC

SECTION B: RECLAIM ANNUAL EMISSION ALLOCATION

The annual allocation of RECLAIM Trading Credits (RTCs) for this facility is calculated pursuant to Rule 2002. If the facility submits a permit application to increase in an annual allocation to a level greater than the facility's starting Allocation plus Non-Tradable credits as listed below, the application will be evaluated for compliance with Rule 2005 (c)(4). Rule 2005 (e) - Trading Zone Restrictions applies if an annual allocation is increased to a level greater than the facility's Starting Allocation plus Non-Tradable Credits:

Year Begin (month/year)	Year End (month/year)	Zone	NOx RTC Starting Allocation (pounds)	Non-Tradable Credits(NTC) (pounds)
7/1994	6/1995	Coastal	296280	7720

APPENDIX H

MGS RISK MANAGEMENT PLAN ACCEPTANCE LETTER

City of Vernon

Health and Environmental Control Department
Lewis J. Pozzebon, Director / Health Officer
4305 Santa Fe Avenue, Vernon, California 90058
Telephone (323) 583-8811

July 23, 2009

Colorado Energy Management, LLC
4963 Soto Street
Vernon, California 90058
Attn: Erik Knutson, Plant Manager

SUBJECT: California Accidental Release Prevention (CalARP) Risk Management Plan (RMP) for Malburg Generation Station located at 4963 Soto Street, Vernon, California 90058

Dear Mr. Knutson:

We have conducted a review of the subject CalARP documentation for the aqueous ammonia system at the subject facility. Based upon the information submitted, our Department accepts the document as complete. In accordance to California Health and Safety Code, Division 20, Chapter 6.95, Section 25535.2, we have notified the public that the RMP documents will be available for review for a period of 45 calendar days starting from the above date. During this time period, the public will have the opportunity to submit written comments to our Department. Thank you for your cooperation. Please call me at (323) 583-8811 extension 204 if you have any questions or comments.

Sincerely,

Jerrick Torres, R.E.H.S.
Environmental Specialist

Cc: Fire Department
Community Services & Water Department

10cJT:MyDocs\RMP&CalARP\Facilities\MGS\Complete072309.doc

APPENDIX I

MGS CEC COMMISSION DECISION COMPLIANCE MATRIX

Malburg Generating Station
CEC Conditions of Cerfitication
Compliance Matrix

Condition #	Subject	Condition Description	Means of Verification	Methods & Comments
COM-1				Condition completely satisfied.
COM-2	Access	The project owner shall grant Energy Commission staff and delegate agencies or consultants unrestricted access to the power plant site.	None Specified	The Malburg Generating Facility site remains accessible for Energy Commission staff and delegate agencies or consultants.
COM-3	Compliance Record	The project owner shall maintain project files onsite. Energy Commission staff and delegate agencies shall be given unrestricted access to the files.	None Specified	Project files are on site. Energy Commission staff and delegate agencies are given unrestricted access to the files.
COM-4	Compliance Verification Submittals	The project owner is responsible for the delivery and content of all verification submittals to the CPM, whether such condition was satisfied by work performed or the project owner or his agent.	None Specified	MGS is responsible for the delivery and content of all verification submittals to the CPM.
COM-5				Condition completely satisfied.
COM-6	Compliance Matrix	The project owner shall submit a compliance matrix (in a spreadsheet format) with each monthly and annual compliance report which includes the status of all compliance conditions of certification.	None Specified	This matrix satisfies the requirement and will be submitted with each annual compliance report.
COM-7				Condition completely satisfied.
COM-8	Annual Compliance Reports	After construction ends and throughout the life of the project, the project owner shall submit Annual Compliance Reports (ACRs) which include specific information. The first ACR is due after the air district has issued a Permit to Operate.	Eleven specific requirements are listed in the Decision	Reports are submitted annually as required. Responses to the eleven specific requirements are included in the Annual Fourth Quarter Compliance Report.
COM-9				Condition completely satisfied.
COM-10				Condition completely satisfied.
COM-11				Condition completely satisfied.
COM-12	Reporting of Complaints, Notices and Citations	Within 10 days of receipt, the project owner shall report to the CPM, all notices, complaints, and citations.	None Specified	MGS shall report all notices, complaints, and citations to the CPM within 10 days of receipt. If no such item is received, this is verified in each annual report.
COM-13	Planned Facility Closure	The project owner shall submit a closure plan to the CPM at least twelve months prior to commencement of a planned closure.	None Specified	MGS will submit plan as required at closure of facility. No action required until that time, but facility non-closure is affirmed in each annual report.
COM-14	Unplanned Temporary Facility Closure	To ensure that public health and safety and the environment are protected in the event of an unplanned temporary closure, the project owner shall submit an on-site contingency plan no less than 60 days prior to commencement of commercial operation. The approved plan must be in place prior to commercial	The project owner, in consultation with the CPM, will update the on-site contingency plan as necessary. The CPM may require revisions to the on-site contingency plan over the life of the project. In the annual compliance reports submitted to the Energy	MGS will review the on-site contingency plan in the annual compliance reports, and recommend changes to bring the plan up to date. In the event of an unplanned temporary closure, MGS shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take

Condition #	Subject	Condition Description	Means of Verification	Methods & Comments
		operation of the facility and shall be kept at the site at all times.	Commission, the project owner will review the on-site contingency plan, and recommend changes to bring the plan up to date. Any changes to the plan must be approved by the CPM. In the event of an unplanned temporary closure, the project owner shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take all necessary steps to implement the on-site contingency plan.	all necessary steps to implement the on-site contingency plan.
COM-15	Unplanned Permanent Facility Closure	To ensure that public health and safety and the environment are protected in the event of an unplanned permanent closure, the project owner shall submit an on-site contingency plan no less than 60 days prior to commencement of commercial operation.	All of the requirements specified for unplanned temporary closure shall also apply to unplanned permanent closure.	In the event of an unplanned permanent closure, MGS shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take all necessary steps to implement the on-site contingency plan. No action required until that time, but facility non-closure should be affirmed in each annual report.
COM-16	Post certification changes to the Decision	The project owner must petition the Energy Commission to delete or change a condition of certification, modify the project design or operational requirements and/or transfer ownership of operational control of the facility.	None Specified	Whether or not such a submission has taken place during the prior year is addressed in each annual report.
GEN-1				Condition completely satisfied.
GEN-2				Condition completely satisfied.
GEN-3				Condition completely satisfied.
GEN-4				Condition completely satisfied.
GEN-5				Condition completely satisfied.
GEN-6				Condition completely satisfied.
GEN-7				Condition completely satisfied.
GEN-8				Condition completely satisfied.
CIVIL-1				Condition completely satisfied.
CIVIL-2				Condition completely satisfied.
CIVIL-3				Condition completely satisfied.
CIVIL-4				Condition completely satisfied.
STRUC-1				Condition completely satisfied.
STRUC-2				Condition completely satisfied.
STRUC-3				Condition completely satisfied.
STRUC-4				Condition completely satisfied.
MECH-1				Condition completely satisfied.
MECH-2				Condition completely satisfied.
MECH-3				Condition completely satisfied.
ELEC-1				Condition completely satisfied.
TSE-1				Condition completely satisfied.

Condition #	Subject	Condition Description	Means of Verification	Methods & Comments
TSE-2				Condition completely satisfied.
TSE-3				Condition completely satisfied.
TSE-4				Condition completely satisfied.
TSE-5				Condition completely satisfied.
TSE-6				Condition completely satisfied.
TSE-7				Condition completely satisfied.
TSE-8				Condition completely satisfied.
TLSN-1				Condition completely satisfied.
AQ-C1				Condition completely satisfied.
AQ-C2				Condition completely satisfied.
AQ-C3				Condition completely satisfied.
AQ-C4				Condition completely satisfied.
AQ-C5	Chromium compounds	No chromium containing compounds shall be added to cooling tower circulating water.	The City of Vernon shall make the site available for inspection by representatives of the District, CARB and the Commission.	The site remains available for inspection by representatives of the District, CARB and the Commission.
AQ-C6	Blowdown water	The City of Vernon shall determine the TDS levels in the blowdown water by independent laboratory testing prior to initial operation and periodically thereafter.	The City of Vernon shall submit for approval to the CPM, a protocol for initial and weekly testing and the identification of the independent laboratory to be used 90 days prior to cooling tower operation. The City of Vernon shall submit weekly TDS reports for the blowdown water as part of the quarterly emission report to the CPM for approval.	MGS shall submit weekly TDS reports for the blowdown water as part of the quarterly emission report to the CPM for approval.
AQ-C7	PM emissions	PM10 emissions from the cooling tower (in total) shall not exceed 6.2 lb/day.	The City of Vernon shall calculate the daily PM10 emissions from the cooling tower and submit all calculations and results on a quarterly basis in the quarterly emission reports to the CPM for approval.	MGS shall calculate the daily PM10 emissions from the cooling tower and submit all calculations and results on a quarterly basis in the quarterly emission reports to the CPM for approval.
AQ-C8	Firewater pump testing	The City of Vernon shall refrain from testing the firewater pump on the same day as either gas fire combustion turbines have been started up or shut down as defined by Condition of Certification AQ-C9.	The City of Vernon shall submit to the CPM for approval all testing times and results of the diesel fired emergency firewater pump in the quarterly emissions report.	MGS shall submit to the CPM for approval all testing times and results of the diesel fired emergency firewater pump in the quarterly emissions report. .
AQ-C9	Startup/Shut-down compliance	The City of Vernon shall use the following definitions to determine compliance with startup, shutdown and any related emission or operational limitations. Startup is defined as beginning when fuel is first delivered to the combustors of the combustion turbine and ending when the combustion turbine reaches all NOx and CO emission limits for normal operation. Shutdown is defined as beginning during normal operation with the intent to shutdown and ends with the secession of fuel being delivered to the combustors of	See Verification for Condition of Certification AQ-6.	MGS shall 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.

Condition #	Subject	Condition Description	Means of Verification	Methods & Comments
		the combustion turbine.		
AQ-C10	Emission limits	The City of Vernon shall commission and operate the Malburg Generation Station within the emission limits.	The City of Vernon shall submit to the CPM for approval on a quarterly basis all emission records and calculations to demonstrate compliance with the emission limits stated herein as part of the quarterly emissions report.	MGS shall submit to the CPM for approval on a quarterly basis all emission records and calculations to demonstrate compliance with the emission limits stated herein as part of the quarterly emissions report.
AQ-C11	Quarterly emissions report	The City of Vernon shall submit a quarterly emissions report on a quarterly basis to the CPM for approval. The quarterly emissions report shall generally report all ammonia, NOx, SOx, CO, PM10 and VOC emissions from the Malburg Generation Station as necessary to demonstrate compliance with all emission limits. The fourth quarter emission report shall include an annual summary of all emissions of ammonia, NOx, SOx, CO, PM10 and VOC as necessary to demonstrate compliance with all annual emission limits.	The City of Vernon shall submit to the CPM the quarterly emissions report no less than 30 days after the end of each calendar quarter.	MGS shall submit to the CPM the quarterly emissions report no less than 30 days after the end of each calendar quarter.
AQ-C12				Condition completely satisfied.
AQ-C13	Modification to air permit	The City of Vernon shall submit to the CPM for review and approval any modification proposed by either the City or issuing agency to any project air permit.	The City of Vernon shall submit any proposed air permit modification to the CPM within five working days of its submittal either by the City to an agency, or receipt of proposed modifications from an agency. The City of Vernon shall submit all modified air permits to the CPM within 15 days of receipt.	MGS shall submit any proposed air permit modification to the CPM within five working days of its submittal either by MGS to an agency, or receipt of proposed modifications from an agency. MGS shall submit all modified air permits to the CPM within 15 days of receipt.
AQ-C14				Condition completely satisfied.
AQ-1	Emissions discharge	Except for open abrasive blasting operations, the City of Vernon shall not discharge into the atmosphere from any single source of emissions whatsoever any contaminant for a period or periods aggregating more than three minutes in any one hour as listed.	The City of Vernon shall make the Malburg Generating Facility site accessible for inspection to the District, CARB and Commission.	The Malburg Generating Facility site remains accessible for inspection to the District, CARB and Commission.
AQ-2	Diesel oil containing sulfur compounds	The City of Vernon shall not use diesel oil containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.	The City of Vernon shall submit fuel purchase records for approval to the CPM on a quarterly basis in the quarterly emissions report.	MGS shall submit fuel purchase records for approval to the CPM on a quarterly basis in the quarterly emissions report.
AQ-3	Fuel purchase records & sulfur content	The city of Vernon 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	The City of Vernon shall submit fuel purchase records for approval to the CPM on a quarterly basis in the quarterly emissions report.	MGS shall submit fuel purchase records for approval to the CPM on a quarterly basis in the quarterly emissions report.
AQ-4	Accident release prevention	Accident release prevention requirements of Section 112 (r)(7): a). The City of Vernon shall comply with the accidental release prevention requirements pursuant to 40CFR Part 68 and shall submit to the Executive Officer and the CPM, as a part of an annual compliance certification, a	The City of Vernon shall submit for approval to the CPM the above required statement of compliance and any further information requested on an annual basis as part of the annual compliance report.	MGS shall submit to the Executive Officer and the CPM, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and admission of a risk management plan (RMP). In addition, MGS shall submit any additional relevant information requested by the Executive Officer,

Condition #	Subject	Condition Description	Means of Verification	Methods & Comments
		statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and admission of a risk management plan (RMP). b). The City of Vernon shall submit any additional relevant information requested by the Executive Officer, designated agency or CPM.		designated agency or CPM.
AQ-5	Steam generator emissions	The City of Vernon shall limit the emissions from both gas fired combustion turbine-heat recovery steam generator train exhaust stacks.	The City of Vernon shall submit all emission calculations, fuel use, CEM records 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.	MGS shall submit all emission calculations, fuel use, CEM records 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.
AQ-6	2 ppm NOx emission limit	The 2 ppm NOx emission limit shall not apply during turbine commissioning, start-up and shutdown. The commissioning period shall not exceed 573 operating hours per turbine from the initial start-up. Following commissioning, start-ups shall not exceed 2 hours and the number of startups shall not exceed one per day per turbine. Following commissioning, shutdowns shall not exceed 30 minutes and the number of shutdowns shall not exceed one per day per turbine. The City of Vernon shall provide the District and the CPM with the written notification of the initial start-up date. Written records of commissioning, start-ups and shutdowns shall be kept and made available to District and submitted to the CPM for approval.	The City of Vernon shall provide the District and the CPM with the written notification of the initial start-up date no later than 60 days prior to the startup date. The City of Vernon shall report to the CPM for approval all emissions, fuel use and emission calculations during the commissioning period on a monthly basis as part of the monthly compliance report. The City of Vernon shall 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.	MGS shall 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.
AQ-7	2 ppm CO emission limit	The 2 ppm CO emission limit shall not apply during turbine commissioning, start-up and shutdown. The commissioning period shall not exceed 573 operating hours per turbine from the initial start-up. Following commissioning, start-ups shall not exceed 2 hours and the number of startups shall not exceed one per day per turbine. Following commissioning, shutdowns shall not exceed 30 minutes and the number of shutdowns shall not exceed one per day per turbine. The City of Vernon shall provide the District and CPM with the written notification of the initial start-up date. Written records of commissioning, start-ups and shutdowns shall be kept and made available to District and reported for approval to the CPM.	See Verification for Condition of Certification AQ-6.	MGS shall 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.

Condition #	Subject	Condition Description	Means of Verification	Methods & Comments
AQ-8	80.13 lb/mscf NOx emission limits	The 80.13 lb/mmscf NOx emission limit(s) shall only apply during interim period to report RECLAIM emissions. The interim period shall not exceed 12 months from the initial start-up date.	The City of Vernon shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.	MGS shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.
AQ-9	2 ppm NOx emissions limits average	The 2 PPM NOx emissions limit(s) are averaged over 1 hour at 15 percent oxygen, dry basis.	The City of Vernon shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.	MGS shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.
AQ-10	2 ppm CO emission limits average	The 2 ppm CO emission limit(s) are averaged over 3 hours at 15 percent oxygen, dry basis.	The City of Vernon shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.	MGS shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.
AQ-11	2 ppm ROG emission limits average	The 2 ppm ROG emission limit(s) are averaged over 1 hour at 15 percent oxygen, dry basis.	The City of Vernon shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.	MGS shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.
AQ-12	5 ppm NH3 emission limits average	The 5 ppm NH3 emission limit(s) are averaged over 1 hour at 15 percent oxygen, dry basis. The City of Vernon shall calculate and continuously record the ammonia slip concentration using the provided formula.	The City of Vernon shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.	MGS shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.
AQ-13	Compliance with District Rule 475	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.	The City of Vernon shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.	MGS shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.
AQ-14	Engine cylinder lubricating oil	The City of Vernon shall not use engine cylinder lubricating oil containing the following specified compounds: Ash Content Greater than 0.038	The City of Vernon shall submit fuel purchase records for approval to the CPM on a quarterly basis in the quarterly emissions report.	MGS shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.
AQ-15	Operating time for Diesel fueled backup generators & firewater pump	The City of Vernon shall limit the operating time of the diesel fueled emergency backup generators and the firewater pump to no more than 199 hours each in any one year.	See Verification for Condition of Certification AQ-C8.	MGS shall submit to the CPM for approval all testing times and results of the diesel fired emergency firewater pump in the quarterly emissions report.
AQ-16	Pressure relief valves	The City of Vernon shall install and maintain a pressure relief valve set at 25 psig in the ammonia storage tank.	The City of Vernon shall make the ammonia storage tank available for inspection by the District, Commission or CARB.	The ammonia storage tank remains accessible for inspection to the District, CARB and Commission.
AQ-17	Elapsed time meter in firewater pump	The City of Vernon shall install and maintain a(n) non-resettable elapsed time meter into the firewater pump to accurately indicate the elapsed operating time of the engine.	The City of Vernon shall make the firewater pump available for inspection by the District, Commission or CARB.	The firewater pump remains accessible for inspection to the District, CARB and Commission.
AQ-18	Totalizing fuel meter	The City of Vernon shall install and maintain a(n) non-resettable totalizing fuel meter to accurately indicate the fuel usage of the turbines.	The City of Vernon shall make the firewater pump available for inspection by the District, Commission or CARB.	The firewater pump remains accessible for inspection to the District, CARB and Commission.
AQ-19	Injected ammonia (NH_3)	The City of Vernon shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly	The City of Vernon shall submit to CPM for approval the design drawing that clearly show the flow meter and	MGS shall submit to the CPM for approval the annual calibration report for the flow meter and recording device as

Condition #	Subject	Condition Description	Means of Verification	Methods & Comments
		throughput of injected ammonia (NH3). The City of Vernon shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.	recording device for the ammonia injection grid no less than 90 days prior to installation of the ammonia injection grid. The City of Vernon shall submit to the CPM for approval the annual calibration report for the flow meter and recording device as part of the annual compliance report.	part of the annual compliance report.
AQ-20	SCR exhaust temperature	The City of Vernon shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the SCR reactor. The City of Vernon shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.	The City of Vernon shall submit to CPM for approval the design drawing that clearly show the temperature gauge and recording device for the inlet to the SCR reactor no less than 90 days prior to installation of the SCR. The City of Vernon shall submit to the CPM for approval the annual calibration report for the temperature gauge and recording device as part of the annual compliance report.	MGS shall submit to the CPM for approval the annual calibration report for the temperature gauge and recording device as part of the annual compliance report.
AQ-21	Differential pressure across SCR catalyst bed	The City of Vernon shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches of water column. The City of Vernon shall also install and maintain a device to continuously record the parameter being measured. The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.	The City of Vernon shall submit to CPM for approval the design drawing that clearly show the pressure gauge and recording device across the SCR reactor no less than 90 days prior to installation of the SCR. The City of Vernon shall submit to the CPM for approval the annual calibration report for the pressure gauge and recording device as part of the annual compliance report.	MGS shall submit to the CPM for approval the annual calibration report for the pressure gauge and recording device as part of the annual compliance report.
AQ-22	Source test(s) for pollutants	The City of Vernon shall conduct source test (s) for the pollutant(s) identified below: - CO Emissions - NOx Emissions - -PM Emissions VOC Emissions - SOx Emissions - NH3 Emissions	The City of Vernon shall submit for approval to the District and the CPM the required initial source testing protocol no less than 45 days prior to the date of the source test. The City of Vernon shall notify the District and CPM of the date and time of the source test no less than 10 days prior to the test. The City of Vernon shall submit to the District and CPM for approval the results of the initial source test no later than 60 days following the date of the source test.	MGS shall submit for approval to the District and the CPM the required source testing protocol no less than 45 days prior to the date of the source test. MGS shall notify the District and CPM of the date and time of the source test no less than 10 days prior to the test. MGS shall submit to the District and CPM for approval the results of the initial source test no later than 60 days following the date of the source test.
AQ-23	Source test(s) for pollutants	The City of Vernon shall conduct source test(s) for the pollutant(s) identified below: - VOC Emissions - SOx Emissions - PM Emissions	The City of Vernon shall submit for approval to the District and the CPM the required source testing protocol no less than 45 days prior to the date of the source test. The City of Vernon shall notify the District and CPM of the date and time of the source test no less than 10 days prior to the test. The City of Vernon shall submit to the District and CPM for approval the results of the source test no later than 60 days following the date of the source test.	MGS shall submit for approval to the District and the CPM the required source testing protocol no less than 45 days prior to the date of the source test. MGS shall notify the District and CPM of the date and time of the source test no less than 10 days prior to the test. MGS shall submit to the District and CPM for approval the results of the initial source test no later than 60 days following the date of the source test.
AQ-24	Source test(s) for	The City of Vernon shall conduct source	The City of Vernon shall submit for	MGS shall submit for approval to the

Condition #	Subject	Condition Description	Means of Verification	Methods & Comments
	pollutants	test(s) for the pollutant(s) identified below: NH3 Emissions	approval to the District and the CPM the required source testing protocol no less than 45 days prior to the date of the source test. The City of Vernon shall notify the District and CPM of the date and time of the source test no less than 10 days prior to the test. The City of Vernon shall submit to the District and CPM for approval the results of the source test no later than 60 days following the date of the source test.	District and the CPM the required source testing protocol no less than 45 days prior to the date of the source test. MGS shall notify the District and CPM of the date and time of the source test no less than 10 days prior to the test. MGS shall submit to the District and CPM for approval the results of the initial source test no later than 60 days following the date of the source test.
AQ-25	Exhaust stack CEMS	The City of Vernon shall install and maintain a CEMS in each exhaust stack of the combustion turbine-HRSG trains to measure tlisted parameters:	The City of Vernon shall make the Malburg Generation Station available for inspection by the District, Commission or CARB.	The Malburg Generating Station remains accessible for inspection to the District, CARB and Commission.
AQ-26	CEMs	The City of Vernon shall install and maintain a CEMS to measure listed parameters.	The City of Vernon shall make the Malburg Generation Station available for inspection by the District, Commission or CARB.	The Malburg Generating Station remains accessible for inspection to the District, CARB and Commission.
AQ-27	Fuel usage	The City of Vernon shall limit the fuel usage of each turbine-duct burner pair to no more than 330 million cubic feet per month. The City of Vernon shall keep records, in a manner approved by the District, for the operational status of the duct burners and their fuel use.	The City of Vernon shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.	MGS shall submit to the CPM for approval all emissions and emission calculations on a quarterly basis as part of the quarterly emissions report.
AQ-28	Venting	The City of Vernon shall vent combustion turbines and HRSGs to the CO oxidation/SCR control system whenever the turbines are in operation.	The City of Vernon shall make the Malburg Generation Station available for inspection by the District, Commission or CARB.	The Malburg Generating Station remains accessible for inspection to the District, CARB and Commission.
AQ-29	Venting	The City of Vernon shall vent ammonia storage tank, during filling, only to the vessel from which it is being filled.	The City of Vernon shall make the Malburg Generation Station available for inspection by the District, Commission or CARB.	The Malburg Generating Station remains accessible for inspection to the District, CARB and Commission.
AQ-30	Continuously record	For the purpose of the following condition number(s), “continuously record” shall be defined as recording at least once every hour and shall be calculated upon the average of the continuous monitoring for that hour. Condition of Certification AQ-17 Condition of Certification AQ-18	The City of Vernon shall make the Malburg Generation Station available for inspection by the District, Commission or CARB.	The Malburg Generating Station remains accessible for inspection to the District, CARB and Commission.
AQ-31	Continuously record	For the purpose of the following condition number(s), “continuously record” shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that month. Condition of Certification AQ-19	The City of Vernon shall make the Malburg Generation Station available for inspection by the District, Commission or CARB.	The Malburg Generating Station remains accessible for inspection to the District, CARB and Commission.
AQ-32	MGS electric generating equipment	The MGS electric generating equipment shall not be operated unless the City of Vernon demonstrates to the Executive Officer that the facility holds sufficient RTCs to offset the prorated annual emissions increase for the first compliance year of operation. In addition, this equipment shall not be	The City of Vernon shall submit all identified evidence demonstrating compliance to the CPM on an annual basis as part of the annual compliance report.	MGS shall submit all identified evidence demonstrating that, at the commencement of each compliance year, the facility holds sufficient RTCs in an amount equal to the annual emission increase to the CPM on an annual basis as part of the annual compliance report.

Condition #	Subject	Condition Description	Means of Verification	Methods & Comments
		operated unless the City of Vernon demonstrates to the Executive Officer that, at the commencement of each compliance year after the first compliance year of operation, the facility hold sufficient RTCs in an amount equal to the annual emission increase. The City of Vernon shall submit all such information to the CPM for approval.		
AQ-33	Source test report	The City of Vernon shall provide to the District a source test report in accordance with listed specifications:	The City of Vernon shall submit to the CPM the required source test of Conditions of Certification AQ-21, -22 and -23 in compliance with this condition.	MGS shall submit for approval to the District and the CPM the required source testing protocol no less than 45 days prior to the date of the source test. MGS shall notify the District and CPM of the date and time of the source test no less than 10 days prior to the test. MGS shall submit to the District and CPM for approval the results of the initial source test no later than 60 days following the date of the source test.
AQ-34	Recordkeeping	The City of Vernon shall keep records, in a manner approved by the District, for listed parameters or items.	The City of Vernon shall make these records available to the CPM upon request.	MGS shall make these records available to the CPM upon request.
AQ-35	Recordkeeping	The City of Vernon shall keep records, in a manner approved by the District, for listed parameters or items.	The City of Vernon shall submit these records to the CPM on an annual basis in the annual compliance report.	MGS shall keep records of dates of operation, the elapsed time, in hour and the reason for operation of the emergency diesel powered generators and/or the firewater pump and shall submit these records to the CPM on an annual basis in the annual compliance report.
AQ-36				Condition completely satisfied.
Public Health-1				Condition completely satisfied.
Worker Safety-1				Condition completely satisfied.
Worker Safety-2				Condition completely satisfied.
HAZ-1	Use of hazardous materials	The project owner shall not use any hazardous materials not listed in Appendix C, below, or in greater quantities than those identified by chemical name in Appendix C, below, unless approved in advance by City of Vernon and the CPM.	The project owner shall provide to the Compliance Project Manager (CPM), in the Annual Compliance Report, a list of hazardous materials contained at the facility in reportable quantities.	MGS shall provide to the Compliance Project Manager (CPM), in the Annual Compliance Report, a list of hazardous materials contained at the facility in reportable quantities.
HAZ-2				Condition completely satisfied.
HAZ-3				Condition completely satisfied.
HAZ-4				Condition completely satisfied.
HAZ-5				Condition completely satisfied.
HAZ-6	Gas pipeline review	The project owner shall require that the gas pipeline undergo a complete design review and detailed inspection 30 days after initial startup and every 5 years thereafter.	At least 30 days prior to the initial flow of gas in the pipeline, the project owner shall provide outline of the plan to accomplish a full and comprehensive pipeline design review to the CPM for review and approval. The full and complete plan shall be amended, as appropriate, and submitted to the CPM for review and approval, not later than one year	The initial requirement of the Condition has been completed during construction. Requirement for 5-year review satisfied 30 November 2010.

Condition #	Subject	Condition Description	Means of Verification	Methods & Comments
			before the plan is implemented by the project owner.	
HAZ-7	Seismic event inspections	After any significant seismic event in the area where surface rupture occurs within one mile of the pipeline, the gas pipeline shall be inspected by the project owner.	At least 30 days prior to the initial flow of gas in the pipeline, the project owner shall provide a detailed plan to accomplish a full and comprehensive pipeline inspection in the event of an earthquake to the CPM for review and approval. This plan shall be reviewed and amended, as appropriate, and submitted to the CPM for review and approval, at least every five years.	The initial requirement of the Condition has been completed during construction. Requirement for 5-year review satisfied 30 November 2010.
HAZ-8				Condition completely satisfied.
WASTE-1				Condition completely satisfied.
WASTE-2				Condition completely satisfied.
WASTE-3	Impending waste management related enforcement action	Upon becoming aware of any impending waste management related enforcement action by any local, state, or federal authority, the project owner shall notify the CPM of any such action taken or proposed to be taken against the project itself, or against any waste hauler or disposal facility or treatment operator with which the owner contracts.	The project owner shall notify the CPM in writing within 10 days of becoming aware of an impending enforcement action. The CPM shall notify the project owner of any changes that will be required in the manner in which project-related wastes are managed.	MGS shall notify the CPM in writing within 10 days of becoming aware of an impending enforcement action. The CPM shall notify the project owner of any changes that will be required in the manner in which project-related wastes are managed. If no such enforcement action occurs, this fact should be verified in each annual report.
WASTE-4	Construction & operation waste management plan	The project owner shall prepare a Construction Waste Management Plan and an Operation Waste Management Plan for all wastes generated during construction and operation of the facility, respectively, and shall submit both plans to the City of Vernon. Environmental Health Department and the City of Vernon Fire Department for comment and to the CPM for review and approval.	In the Annual Compliance Reports, the project owner shall document the actual waste management methods used during the year compared to the planned management methods.	In the Annual Compliance Reports, MGS shall document the actual waste management methods used during the year compared to the planned management methods.
SOIL & WATER-1				Condition completely satisfied.
SOIL & WATER-2				Condition completely satisfied.
SOIL & WATER-3				Condition completely satisfied.
SOIL & WATER-4	Water usage metering & recording	The project owner shall install metering devices and record on a monthly basis the amount of water, listed by source (potable and reclaimed) used by the project. The annual summary shall include the monthly range and monthly average of daily usage in gallons per day, and total water used by the project on a monthly and annual basis in acre-feet. The annual summary shall also include the yearly range and yearly average water use by the project. This information shall be supplied to the CPM.	The project owner shall submit an annual water use summary to the CPM as part of its annual compliance report for the life of the project.	MGS shall submit an annual water use summary to the CPM as part of its annual compliance report for the life of the project.
SOIL &	Potable water	The project owner shall not use potable	The project owner shall include a	MGS shall include a detailed summary

Condition #	Subject	Condition Description	Means of Verification	Methods & Comments
WATER-5	usage	water for process cooling water for more than 9 days (216 hours) per calendar year.	detailed summary of all potable water and reclaimed water used for process water in the Annual Compliance Report. If use of potable water exceeds 9 days per year, the project owner shall be subject to noncompliance procedures and enforcement action described in the General Compliance Conditions.	of all potable water and reclaimed water used for process water in the Annual Compliance Report.
SOIL/ WATER-6				Condition completely satisfied.
SOIL/ WATER-7				Condition completely satisfied.
CUL-1				Condition completely satisfied.
CUL-2				Condition completely satisfied.
CUL-3				Condition completely satisfied.
CUL-4				Condition completely satisfied.
CUL-5				Condition completely satisfied.
CUL-6				Condition completely satisfied.
CUL-7				Condition completely satisfied.
CUL-8	Station A	The project owner shall ensure that Station A is maintained in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (1995) (36 CFR Part 68). The project owner shall provide a summary of maintenance activities completed within each calendar year.	In each annual compliance report, the project owner shall include the summary of Station A maintenance activities completed within the last calendar year.	MGS shall submit a summary of observed Station A maintenance activities completed within the last calendar year by City of Vernon personnel or contractors.
PAL-1				Condition completely satisfied.
PAL-2				Condition completely satisfied.
PAL-3				Condition completely satisfied.
PAL-4				Condition completely satisfied.
PAL-5				Condition completely satisfied.
PAL-6				Condition completely satisfied.
PAL-7				Condition completely satisfied.
LAND-1				Condition completely satisfied.
LAND-2				Condition completely satisfied.
TRANS-1				Condition completely satisfied.
TRANS-2				Condition completely satisfied.
TRANS-3				Condition completely satisfied.
TRANS-4				Condition completely satisfied.
TRANS-5				Condition completely satisfied.
TRANS-6				Condition completely satisfied.
TRANS-7				Condition completely satisfied.
TRANS-8	Truck travel routes for aqueous ammonia	The City of Vernon shall only use the preferred and alternate truck travel routes for deliveries of aqueous ammonia to the MGS site. The preferred route shall be from Interstate 710, exiting at the Bandini Boulevard. Trucks will	The final preferred and alternative truck travel routes for aqueous ammonia delivery will be submitted to the Compliance Project Manager for approval 30 days prior to the first delivery of aqueous ammonia to the	The originally mandated route and alternate route have been communicated to the aqueous ammonia supplier and use of these routes is mandated by MGS. MGS may alter the final truck travel route only upon prior

Condition #	Subject	Condition Description	Means of Verification	Methods & Comments
		then travel west along Bandini Boulevard, south on Soto Avenue, and finally west on 50th Street to the MGS. The City shall use this route unless it notifies the CPM otherwise and the CPM approves.	MGS. During operations, the City may alter the final truck travel route only upon prior approval of the CPM.	approval of the CPM.
TRANS-9				Condition completely satisfied.
VIS-1	Lighting installation	The project owner shall design and install all permanent lighting such that light bulbs and reflectors are not visible from public viewing areas; lighting does not cause reflected glare; and illumination of the project, the vicinity, and the nighttime sky is minimized.	The project owner shall report any complaints about permanent lighting and provide documentation of resolution in the Annual Compliance Report, accompanied by any lighting complaint resolution forms for that year.	MGS shall report any complaints about permanent lighting and provide documentation of resolution in the Annual Compliance Report, accompanied by any lighting complaint resolution forms for that year.
VIS-2	Structure paint	The project owner shall paint or treat the surfaces of all project structures and buildings visible to the public in a gray color to blend with the existing Station A building. Surfaces shall be treated with finishes that minimize glare. The project owner shall ensure proper treatment maintenance for the life of the project.	At least 30 days prior to the start of commercial operation, the project owner shall notify the CPM that all buildings and structures are ready for inspection. The project owner shall provide a status report regarding treatment maintenance in the Annual Compliance Report.	MGS shall provide a status report regarding treatment maintenance in the Annual Compliance Report.
VIS-3	Tree planting	The project owner shall plant trees along the east side of the MGS site to enhance views of the new power plant from Soto Street, consistent with the City of Vernon General Plan policy 1.3. The project owner shall ensure proper maintenance of the trees for the life of the project.	At least 30 days prior to the start of commercial operation, the project owner shall notify the CPM that the trees are ready for inspection. The project owner shall provide a status report regarding tree maintenance in the Annual Compliance Report.	MGS shall provide a status report regarding tree maintenance in the Annual Compliance Report.
VIS-4				Condition completely satisfied.
NOISE-1				Condition completely satisfied.
NOISE-2	Noise complaints	Throughout the construction and operation of the project, the project owner shall document, investigate, evaluate, and attempt to resolve all project related noise complaints.	Within 30 days of receiving a noise complaint, the project owner shall file a copy of the Noise Complaint Resolution Form, or similar instrument approved by the CPM, with the City of Vernon Director of Community Services & Water and the City of Huntington Park Senior Planner and with the CPM, documenting the resolution of the complaint. If mitigation is required to resolve a complaint, and the complaint is not resolved within a 30-day period, the project owner shall submit an updated Noise Complaint Resolution Form when the mitigation is finally implemented.	Within 30 days of receiving a noise complaint, MGS shall file a copy of the Noise Complaint Resolution Form, or similar instrument approved by the CPM, with the City of Vernon Director of Community Services & Water and the City of Huntington Park Senior Planner and with the CPM, documenting the resolution of the complaint. If no such complaint is received, this fact should be verified in each annual report.
NOISE-3				Condition completely satisfied.
NOISE-4				Condition completely satisfied.
NOISE-5				Condition completely satisfied.
NOISE-6				Condition completely satisfied.
NOISE-7				Condition completely satisfied.
NOISE-8				Condition completely satisfied.

APPENDIX J

NH3 FLOW METER CALIBRATION RESULTS

Rosemount Service
8200 Market Blvd.
Chanhassen, MN 55317
T: 800-654-7768
F: 952-906-8844

EMERSON.
Process Management

March 20, 2018

CALIBRATION DATA SHEET

Consistent with ISO 10474 2.1 or EN 10204 2.1

Contact Information

Purchase Order:	MGS13324	**Service Request:**	1692384
Customer Name:	Colorado Energy Management LLC	**Quote#:**	AEIA-14CVD0L
Location/Project:		**Sales Representative:**	RICHARD TSE
Address 1:	4963 S Soto StVernon, CA 90058	**Phone:**	
Address 2:		**Email:**	
Customer Contact:	Ian Everts	**Service Representative:**	
Phone:	323-350-3481	**Phone:**	657-291-4328
Email:	ieverts@heorotpower.com	**Email:**	Stevie.Day@emerson.com

Device Information

Device Type: Pressure Transmitter	**Serial Number:**	**1287778**
Device Tag: 11 HSJJ50 CF0100 FT FIT 18	**Range:**	**0 To 10 IN H2O**
Model: 3051CD1A02A1AS5M5Q4E5		

Test Equipment Used

Asset #	Description	Calibration Due
ES-01410	FLUKE 754	24-Dec-18
PS-01477	FLUKE 750PDS2	25-Dec-18
PS-01266	FLUKE 700PD3	26-Dec-18
PS-01349	FLUKE 700PD7	27-Dec-18

As Found Calibration Data

Specified Range IN H2O	Applied % Of Span	Applied IN H2O	Specified Analog Output In mA	Output Tolerance +/-	Indicated Digital Output In IN H2O	Measured Analog Output In mA	Pass/Fail
0.000	0.00	0.000	4.0000	0.016	0.000	3.9760	Fail
2.500	25.00	2.500	12.0000	0.016	2.502	12.3300	Fail
5.000	50.00	5.000	15.3137	0.016	5.030	15.3120	Fail
7.500	75.00	7.500	17.8564	0.016	7.030	17.8570	Fail
10.000	100.00	10.000	20.0000	0.016	10.030	20.0030	Fail

As Left Calibration Data

0.000	0.00	0.000	4.0000	0.016	0.000	4.0000	Pass
2.500	25.00	2.500	12.0000	0.016	2.501	12.0010	Pass
5.000	50.00	5.000	15.3137	0.016	5.000	15.3130	Pass
7.500	75.00	7.500	17.8564	0.016	7.500	17.8570	Pass
10.000	100.00	10.000	20.0000	0.016	10.000	20.0000	Pass

Certification

This is to validate that the listed product performs within the acceptable performance variation of the test equipment. Measuring and test equipment used in the inspection and validation of the listed product are traceable to the National Institute of Standards and Technology.

Stevie Day

March 20, 2018
Date

Rosemount Service Representative
PH: 657-291-4328

Rosemount Service
8200 Market Blvd.
Chanhassen, MN 55317
T: 800-654-7768
F: 952-906-8844

EMERSON.
Process Management

March 20, 2018

CALIBRATION DATA SHEET

Consistent with ISO 10474 2.1 or EN 10204 2.1

Contact Information

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Customer Name:	Colorado Energy Management LLC	**Quote#:**	AEIA-14CVD0L
Location/Project:		**Sales Representative:**	RICHARD TSE
Address 1:	4963 S Soto StVernon, CA 90058	**Phone:**	
Address 2:		**Email:**	
Customer Contact:	Ian Everts	**Service Representative:**	
Phone:	323-350-3481	**Phone:**	657-291-4328
Email:	ieverts@heorotpower.com	**Email:**	Stevie.Day@emerson.com

Device Information

Device Type: Pressure Transmitter	**Serial Number: 1292706**
Device Tag: 21 HSJ50 CF010 FT	**Range: 0 To 10 IN H2O**
Model: 3051CD1A02A1AS5M5Q4E5	

Test Equipment Used

Asset #	Description	Calibration Due
ES-01410	FLUKE 754	24-Dec-18
PS-01477	FLUKE 750PDS2	25-Dec-18
PS-01266	FLUKE 700PD3	26-Dec-18
PS-01349	FLUKE 700PD7	27-Dec-18

As Found Calibration Data

Specified Range IN H2O	Applied % Of Span	Applied IN H2O	Specified Analog Output In mA	Output Tolerance +/-	Indicated Digital Output In IN H2O	Measured Analog Output In mA	Pass/Fail
0.000	0.00	0.000	4.0000	0.016	0.190	3.9950	Fail
2.500	25.00	2.500	12.0000	0.016	2.520	12.0320	Fail
5.000	50.00	5.000	15.3137	0.016	5.010	15.0320	Fail
7.500	75.00	7.500	17.8564	0.016	7.501	17.8570	Pass
10.000	100.00	10.000	20.0000	0.016	10.000	20.0000	Pass

As Left Calibration Data

0.000	0.00	0.000	4.0000	0.016	0.000	4.0000	Pass
2.500	25.00	2.500	12.0000	0.016	2.501	12.0010	Pass
5.000	50.00	5.000	15.3137	0.016	5.010	15.3250	Pass
7.500	75.00	7.500	17.8564	0.016	7.501	17.8570	Pass
10.000	100.00	10.000	20.0000	0.016	10.000	20.0000	Pass

Certification

This is to validate that the listed product performs within the acceptable performance variation of the test equipment. Measuring and test equipment used in the inspection and validation of the listed product are traceable to the National Institute of Standards and Technology.

Stevie Day

March 20, 2018
Date

Rosemount Service Representative
PH: 657-291-4328

APPENDIX K

SCR TEMPERATURE GAUGE CALIBRATION REPORT

Rosemount Service
8200 Market Blvd.
Chanhassen, MN 55317
T: 800-654-7768
F: 952-906-8844

March 20, 2018

CALIBRATION DATA SHEET

Consistent with ISO 10474 2.1 or EN 10204 2.1

Contact Information

Purchase Order:	MGS13324	**Service Request:**	1692384
Customer Name:	Colorado Energy Management LLC	**Quote#:**	AEIA-14CVD0L
Location/Project:		**Sales Representative:**	RICHARD TSE
Address 1:	4963 S Soto StVernon, CA 90058	**Phone:**	
Address 2:		**Email:**	
Customer Contact:	Ian Everts	**Service Representative:**	
Phone:	323-350-3481	**Phone:**	657-291-4328
Email:	ieverts@heorotpower.com	**Email:**	Stevie.Day@emerson.com

Device Information

Device Type: Temperature Transmitter	**Serial #: 9029664**	**Range: 0 to 800 Deg. F**
Device Tag: 21HBK70CT031	**Sensor Type: PT-100 (x = 0.00385)**	
Model: YTA110		

Test Equipment Used

Asset #	Description	Calibration Due
ES-01410	FLUKE 754	24-Dec-18
PS-01477	FLUKE 750PDS2	25-Dec-18
PS-01266	FLUKE 700PD3	26-Dec-18
PS-01349	FLUKE 700PD7	27-Dec-18

As Found Calibration Data

Specified Range Deg F	Applied % Of Span	Applied Deg F	Specified Analog Output In mA	Output Tolerance +/-	Indicated Digital Output In F	Measured Analog Output In mA	Pass/Fail
0.00	0.00	0.00	4.0000	0.007	0.10	4.0000	Pass
200.00	25.00	200.00	8.0000	0.007	199.96	7.9990	Pass
400.00	50.00	400.00	12.0000	0.007	400.10	12.0000	Pass
600.00	75.00	600.00	16.0000	0.007	600.00	15.9990	Pass
800.00	100.00	800.00	20.0000	0.007	800.00	19.9990	Pass

As Left Calibration Data

0.00	0.00	0.00	4.0000	0.007	0.10	4.0000	Pass
200.00	25.00	200.00	8.0000	0.007	200.11	8.0020	Pass
400.00	50.00	400.00	12.0000	0.007	400.10	12.0000	Pass
600.00	75.00	600.00	16.0000	0.007	599.98	15.9990	Pass
800.00	100.00	800.00	20.0000	0.007	800.10	19.9990	Pass

Certification

This is to validate that the listed product performs within the acceptable performance variation of the test equipment. Measuring and test equipment used in the inspection and validation of the listed product are traceable to the National Institute of Standards and Technology.

Stevie Day

March 20, 2018
Date

Rosemount Service Representative
PH: 657-291-4328

Rosemount Service
8200 Market Blvd.
Chanhassen, MN 55317
T: 800-654-7768
F: 952-906-8844

March 20, 2018

CALIBRATION DATA SHEET

Consistent with ISO 10474 2.1 or EN 10204 2.1

Contact Information

Purchase Order:	MGS13324	**Service Request:**	1692384
Customer Name:	Colorado Energy Management LLC	**Quote#:**	AEIA-14CVD0L
Location/Project:		**Sales Representative:**	RICHARD TSE
Address 1:	4963 S Soto StVernon, CA 90058	**Phone:**	
Address 2:		**Email:**	
Customer Contact:	Ian Everts	**Service Representative:**	
Phone:	323-350-3481	**Phone:**	657-291-4328
Email:	ieverts@heorotpower.com	**Email:**	Stevie.Day@emerson.com

Device Information

Device Type: Temperature Transmitter	**Serial #: 9029687**	**Range: 0 to 800 Deg. F**
Device Tag: 11HBK70CT031	**Sensor Type: PT-100 (x = 0.00385)**	
Model: YTA110		

Test Equipment Used

Asset #	Description	Calibration Due
ES-01410	FLUKE 754	24-Dec-18
PS-01477	FLUKE 750PDS2	25-Dec-18
PS-01266	FLUKE 700PD3	26-Dec-18
PS-01349	FLUKE 700PD7	27-Dec-18

As Found Calibration Data

Specified Range Deg F	Applied % Of Span	Applied Deg F	Specified Analog Output In mA	Output Tolerance +/-	Indicated Digital Output In F	Measured Analog Output In mA	Pass/Fail
0.00	0.00	0.00	4.0000	0.007	-0.12	3.9950	Pass
200.00	25.00	200.00	8.0000	0.007	199.90	7.9970	Pass
400.00	50.00	400.00	12.0000	0.007	399.88	11.9970	Pass
600.00	75.00	600.00	16.0000	0.007	599.87	15.9970	Pass
800.00	100.00	800.00	20.0000	0.007	799.84	19.9980	Pass

As Left Calibration Data

0.00	0.00	0.00	4.0000	0.007	-0.12	3.9950	Pass
200.00	25.00	200.00	8.0000	0.007	199.90	7.9970	Pass
400.00	50.00	400.00	12.0000	0.007	399.88	11.9970	Pass
600.00	75.00	600.00	16.0000	0.007	599.87	15.9970	Pass
800.00	100.00	800.00	20.0000	0.007	799.84	19.9980	Pass

Certification

This is to validate that the listed product performs within the acceptable performance variation of the test equipment. Measuring and test equipment used in the inspection and validation of the listed product are traceable to the National Institute of Standards and Technology.

Stevie Day

March 20, 2018
Date

Rosemount Service Representative
PH: 657-291-4328

APPENDIX L

SCR PRESSURE GAUGE CALIBRATION REPORT

Rosemount Service
8200 Market Blvd.
Chanhassen, MN 55317
T: 800-654-7768
F: 952-906-8844

EMERSON.
Process Management

March 19, 2018

CALIBRATION DATA SHEET

Consistent with ISO 10474 2.1 or EN 10204 2.1

Contact Information

Purchase Order:	MGS13324	**Service Request:**	1692384
Customer Name:	Colorado Energy Management LLC	**Quote#:**	AEIA-14CVD0L
Location/Project:		**Sales Representative:**	RICHARD TSE
Address 1:	4963 S Soto StVernon, CA 90058	**Phone:**	
Address 2:		**Email:**	
Customer Contact:	Ian Everts	**Service Representative:**	
Phone:	323-350-3481	**Phone:**	657-291-4328
Email:	ieverts@heorotpower.com	**Email:**	Stevie.Day@emerson.com

Device Information

Device Type: Pressure Transmitter	**Serial Number: 2161036**
Device Tag: 170CP010	**Range: 0 To 2.5 IN H2O**
Model: EJA110A	

Test Equipment Used

Asset #	Description	Calibration Due
ES-01410	FLUKE 754	24-Dec-18
PS-01477	FLUKE 750PDS2	25-Dec-18
PS-01266	FLUKE 700PD3	26-Dec-18
PS-01349	FLUKE 700PD7	27-Dec-18

As Found Calibration Data

Specified Range IN H2O	Applied % Of Span	Applied IN H2O	Specified Analog Output In mA	Output Tolerance +/-	Indicated Digital Output In IN H2O	Measured Analog Output In mA	Pass/Fail
0.000	0.00	0.000	4.0000	0.082	-0.008	3.9950	Pass
0.625	25.00	0.625	12.0000	0.082	0.622	11.9980	Pass
1.250	50.00	1.250	15.3137	0.082	1.249	15.3090	Pass
1.875	75.00	1.875	17.8564	0.082	1.875	17.8570	Pass
2.500	100.00	2.500	20.0000	0.082	2.500	20.0010	Pass

As Left Calibration Data

0.000	0.00	0.000	4.0000	0.082	-0.008	3.9950	Pass
0.625	25.00	0.625	12.0000	0.082	0.622	11.9980	Pass
1.250	50.00	1.250	15.3137	0.082	1.249	15.3090	Pass
1.875	75.00	1.875	17.8564	0.082	1.875	17.8570	Pass
2.500	100.00	2.500	20.0000	0.082	2.500	20.0010	Pass

Certification

This is to validate that the listed product performs within the acceptable performance variation of the test equipment. Measuring and test equipment used in the inspection and validation of the listed product are traceable to the National Institute of Standards and Technology.

Stevie Day

March 19, 2018
Date

Rosemount Service Representative
PH: 657-291-4328

Rosemount Service
8200 Market Blvd.
Chanhassen, MN 55317
T: 800-654-7768
F: 952-906-8844

EMERSON.
Process Management

March 19, 2018

CALIBRATION DATA SHEET

Consistent with ISO 10474 2.1 or EN 10204 2.1

Contact Information

Purchase Order:	MGS13324	**Service Request:**	1692384
Customer Name:	Colorado Energy Management LLC	**Quote#:**	AEIA-14CVD0L
Location/Project:		**Sales Representative:**	RICHARD TSE
Address 1:	4963 S Soto StVernon, CA 90058	**Phone:**	
Address 2:		**Email:**	
Customer Contact:	Ian Everts	**Service Representative:**	
Phone:	323-350-3481	**Phone:**	657-291-4328
Email:	ieverts@heorotpower.com	**Email:**	Stevie.Day@emerson.com

Device Information

Device Type: Pressure Transmitter	**Serial Number: 2161035**
Device Tag: 270CP010	**Range: 0 To 2.5 IN H2O**
Model: EJA110A	

Test Equipment Used

Asset #	Description	Calibration Due
ES-01410	FLUKE 754	24-Dec-18
PS-01477	FLUKE 750PDS2	25-Dec-18
PS-01266	FLUKE 700PD3	26-Dec-18
PS-01349	FLUKE 700PD7	27-Dec-18

As Found Calibration Data

Specified Range IN H2O	Applied % Of Span	Applied IN H2O	Specified Analog Output In mA	Output Tolerance +/-	Indicated Digital Output In IN H2O	Measured Analog Output In mA	Pass/Fail
0.000	0.00	0.000	4.0000	0.082	0.005	4.0320	Pass
0.625	25.00	0.625	12.0000	0.082	0.626	12.0010	Pass
1.250	50.00	1.250	15.3137	0.082	1.260	15.3450	Pass
1.875	75.00	1.875	17.8564	0.082	1.875	17.8690	Pass
2.500	100.00	2.500	20.0000	0.082	2.500	20.0010	Pass

As Left Calibration Data

0.000	0.00	0.000	4.0000	0.082	0.001	4.0000	Pass
0.625	25.00	0.625	12.0000	0.082	0.625	12.0000	Pass
1.250	50.00	1.250	15.3137	0.082	1.250	15.3140	Pass
1.875	75.00	1.875	17.8564	0.082	1.875	17.8570	Pass
2.500	100.00	2.500	20.0000	0.082	2.500	20.0010	Pass

Certification

This is to validate that the listed product performs within the acceptable performance variation of the test equipment. Measuring and test equipment used in the inspection and validation of the listed product are traceable to the National Institute of Standards and Technology.

Stevie Day

March 19, 2018
Date

Rosemount Service Representative
PH: 657-291-4328

APPENDIX M

STATION “A” MAINTENANCE REPORT

ANNUAL COMPLIANCE REPORT
CONDITION OF CERTIFICATION NUMBER
CUL-8, YEAR 2018

For the:

MALBURG GENERATING STATION
(Docket 01-AFC-25C)

Submitted To:

CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
Sacramento, CA 95814

Prepared by:

CITY OF VERNON
4305 Santa Fe Avenue
Vernon, CA 90058

MALBURG GENERATING STATION
ANNUAL COMPLIANCE REPORT
CONDITION OF CERTIFICATION NUMBER CUL-8
YEAR 2018

INTRODUCTION

The City of Vernon (City) has been operating an electric power generating facility (Station "A") since 1933 in the City of Vernon. The facility consists of the Johnson & Heinze Diesel Plant and H. Gonzales Generating Station. The City constructed Malburg Generating Station (MGS) at the Station "A" facility in 2005 (Docket 01-AFC-25C). The commissioning of MGS was completed in October 2005 and the power plant was put under commercial operation on October 17, 2005. The City sold MGS to Bicent (California) Malburg LLC (Bicent) in 2008. After the sale of MGS, the City continued to retain ownership of the Johnson & Heinze Diesel Plant, H. Gonzales Generating Station, and Station "A" building.

Condition of Certification Number CUL-8 requires the City to maintain the Station "A" building as an Historic Property in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties, which include standards for preservation, rehabilitation, restoration, and reconstruction, as codified in Title 36 of the Code of Federal Regulations (CFR), Part 68 (1995). Each of the standards can be applied to a historic property to assist the long-term preservation of a property's significance through the retention of historic materials and features.

The Station "A" building is still in use and no major changes or alterations occurred to the building in 2017 and 2018. Routine maintenance has occurred and 16[1] security cameras were installed along the exterior of the building, in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

To verify that the Station "A" building is maintained in accordance with the Standards for the Treatment of Historic Properties (36 CFR Part 68), the California Energy Commission (CEC) requires the City to submit an annual report that summarizes the maintenance activities completed to preserve the property within each calendar year. The City is, therefore, submitting this annual compliance report, which provides a summary of the maintenance and camera installation activities completed for the Station "A" building during the years 2017 and 2018.

COMPLIANCE DETAILS FOR CONDITION OF CERTIFICATION NUMBER CUL-8

As per Condition of Certification Number CUL-8, the project owner shall ensure that Station "A" is maintained in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR Part 68). The project owner shall provide a summary of maintenance activities completed within each calendar year. These maintenance activities were completed in accordance with the Secretary of the Interior's Standards for Preservation, as detailed in 36 CFR

---

[1] This camera system includes 7 additional cameras not physically located on the Station "A" building.

Part 68, and sustained the historic use and appearance of the building; did not alter or diminish its historic character, materials, features, or spaces; avoided use of abrasive chemical or physical treatments; and preserved its craftsmanship.

For verification of the above condition of certification, the project owner shall include the summary of Station "A" maintenance activities completed to preserve the Station "A" building within the calendar year. A summary of the maintenance activities completed by the City during the year 2018 is presented at the end of this report.

Additionally, in October 2018, the CEC inquired whether the 2017 installation of a Station "A" building security system conforms with the Secretary of the Interior's Standards for the Treatment of Historic Properties. Based on a review of applicable standards, the addition of cameras is a treatment type that falls under the Secretary of the Interior's Standards for Rehabilitation. The Standards for Rehabilitation acknowledge the need to alter a historic property to meet new uses or needs through compatible changes to the property, while also retaining the building's historic character. Based on this analysis, the City has determined that the camera installation activities do conform with the following applicable Standards for Rehabilitation, as detailed in 36 CFR Part 68:

- **Standard 1:** A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
- **Standard 2:** The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
- **Standard 3:** Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
- **Standard 5:** Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
- **Standard 7:** Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
- **Standard 9:** New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
- **Standard 10:** New additions and adjacent or related new construction shall be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Each of these applicable Secretary of the Interior's Standards for Rehabilitation, as they relate to the camera installation activities, are discussed in more detail at the end of this report.

Maintenance Activities Completed to Preserve the Exterior of the Station "A" Building:

1. **Weekly Maintenance of the Exterior of Station "A"**
    a. Cleaning of 50th Street, Seville Avenue and parking lot, and outside areas to the north and east of the building.
    b. Maintenance of lawns, flower beds, and trees provided outside the Station "A" building, including the mowing of lawns.
2. **Monthly Maintenance of the Exterior of Station "A"**

    Sweeping of the following roads: (a) northeast access road from Seville Avenue to the northeast corner of the building, (b) south access road from 50th Street to the northeast corner of the building, (c) 50th Street access gate to Seville Avenue, and (d) Seville Avenue access gate to 50th Street.
3. **Quarterly Maintenance of the Exterior of Station "A"**

    Inspection of the following items: (a) lighting, (b) waste water separator, (c) safety systems, and (d) compressor backflow catch basin.
4. **Annual Maintenance of the Exterior of Station "A"**
    a. A visual inspection of the Station "A" building (exterior inspection) was conducted to determine if maintenance repairs were required.
    b. Roof drains were inspected and cleaned.
    c. First floor exterior windows were cleaned.

Maintenance Activities Completed to Preserve the Interior of the Station "A" Building:

1. **Daily Maintenance of the Interior of Station "A"**

    Sweeping and mopping of floors (control room, west offices and hallway, east offices and hallway, and dressing room and lavatory).
2. **Weekly Maintenance of the Interior of Station "A"**

    Sweeping and mopping of floors (battery charger room, basement, west 7-kilovolt [kV] room, east 7-kV room, main floor, 480-volt room, operations manager office, control room, machine shop, and piping gallery). Waxing of floors (control room and main floor hallways).
3. **Monthly Maintenance of the Interior of Station "A"**

    Elevator inspection, fire extinguisher inspections, automated external defibrillator (AED) inspection, and eye wash inspections.
4. **Quarterly Maintenance of the Interior of Station "A"**

    Inspection of the following items: (a) crane, (b) lighting, (c) spill cabinet, (d) exit sign emergency lighting, (e) safety systems, (f) smoke detectors, (g) maintenance of air conditioner units, (h) hot sticks and high voltage gloves used for switching and hot work, and (g) first aid kits.

5. **Semi-Annual Maintenance of the Interior of Station "A"**
    a. Waxing of floors (480-volt room, operations manager office, piping gallery, main floor, west 7-kV room, east 7-kV room, basement, battery charger room, machine shop, muffler deck, engine room, and air washer deck).
    b. Inspection of the east and west 7-kV room fire suppression system.
6. **Annual Maintenance of the Interior of Station "A"**
    a. Testing of potable water backflow device.
    b. Verification of safety data sheet (SDS) book.

Security of the Station "A" Building:

The security system includes 23 high definition (HD) infrared cameras with digital video recording (DVR), 16 of which are physically located on the Station "A" building. Managers and control room staff can access the camera system to monitor any suspicious activity at Station "A". The camera system also helps identify the vehicles, drivers, passengers, and license plates entering the Soto Street and Seville Avenue gates.

The Station "A" building also includes a 24/7 security guard and a locked gate at the Soto Street entrance. The security guard screens visitors seeking access to Station "A", and the control room staff have the ability to screen visitors through the camera system at both the Soto Street and Seville Avenue entrance gates, as well as through an audible intercom system at the Soto Street entrance gate. The facility security restricts access to Station "A" to authorized personnel, consistent with Condition of Certification Number COM-9's Operational Security Plan and industry standards. Exterior and interior doors to Station "A" are accessed via use of a card key issued by the City of Vernon Police Department. All visitors to the facility are recorded in the Visitors and Systems Logs. Monthly checks are performed on all entrance and exit security doors.

The 16 cameras physically located on the Station "A" building replaced existing security system components. The cameras were installed along the exterior building walls or immediately behind the roof parapet, which limits the visibility of the roof cameras from a public vantage point. When feasible, the replacement cameras were installed on existing camera mounts, which avoided impacts to historic fabric and materials. When new camera mounts were required, they were installed through the addition of four screws inserted into the building exterior. Cabling for the new system was completed along the exterior walls, either in existing conduits or along the building exterior, and did not require destructive opening of any walls or spaces. Within the existing control room, no changes were required to the space configuration and layout of the room to accommodate the new security system; instead, new flat-screen surveillance monitors were mounted to the existing walls.

The following provides additional information on how the camera installation activities conform to the Secretary of the Interior's Standards for the Treatment of Historic Properties through the following applicable Standards for Rehabilitation, as detailed in 36 CFR Part 68:

- **Standard 1: A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.** The historic property has retained its historic use and character as a power-related property, originally constructed in 1933, and the security camera installation activities required minimal changes to its exterior character-defining features, specifically its

exterior stucco coating and stepped roof parapet. These character-defining features remain as highly visible elements that convey the property's historic integrity of design, materials, workmanship, and feeling.

- **Standard 2: The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.** The new / replacement security cameras and the installation of new monitors in an existing control room did not affect historic materials or alter a space that characterizes the historic property. The cameras were installed in areas where cameras either previously existed (and re-used the existing mounts, when feasible) or were located away from key features that characterize the property or contribute to its significance. For example, major exterior character-defining features, such as the stepped parapet, metal-sash industrial windows, ornamental window molding, and coarse stucco and fluted wall composition, remain intact and were not diminished by the new camera installation activities. Further, the new monitors in the control room were added to an interior space that lacks distinctive features and did not alter the configuration or character of the space.
- **Standard 3: Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.** The cameras do not create a false sense of historic development. They are clearly distinguishable as modern features and do not impinge upon the property's historic sense of time, place, and use. Aside from the cameras, cabling, and monitors, no other features were installed and the property retains its core architectural elements from its period of significance.
- **Standard 5: Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.** The camera installation activities did not affect the craftsmanship, workmanship, feeling, or materials of the historic property. As noted earlier, major character-defining features of the property remain intact. As a result, the property retains sufficient physical evidence from its period of development and significance, reflecting construction techniques and design elements and patterns from its construction.
- **Standard 7: Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.** No type of abrasive physical or chemical treatment was needed for the improvements.
- **Standard 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.** The camera installation activities include very small-scale elements added to the exterior of the building and did not require destruction or major changes to any of the building's historic materials or character-defining features. When feasible, the cameras were installed within the existing camera mounts which avoided new drilling into the walls. In other areas, the new mounts were installed through the addition of four small screws. The cameras are approximately 8.3" long, 2.83" high, and 3.14" wide; the new mounts have an approximately 3.5" diameter. These are minor changes to a large building and are

compatible with its massing, size, scale, and appearance. Additionally, due to other nearby changes in the surrounding area, the cameras do not cause further changes to the setting and feeling of the property and other nearby power facilities.

- **Standard 10: New additions and adjacent or related new construction shall be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.** The new cameras, cabling, and monitors are all reversible features that could be removed in the future without impacts to the property's form, design, context, appearance, and feeling. The cameras were installed through the addition of small drill holes and the cabling was added to the exterior of the building within existing conduits or placed along the walls. The monitors were installed within interior walls in the existing control room and did not affect the configuration or use of any spaces.

In conclusion, based on the above analysis, the City has determined that the installation of new or replacement security cameras and their associated systems conform with the Secretary of the Interior's Standards for the Treatment of Historic Properties, and specifically the Standards for Rehabilitation. A representative sample of photographs depicting the new cameras, as well as specifications for the cameras, are included in Attachment A.

ATTACHMENT A

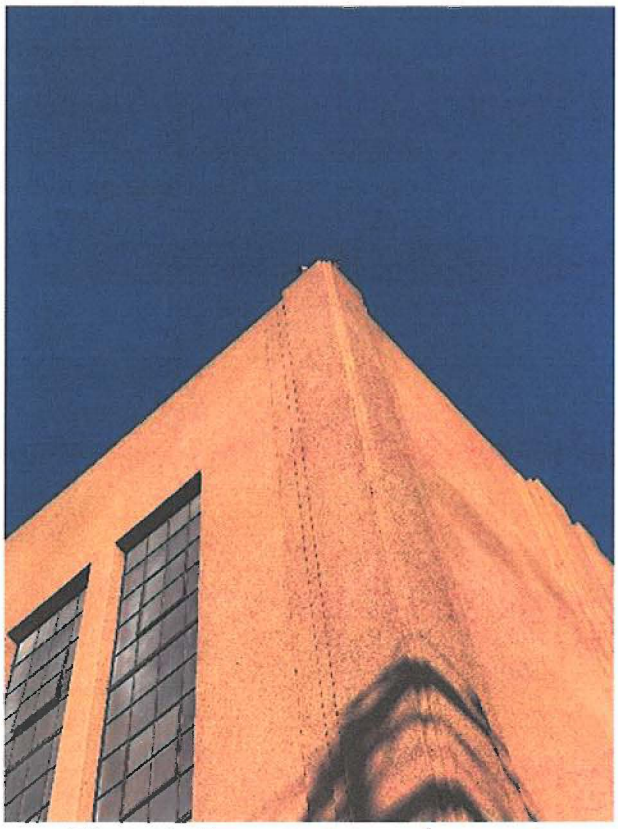


Photo 1: Camera at top of parapet

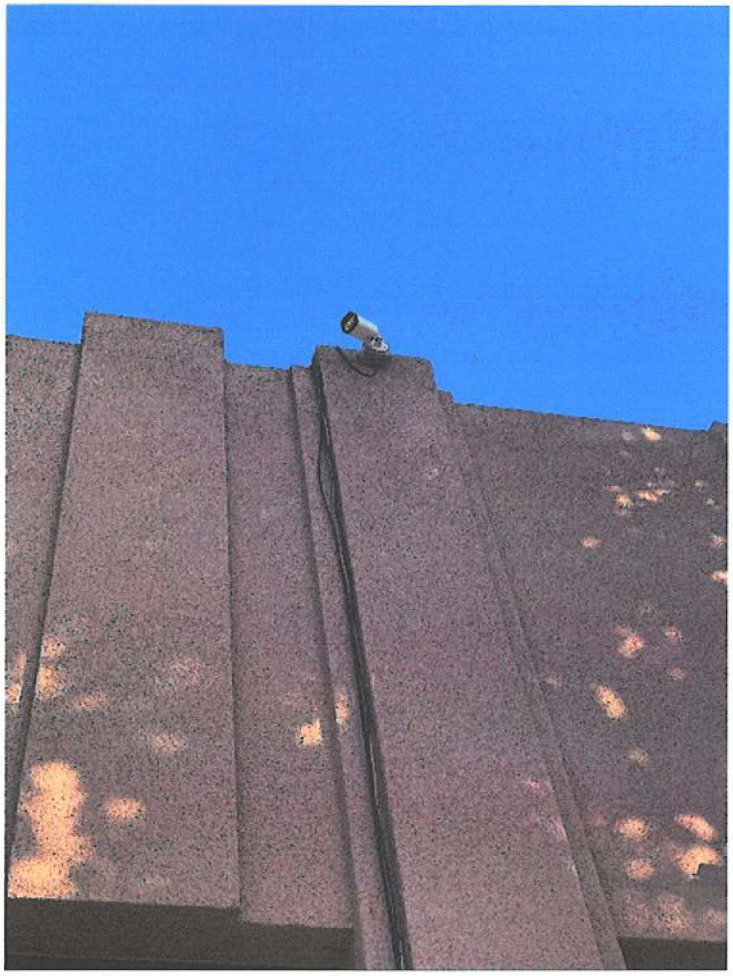


Photo 2: Camera at top of parapet with exterior cabling

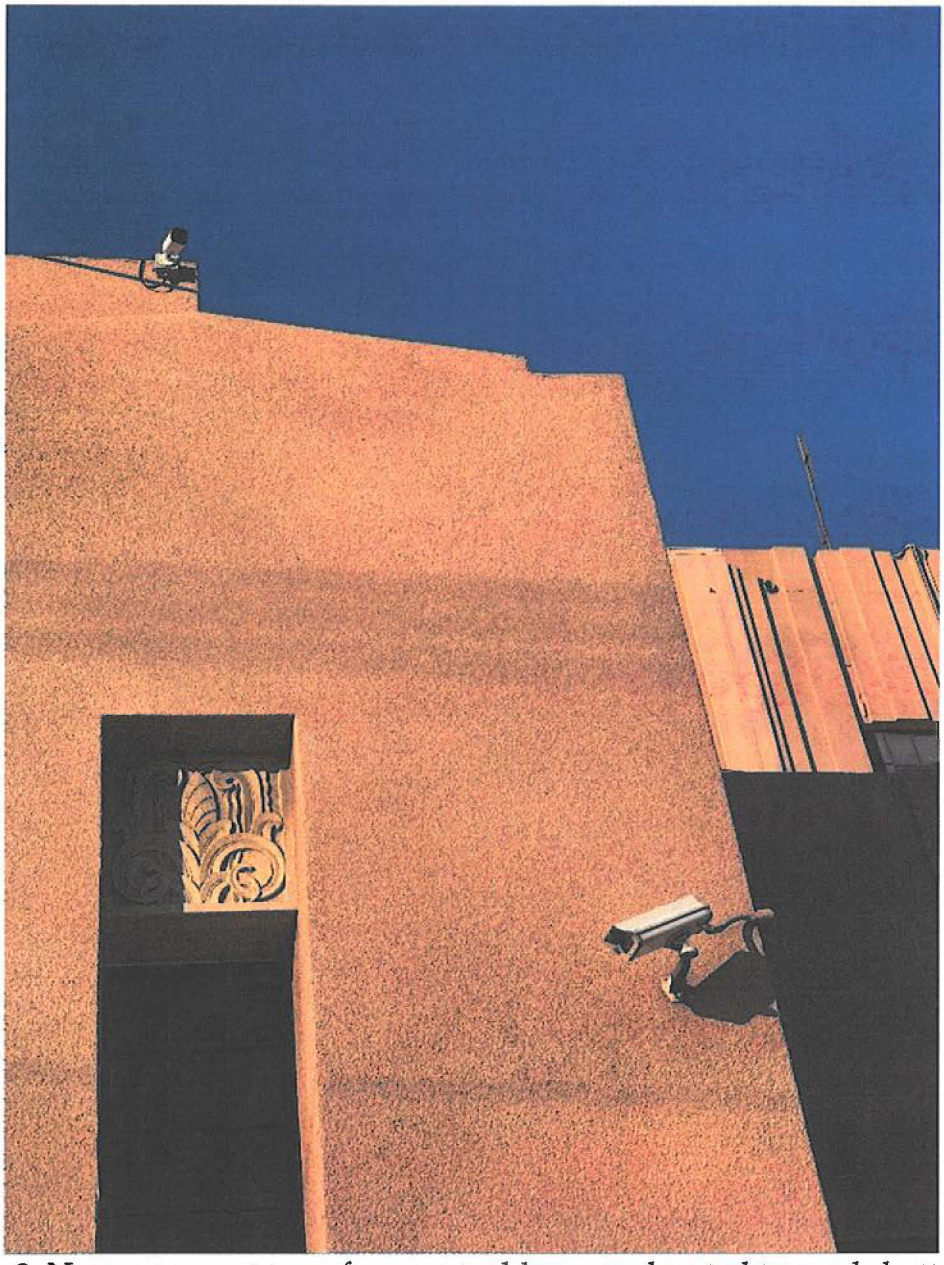


Photo 3: New camera at top of parapet; old camera located towards bottom of photograph

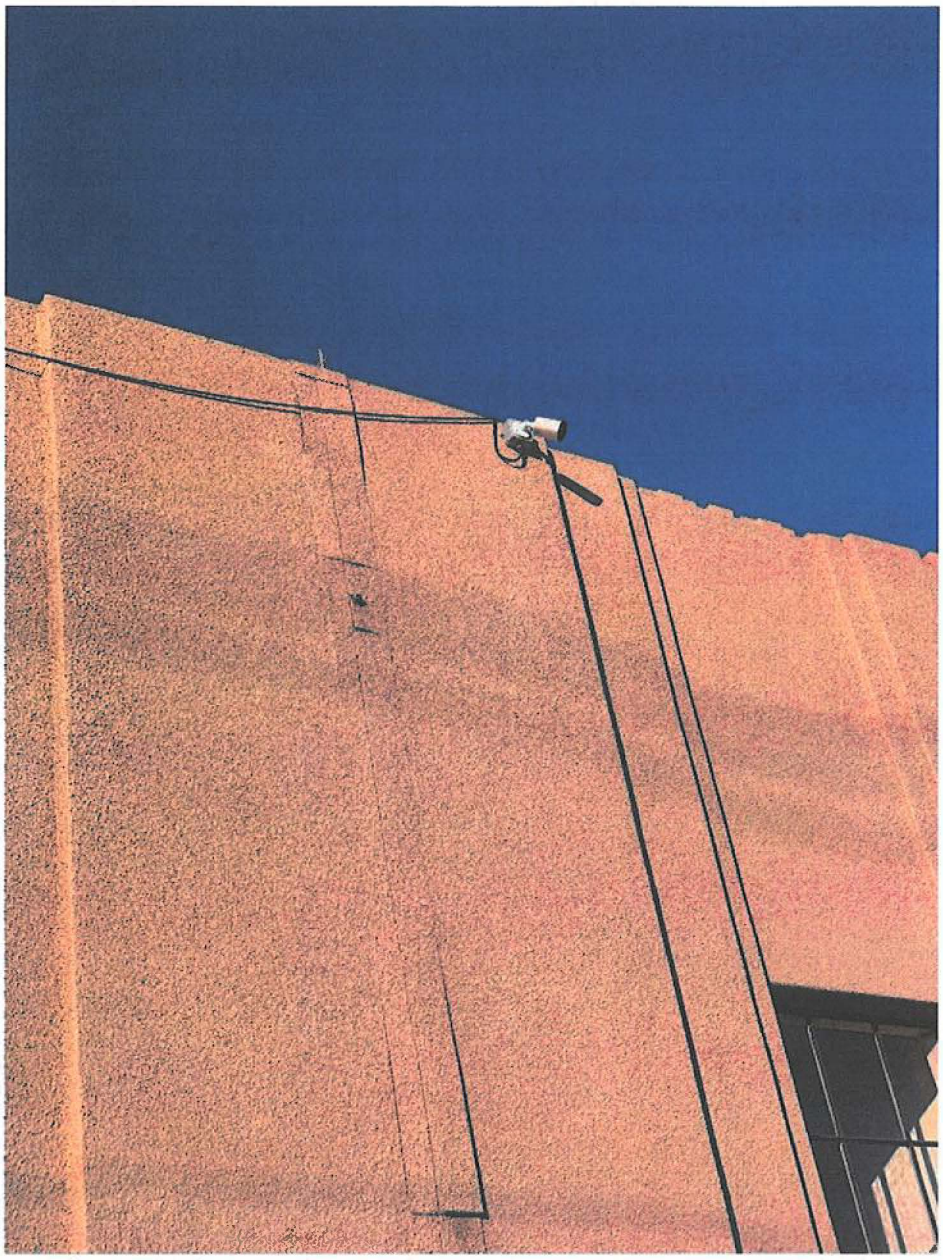
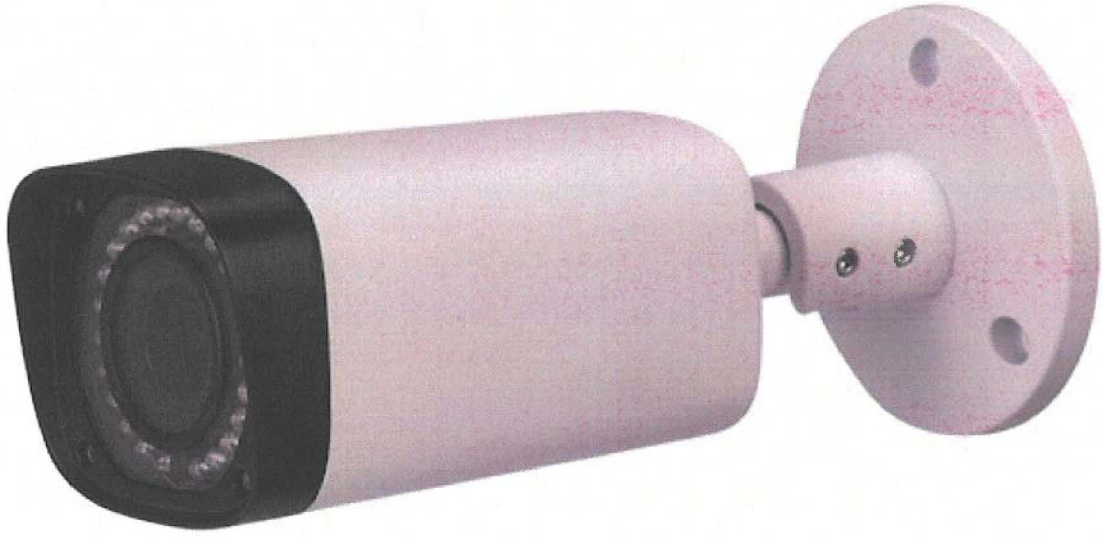


Photo 4: New camera at top of parapet with exterior cabling

CCVWB2D1Z

ETCDEPOT
ALWAYS SECURE

2.4Megapixel 1080P Water-proof HDCVI IR-Bullet Camera



Features

- 1/2.8" 2.4Megapixel CMOS
- 25/30@1080P, 25/30/50/60fps@720P
- High speed, long distance real-time transmission
- HD and standard definition switchable
- OSD Menu, control over coaxial cable
- Day/Night(ICR), AWB, AGC, BLC, 3D-DNR
- 2.7~12mm motorized lens
- Max. IR LEDs length 30m (60m optional), Smart IR
- IP66, DC12V

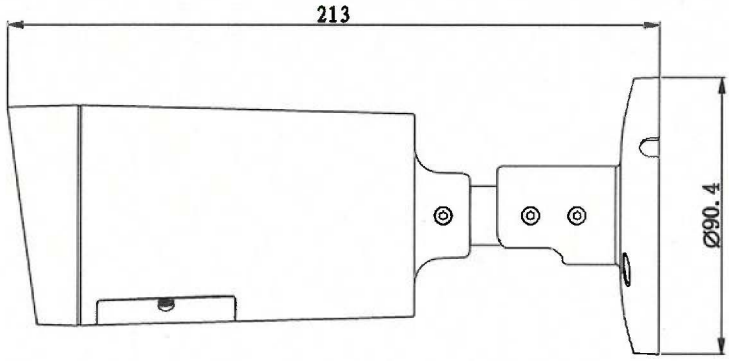
CCVWB2D1Z

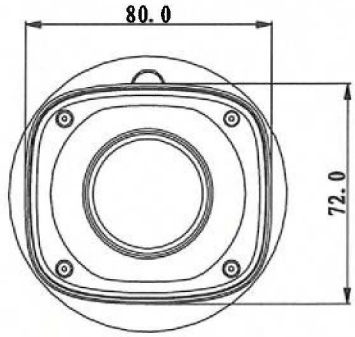
Technical Specifications

Camera		
Image Sensor	1/2.8" 2.4Megapixel CMOS	
Effective Pixels	1984(H)×1225(V)	
Electronic Shutter	1/3s~1/100,000s	
Video Frame Rate	25/30/50/60fps@720P; 25/30fps@1080P	
Synchronization	Internal	
Mini. Illumination	0.05Lux@F1.2(AGC ON), 0Lux IR on	
Video Output	1-channel BNC HDCVI high definition video output/ CVBS standard definition video output (Can switch)	
Camera Features		
Max. IR LEDs Length	30m (60m optional), Smart IR	
Day/Night	Auto(ICR) / Color / B/W	
Noise Reduction	2D/3D	
OSD Menu	Support	
Lens		
Focal Length	2.7~12mm	
Angle of View	H: 105.5° ~32.9°	
Lens Type	Motorized / Fixed Iris	
Mount Type	Φ14	
General		
Power Supply	DC12V±10%	
Power Consumption	Max 7.44W(30m IR) / 11W(60m IR)	
Working Environment	-30°C~+60°C / Less than 95%RH (no condensation)	
Transmission Distance	Over 300m via 75-3 coaxial cable	
Ingress Protection	IP66	
Dimensions(W×D×H)	213mm×80mm×72mm	
Weight	0.55kg	

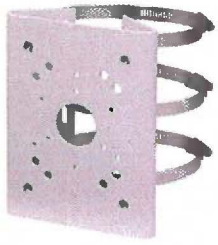
CCVWB2D1Z

Dimensions (mm)





Accessories (optional)

		
PFA122	PFA150	PFA152

APPENDIX N

NOISE COMPLAINT LOG AND RESOLUTION FORM

CEC Complaint Log

Complaint Log Number	Date Received	Complainant Name	Complainant Contact Info.	Nature of Complaint	Report Submitted to CEC
C1001	6/11/2010	Ken Wilson	323-236-7600 KenWilson@microalarm.com	Startup noise from steam relief vents.	7/2/2010 (Closed)
C1002	6/21/2011	Ken Wilson	323-236-7600 KenWilson@microalarm.com	Startup noise from steam relief vents.	7/27/11 (Closed)
C1003	7/26/2012	Ken Wilson	323-236-7600 KenWilson@microalarm.com	Startup noise from steam relief vents.	8/10/2012 (Closed)

Malburg Generating Station (CERSID: 10451263)

Facility Information **Submitted Jul 30, 2018**

Submitted on 7/30/2018 1:33:22 PM by *Kyle McCormack* of Malburg Generating Station (Vernon, CA)

- Business Activities
- Business Owner/Operator Identification

Hazardous Materials Inventory **Submitted Jul 30, 2018**

Submitted on 7/30/2018 1:33:22 PM by *Kyle McCormack* of Malburg Generating Station (Vernon, CA)

- Hazardous Material Inventory (47)
- Site Map (Official Use Only)
  - *Annotated Site Map (Official Use Only)* (Adobe PDF, 434KB)
  - *Annotated Site Map (Official Use Only)* (Adobe PDF, 395KB)
  - *Annotated Site Map (Official Use Only)* (Adobe PDF, 1419KB)

Emergency Response and Training Plans **Submitted Jul 30, 2018**

Submitted on 7/30/2018 1:33:22 PM by *Kyle McCormack* of Malburg Generating Station (Vernon, CA)

- Emergency Response/Contingency Plan
  - *Emergency Response/Contingency Plan* (Adobe PDF, 258KB)
  - *Emergency Response/Contingency Plan* (Adobe PDF, 891KB)
- Employee Training Plan
  - Provided In Submital Element: Emergency Response and Training Plans

Aboveground Petroleum Storage Act **Submitted Jul 30, 2018**

Submitted on 7/30/2018 1:33:22 PM by *Kyle McCormack* of Malburg Generating Station (Vernon, CA)

- Aboveground Petroleum Storage Act Documentation
  - Provided In Submital Element: Hazardous Materials Inventory

Site Identification

Malburg Generating Station
4963 S Soto St
Vernon, CA 90058
County
Los Angeles

CERS ID
10451263
EPA ID Number
CAL000333289

Submittal Status

Submitted on 7/30/2018 by *Kyle McCormack* of Malburg Generating Station (Vernon, CA)

Hazardous Materials

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

Underground Storage Tank(s) (UST)

Does your facility own or operate underground storage tanks?	**No**

Hazardous Waste

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

Excluded and/or Exempted Materials

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

Additional Information

No additional comments provided.

Facility/Site

Malburg Generating Station
4963 S Soto St
Vernon, CA 90058

CERS ID
10451263

Submittal Status

Submitted on 7/30/2018 by *Kyle McCormack* of Malburg Generating Station (Vernon, CA)

Identification

Colorado Energy Management, LLC

Operator Phone	Business Phone	Business Fax
(303) 442-5112	(323) 476-3610	(323) 476-3640

Beginning Date	Ending Date	
Dun & Bradstreet	**SIC Code**	**Primary NAICS**
031850840	4911	221112

Facility/Site Mailing Address

4963 S Soto St
Vernon, CA 90058

Primary Emergency Contact

Matt Richards
Title
Plant Manager

Business Phone	24-Hour Phone	Pager Number
(323) 476-3623	(626) 393-3748	

Owner

Bicent (California) Malburg, LLC
(410) 770-9500
100 N. West Street
Easton, MD 20601

Secondary Emergency Contact

Kyle McCormack
Title
Environmental Manager

Business Phone	24-Hour Phone	Pager Number
(303) 607-5590	(323) 775-3873	

Billing Contact

Charlotte McLemore
(323) 476-3622 cmclemore@coloradoenergy.com
4963 S Soto St
Vernon, CA 90058

Environmental Contact

Thomas Barnhart
(720) 545-7231 tbarnhart@coloradoenergy.com
4963 Soto Street
Vernon, CA 90058

Name of Signer	Signer Title	Document Preparer
Matt Richards	Plant Manager	Thomas Barnhart

Additional Information

Locally-collected Fields

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

Property Owner

Phone

Mailing Address

,

Assessor Parcel Number (APN)

Number of Employees

Facility ID
VERN

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **Ammonia Distribution - HRSG 1 Vaporizing Skid**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	Aqueous Ammonia	**Gallons**	**50**	**50**	50		- Physical Flammable - Physical Gas Under Pressure - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation				
Toxic, Corrosive, Flammable Liquid, Class I-C	CAS No 1336-21-6 Map: SA-3A Grid: 4/5 B Item 18	State Liquid Type Pure	Storage Container Other Days on Site: 365		Pressue > Ambient Temperature Ambient	Waste Code					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **Ammonia Distribution - HRSG 2 Vaporizing Skid**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	Aqueous Ammonia	**Gallons**	**50**	**50**	50		- Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation				
Toxic, Corrosive, Flammable Liquid, Class I-C	CAS No 1336-21-6 Map: SA-3A Grid: 4/5 B Item 19	State Liquid Type Pure	Storage Container Other Days on Site: 365		Pressue > Ambient Temperature Ambient	Waste Code					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **Ammonia Distribution - Underground Piping**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
Toxic, Corrosive, Flammable Liquid, Class I-C	**Aqueous Ammonia** CAS No 1336-21-6 Map: SA-3A Grid: 2 C/D Item 16	**Gallons** State Liquid Type Pure	**50** Storage Container Aboveground Tank Days on Site: 365	**50**	50 Pressue Temperature	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **Ammonia Storage Area - Pump Skid**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	Aqueous Ammonia	**Gallons**	**5**	**5**	5		- Physical Flammable - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation				
Toxic, Corrosive, Flammable Liquid, Class I-C	CAS No 1336-21-6 Map: SA-3A Grid: 2 C/D Item 16	State Liquid Type Pure	Storage Container Aboveground Tank Days on Site: 365		Pressue Temperature	Waste Code					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location
Ammonia Storage Area - Storage Tank

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
	Aqueous Ammonia	**Gallons**	**8000**	**10809**	4000		- Physical Flammable - Physical Gas Under Pressure - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Respiratory Skin Sensitization - Health Serious Eye Damage Eye Irritation				
Toxic, Corrosive, Flammable Liquid, Class I-C	CAS No 1336-21-6 Map: SA-3A Grid: 2 C/D Item 15	State Liquid Type Pure	Storage Container Aboveground Tank Days on Site: 365		Pressue Temperature	Waste Code					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location
Auxiliary Power Distribution Transformer Area
Transformer A

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
Combustible Liquid, Class III-B	**Transformer Oil** CAS No 64742-53-6 Map: SA-3A Grid: 1 B Item 44	**Gallons** State Liquid Type Mixture	**280** Storage Container Other Days on Site: 365	**280**	280 Pressue > Ambient Temperature > Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure	Severely Hydrotreated Light Napthalic Hydro Oil 2,6 di-tert-butyl	100 % 0 %		64742-53-6 128-37-0

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location
Auxiliary Power Distribution Transformer Area
Transformer B

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Combustible Liquid, Class III-B	**Transformer Oil** CAS No 64742-53-6 Map: SA-3A Grid: 1 B Item 45	**Gallons** State Liquid Type Mixture	**280** Storage Container Other Days on Site: 365	**280**	280 Pressue > Ambient Temperature > Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure	Severely Hydrotreated Light Napthalic Hydro Oil 2,6 di-tert-butyl	100 % 0 %		64742-53-6 128-37-0

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **CEMS Building**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only) Component Name	% Wt	EHS	CAS No.
	Nitrogen CAS No 7717-37-9 Map: SA-3A Grid: 3 B Item 36	**Cu. Feet** State Gas Type Pure	**568** Storage Container Cylinder Days on Site: 365	**568**	284 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure				
Toxic	**Nitrogen / Nitrogen Oxide / Carbon Monoxide Blend** CAS No Map: SA-3A Grid: 3 B item 37	**Cu. Feet** State Gas Type Pure	**1704** Storage Container Cylinder Days on Site: 365	**284**	852 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Gas Under Pressure				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **Combustion Turbine Generator Building CTG1**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	Lubricating Oil	**Gallons**	**3700**	**3700**	3700		- Physical Flammable				
Combustible Liquid, Class III-B	CAS No 64742-54-7 Map: SA-3A Grid: 6/7 B Item 33	State Liquid Type Mixture	Storage Container Aboveground Tank, Other Days on Site: 365		Pressue > Ambient Temperature > Ambient	Waste Code					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **Combustion Turbine Generator Building CTG2**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	Lubricating Oil	**Gallons**	**3700**	**3700**	3700		- Physical Flammable				
Combustible Liquid, Class III-B	CAS No 64742-54-7 Map: SA-3A Grid: 6/7 C Item 34	State Liquid Type Mixture	Storage Container Aboveground Tank Days on Site: 365		Pressue > Ambient Temperature > Ambient	Waste Code					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location
Covered Storage Area Next to Ammonia Tank

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Largest Cont.	Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class II	**Diesel Fuel No. 2** CAS No 68476-34-6 Map: SA-3a Grid: D3	**Gallons** State Liquid Type Pure	**165** Storage Container Steel Drum Days on Site: 365	**55**	100 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Health Acute Toxicity				
Combustible Liquid, Class III-B	**Used lubricating oils** CAS No 70514-12-4	**Gallons** State Liquid Type Waste	**5** Storage Container Steel Drum	**55**	1 Pressue Ambient Temperature Ambient	350 Waste Code 221		Waste Oil Water	95 % 5 %		70514-12-4 7732-18-5
	Rags CAS No 65996-61-4	**Pounds** State Solid Type Waste	**5** Storage Container Steel Drum Days on Site: 180	**55**	1 Pressue Temperature	500 Waste Code		Oil Rags Wipes, Polypropylene	30 % 70 % 20 %		8012-95-1

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location
Diesel Fire Pump House

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 3 - Flammable and Combustible Liquids Combustible Liquid, Class II	**Diesel Fuel No. 2** CAS No 68476-34-6 Map: SA-3A Grid: 8 C Item 46	**Gallons** State Liquid Type Pure	**240** Storage Container Tank Inside Building Days on Site: 365	**240**	240 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **Generator Step up (GSU) Area - GSU CTG1**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Combustible Liquid, Class III-B	**Transformer Oil** CAS No 64742-53-6 Map: SA-3A Grid: 7 D Item 30	**Gallons** State: Liquid Type: Mixture Storage Container: Other Days on Site: 365	**4370**	**4370**	4370 Pressue: > Ambient Temperature: > Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure	Severely Hydrotreated Light Napthalic Hydro Oil 2,6 di-tert-butyl	100 % 0 %		64742-53-6 128-37-0
DOT: 2.2 - Nonflammable Gases	**Nitrogen** CAS No 7727-37-9 Map: SA-3A Grid: 7 D Item 30	**Cu. Feet** **140** State: Gas Type: Pure Storage Container: Cylinder Days on Site: 365			Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location
Generator Step up (GSU) Area - GSU CTG2

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Combustible Liquid, Class III-B	**Transformer Oil** CAS No 64742-53-6 Map: SA-3A Grid: 7 D Item 31	**Gallons** State: Liquid Type: Mixture Storage Container: Other Days on Site: 365	**4370**	**4370**	4370 Pressue: > Ambient Temperature: > Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure	Severely Hydrotreated Light Napthalic Hydro Oil 2,6 di-tert-butyl	100 % 0 %		64742-53-6 128-37-0
DOT: 2.2 - Nonflammable Gases	**Nitrogen** CAS No 7727-37-9 Map: SA-3A Grid: 7 D Item 31	**Cu. Feet** **140** State: Gas Type: Pure Storage Container: Cylinder Days on Site: 365			Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **Generator Step up (GSU) Area - GSU STG**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Combustible Liquid, Class III-B	**Transformer Oil** CAS No 64742-53-6 Map: SA-3A Grid: 6 D Item 32	**Gallons** State: Liquid Type: Mixture	**4370** Storage Container: Other Days on Site: 365	**4370**	4370 Pressue: > Ambient Temperature: > Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure	Severely Hydrotreated Light Napthalic Hydro Oil 2,6 di-tert-butyl	100 % 0 %		64742-53-6 128-37-0
DOT: 2.2 - Nonflammable Gases	**Nitrogen** CAS No 7727-37-9 Map: SA-3A Grid: 6 D Item 32	**Cu. Feet** State: Gas Type: Pure	**140** Storage Container: Cylinder Days on Site: 365		0 Pressue: > Ambient Temperature: Ambient	Waste Code	- Physical Gas Under Pressure				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **HRSG Cooling Tower Bulk Chemical Area**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Toxic, Combustible Liquid, Class III-B	**Acrylate Polymer, Phosphate, Phosphonate** CAS No Map: SA-3B Grid: 2 A Item 6	**Gallons** State: Liquid Type: Mixture	**1300** Storage Container: Aboveground Tank Days on Site: 365	**1300**	650 Pressue: Ambient Temperature: Ambient	Waste Code	- Health Skin Corrosion Irritation				
DOT: 8 - Corrosives (Liquids and Solids) Toxic, Corrosive, Water Reactive, Class 2	**Sulfuric Acid 66 Be** CAS No 7664-93-9 Map: SA-3B Grid: 2 A Item 7	**Gallons** State: Liquid Type: Pure	**2500** Storage Container: Aboveground Tank Days on Site: 365	**2500**	1500 Pressue: Ambient Temperature: Ambient	Waste Code	- Physical Corrosive To Metal - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation				
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Toxic, Oxidizing, Class 2	**Sodium Hypochlorite** CAS No 7681-52-9 Map: SA-3B Grid: 2 A Item 8	**Gallons** State: Liquid Type: Pure	**2400** Storage Container: Plastic/Non-metalic Drum Days on Site: 365	**2400**	1500 Pressue: Ambient Temperature: Ambient	Waste Code	- Physical Oxidizer - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **HRSG Cooling Tower Specialty Chemical Area**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Toxic, Flammable Liquid, Class I-C	**Biocide** CAS No Map: SA-3B Grid: 4 B/C Item 4	**Gallons** State: Liquid Type: Mixture	**150** Storage Container: Aboveground Tank Days on Site: 365	**75**	100 Pressue: Ambient Temperature: Ambient	Waste Code	- Health Acute Toxicity - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation	Dimethyl-Dioctyl-Ammonium Chloride Glycerol	50 % 10 %		5538-94-3 56-81-5
Flammable Liquid, Class I-C	**Biodispersant - Deposit Penetrant** CAS No Map: SA-3B Grid: 4 B/C Item 5	**Gallons** State: Liquid Type: Mixture	**475** Storage Container: Aboveground Tank Days on Site: 365	**400**	250 Pressue: Ambient Temperature: Ambient	Waste Code					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **HRSG Water Chemical Area**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Explosive	**Oxygen Scavenger** CAS No 497-18-7 Map: SA-3A Grid: 3 B/C Item 1	**Gallons** State Liquid Type Mixture	**300** Storage Container Aboveground Tank Days on Site: 365	**200**	200 Pressue Ambient Temperature Ambient	Waste Code	- Physical Explosive - Health Acute Toxicity				
Toxic, Corrosive, Flammable Liquid, Class I-C, Combustible Liquid, Class II	**Corrosion Inhibitor** CAS No Map: SA-3A Grid: S B/C Item 2	**Gallons** State Liquid Type Mixture	**600** Storage Container Aboveground Tank Days on Site: 365	**200**	400 Pressue Ambient Temperature Ambient	Waste Code	- Physical Flammable - Health Acute Toxicity	Cyclohexylamine Morpholine	30 % 10 %	✓	108-91-8 110-91-8
Corrosive	**Boiler Phosphate** CAS No Map: SA-3A Grid: 3 B/C Item 3	**Gallons** State Liquid Type Mixture	**200** Storage Container Aboveground Tank Days on Site: 365	**200**	100 Pressue Ambient Temperature Ambient	Waste Code	- Health Skin Corrosion Irritation	Sodium Hydroxide Sodium Tripolyphosphate	5 % 5 %		1310-73-2 7758-29-4

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **Main Power Distribution Transformer Area Transformer A**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Combustible Liquid, Class III-B	**Transformer Oil** CAS No 64742-53-6 Map: SA-3A Grid: 5/6 C Item 42	**Gallons** State Liquid Type Mixture	**280** Storage Container Other Days on Site: 365	**280**	280 Pressue > Ambient Temperature > Ambient	Waste Code	- Physical Flammable	Severely Hydrotreated Light Napthalic Hydro Oil 2,6 di-tert-butyl	100 % 0 %		64742-53-6 128-37-0

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **Main Power Distribution Transformer Area Transformer B**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Combustible Liquid, Class III-B	**Transformer Oil** CAS No 64742-53-6 Map: SA-3A Grid: 5/6 C Item 43	**Gallons** State Liquid Type Mixture	**280** Storage Container Other Days on Site: 365	**280**	280 Pressue > Ambient Temperature > Ambient	Waste Code	- Physical Flammable	Severely Hydrotreated Light Napthalic Hydro Oil 2,6 di-tert-butyl	100 % 0 %		64742-53-6 128-37-0
Combustible Liquid, Class III-B	**Transformer Oil** CAS No 64742-53-6 Map: SA-3A Grid: 5/6 C Item 43	**Gallons** State Liquid Type Mixture	**280** Storage Container Other Days on Site: 365	**280**	280 Pressue > Ambient Temperature > Ambient	Waste Code	- Physical Flammable	Severely Hydrotreated Light Napthalic Hydro Oil 2,6 di-tert-butyl	100 % 0 %		64742-53-6 128-37-0

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location
Natural Gas Accumulator

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	Natural Gas	**Cu. Feet**	**1600**	**1600**	1600		- Physical Flammable - Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				
Flammable Gas, Explosive, Toxic	CAS No 8006-14-2 Map: SA-3A Grid: 4 C Item 23	State Gas Type Pure	Storage Container Aboveground Tank Days on Site: 365		Pressue > Ambient Temperature Ambient	Waste Code					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location
Natural Gas Compressor Skid

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Flammable Gas, Explosive	**Natural Gas** CAS No 8006-1-2 Map: SA-3A Grid: 4 C Item 20	**Cu. Feet** State Gas Type Pure	**4000** Storage Container Aboveground Tank Days on Site: 365	**4000**	4000 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location
Natural Gas Cooler

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	Natural Gas	**Cu. Feet**	**1600**	**1600**	1600		- Physical Flammable - Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				
Flammable Gas	CAS No 8006-14-2 Map: SA-3A Grid: 4 C Item 22	State Gas Type Pure	Storage Container Aboveground Tank Days on Site: 365		Pressue > Ambient Temperature Ambient	Waste Code					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location
Natural Gas CTG1 Metering / Control Skid

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	Natural Gas	**Cu. Feet**	**9000**	**9000**	9000		- Physical Flammable - Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				
Flammable Gas, Explosive, Toxic	CAS No 8006-14-2 Map: SA-3A Grid: 6 B Item 26	State Gas Type Pure	Storage Container Aboveground Tank Days on Site: 365		Pressue > Ambient Temperature Ambient	Waste Code					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location
Natural Gas Electric Heater

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Flammable Gas, Explosive	**Natural Gas** CAS No 8006-14-2 Map: SA-3B Grid: 4 C Item 24	**Cu. Feet** State Gas Type Pure	**1600** Storage Container Aboveground Tank Days on Site: 365	**1600**	1600 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **Natural Gas Liquid Drain Tank**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	Lubricating Oil	**Gallons**	**100**	**100**	50	200	- Physical Flammable				
Flammable Gas, Combustible Liquid, Class III-A	CAS No 64742-54-7 Map: SA-3A Grid: 4 C Item 25	State Liquid Type Pure	Storage Container Aboveground Tank Days on Site: 365		Pressue > Ambient Temperature Ambient	Waste Code					

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location
Natural Gas Regulation / Metering Pad

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Flammable Gas, Explosive	**Natural Gas** CAS No 8006-14-2 Map: SA-3A Grid: 4 C Item 21 State Gas Type Pure	**Cu. Feet** Storage Container Aboveground Tank Days on Site: 365	**3000**	**3000**	3000 Pressue > Ambient Temperature Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure - Physical Explosive - Health Simple Asphyxiant				

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location
Starting Motor Transformer CTG1

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Combustible Liquid, Class III-B	**Transformer Oil** CAS No 64742-53-6 Map: SA-3A Grid: 7 B Item 40	**Gallons** State Liquid Type Mixture	**490** Storage Container Other Days on Site: 365	**490**	490 Pressue > Ambient Temperature > Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure	Severely Hydrotreated Light Napthalic Hydro Oil 2,6 di-tert-butyl	100 % 0 %		64742-53-6 128-37-0

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location
Starting Motor Transformer CTG2

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
Combustible Liquid, Class III-B	**Transformer Oil** CAS No 64742-53-6 Map: SA-3A Grid: 7 C Item 41	**Gallons** State Liquid Type Mixture	**490** Storage Container Other Days on Site: 365	**490**	490 Pressue > Ambient Temperature > Ambient	Waste Code	- Physical Flammable - Physical Gas Under Pressure	Severely Hydrotreated Light Napthalic Hydro Oil 2,6 di-tert-butyl	100 % 0 %		64742-53-6 128-37-0

Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **Steam Turbine Generator Building - STG**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
	Lubricating Oil	**Gallons**	**4480**	**4480**	4480						
	CAS No: 64742-54-7 Map: SA-3A Grid: 2 B/C Item 35	State: Liquid Type: Mixture	Storage Container: Aboveground Tank Days on Site: 365		Pressue: > Ambient Temperature: > Ambient	Waste Code					

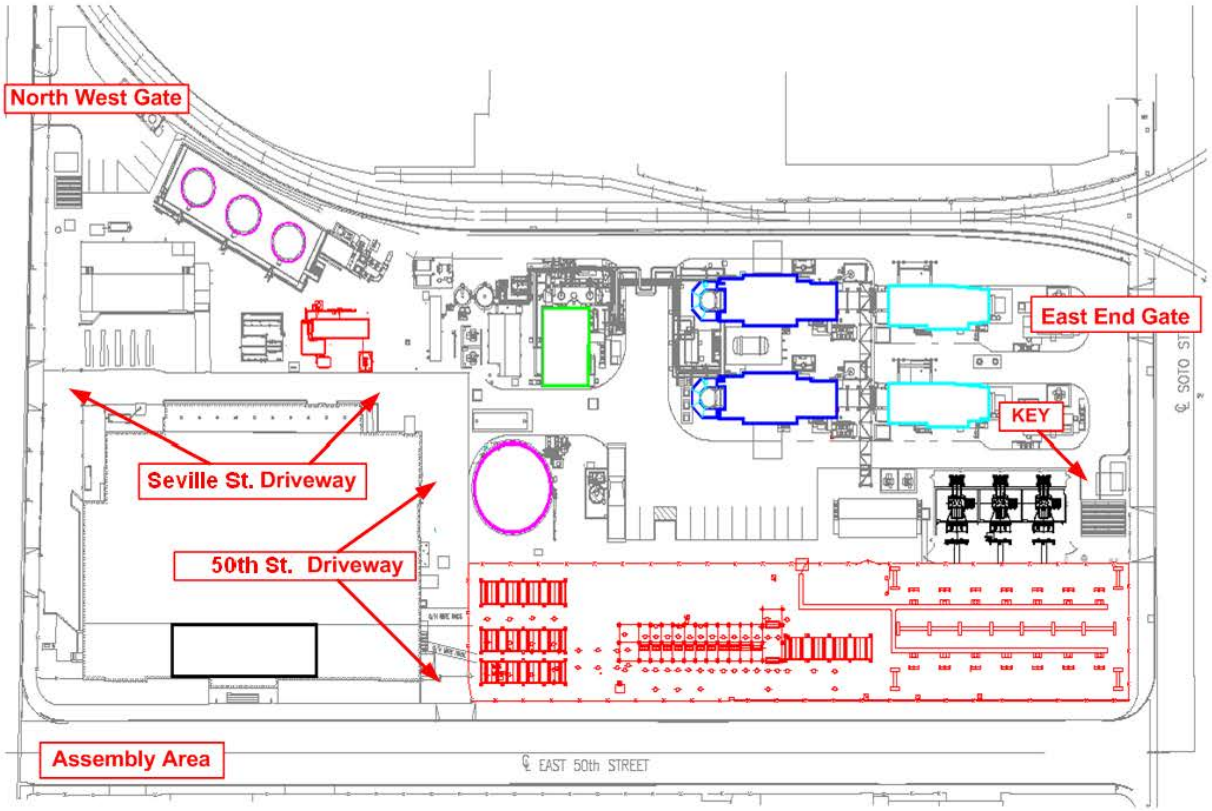
Hazardous Materials And Wastes Inventory Matrix Report

CERS Business/Org. **Malburg Generating Station**
Facility Name **Malburg Generating Station**
4963 S Soto St, Vernon 90058

Chemical Location **Water Treatment Chemical Area**

CERS ID **10451263**
Facility ID **VERN**
Status **Submitted** on 7/30/2018 1:33 PM

DOT Code/Fire Haz. Class	Common Name	Unit	Quantities: Max. Daily	Quantities: Largest Cont.	Quantities: Avg. Daily	Annual Waste Amount	Federal Hazard Categories	Hazardous Components (For mixture only): Component Name	% Wt	EHS	CAS No.
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Toxic, Oxidizing, Class 2	**Sodium Hypochlorite** CAS No 7681-52-9 Map: SA-3B Grid: 5C Item 14	**Gallons** State Liquid Type Pure	**100** Storage Container Plastic/Non-metalic Drum Days on Site: 365	**100**	1 Pressue Ambient Temperature Ambient	Waste Code	- Physical Oxidizer - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation				
DOT: 8 - Corrosives (Liquids and Solids) Corrosive, Toxic	**Ferric Chloride** CAS No Map: SA-3B Grid: 5 C Item 11	**Gallons** State Liquid Type Mixture	**60** Storage Container Plastic/Non-metalic Drum Days on Site: 365	**30**	50 Pressue Ambient Temperature Ambient	Waste Code	- Physical Corrosive To Metal - Health Acute Toxicity - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation	Ferric Chloride Hydrochloric Acid	45 % 1 %		7705-08-0 7647-01-0
Toxic, Corrosive	**Anti-Scalant** CAS No Map: SA-3B Grid: 5 C Item 56	**Gallons** State Liquid Type Mixture	**75** Storage Container Other Days on Site: 365	**75**	50 Pressue Temperature	Waste Code		Phosphonic Acid Salt Alkali Hydroxide Aminotrialkylphosphonic Acid Phosphonic Acid Inorganic Acid	12 % 9 % 16 % 1 % 0 %		Proprietary Proprietary Proprietary Proprietary Proprietary
Toxic, Corrosive, Water Reactive, Class 1	**Caustic Soda** CAS No 1310-73-2 Map: SA-3B Grid: 5 C Item 13	**Gallons** State Liquid Type Pure	**400** Storage Container Other Days on Site: 365	**400**	300 Pressue Ambient Temperature Ambient	Waste Code	- Physical Corrosive To Metal - Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation				
Corrosive, Toxic	**Chlorine Scavenger** CAS No 7631-90-5 Map: SA-3B Grid: 5 C Item 12	**Gallons** State Liquid Type Pure	**100** Storage Container Other Days on Site: 365	**100**	75 Pressue Ambient Temperature Ambient	Waste Code	- Health Skin Corrosion Irritation - Health Serious Eye Damage Eye Irritation				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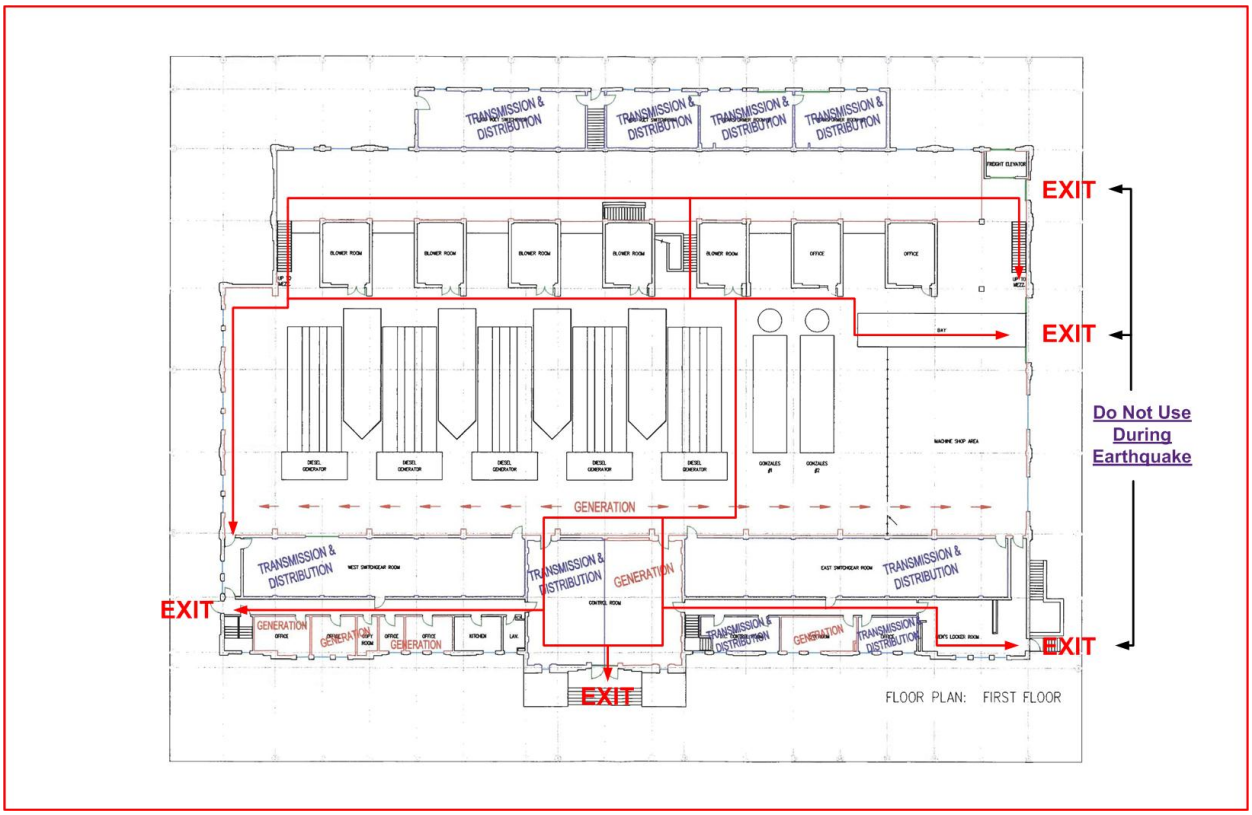
East End Gate
KEY
Seville St. Driveway
50th St. Driveway
Assembly Area
℄ EAST 50th STREET
℄ SOTO ST


TRANSMISSION & DISTRIBUTION
TRANSMISSION & DISTRIBUTION
TRANSMISSION & DISTRIBUTION
TRANSMISSION & DISTRIBUTION
FREIGHT ELEVATOR
EXIT
BLOWER ROOM
BLOWER ROOM
BLOWER ROOM
BLOWER ROOM
BLOWER ROOM
OFFICE
OFFICE
EXIT
BAY
DIESEL GENERATOR
DIESEL GENERATOR
DIESEL GENERATOR
DIESEL GENERATOR
DIESEL GENERATOR
GONZALES #1
GONZALES #2
MACHINE SHOP AREA
Do Not Use During Earthquake
GENERATION
TRANSMISSION & DISTRIBUTION
WEST SWITCHGEAR ROOM
TRANSMISSION & DISTRIBUTION
GENERATION
CONTROL ROOM
EAST SWITCHGEAR ROOM
TRANSMISSION & DISTRIBUTION
EXIT
GENERATION
OFFICE
GENERATION
GENERATION
OFFICE
OFFICE
GENERATION
KITCHEN
LAV.
TRANSMISSION & DISTRIBUTION
GENERATION
TRANSMISSION & DISTRIBUTION
MEN'S LOCKER ROOM
EXIT
EXIT
FLOOR PLAN: FIRST FLOOR

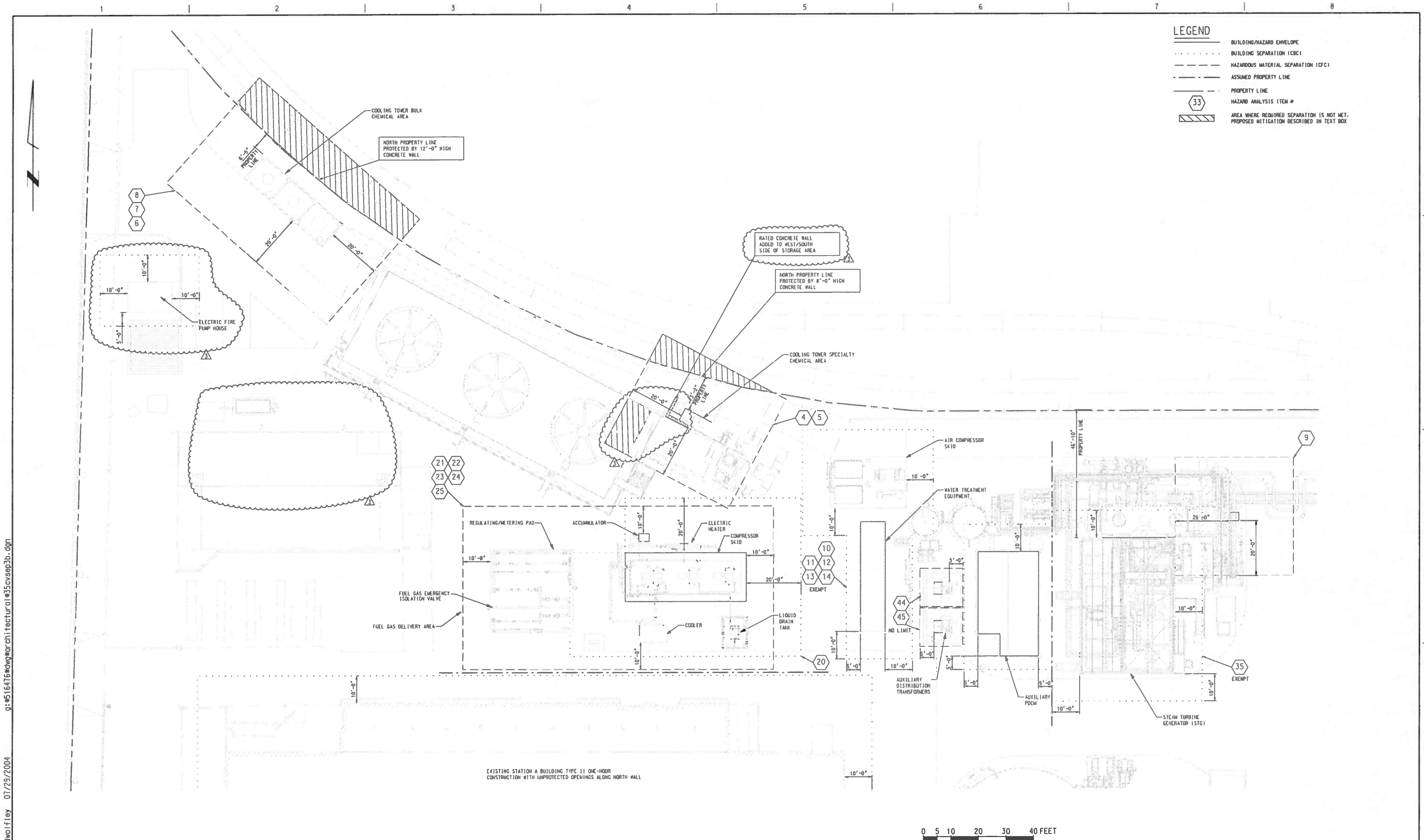


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FIGURE 4
HANDLING AND PROCESSING AREAS, MAP B

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD
3	REVISED PER DCN 108	07/30/04	SDS	HSD	DEJ	TLK
2	REVISED PER DCN 090	04/09/04	SDS	HSD	DEJ	TLK
1	REVISED PER DCN 070	12/23/03	SDS	HSD	DEJ	TLK
0	ISSUED FOR CONSTRUCTION	10/14/03	SDS	HSD	DEJ	TLK

REFERENCE DRAWINGS

DSGN	SDS	09/24/03
DRN	DEJ	09/24/03
CKD	TLK	09/24/03
SCALE:	1/16"=1'-0"	

FOR 22x34 DWG ONLY

POWER
3940 GLENBROOK DRIVE HAILEY, ID 83333

CITY OF VERNON
MALBURG GENERATING STATION
SEPARATION ANALYSIS AREA B

JOB NUMBER 516476-04
DRAWING NO. SA-3B
REV 3

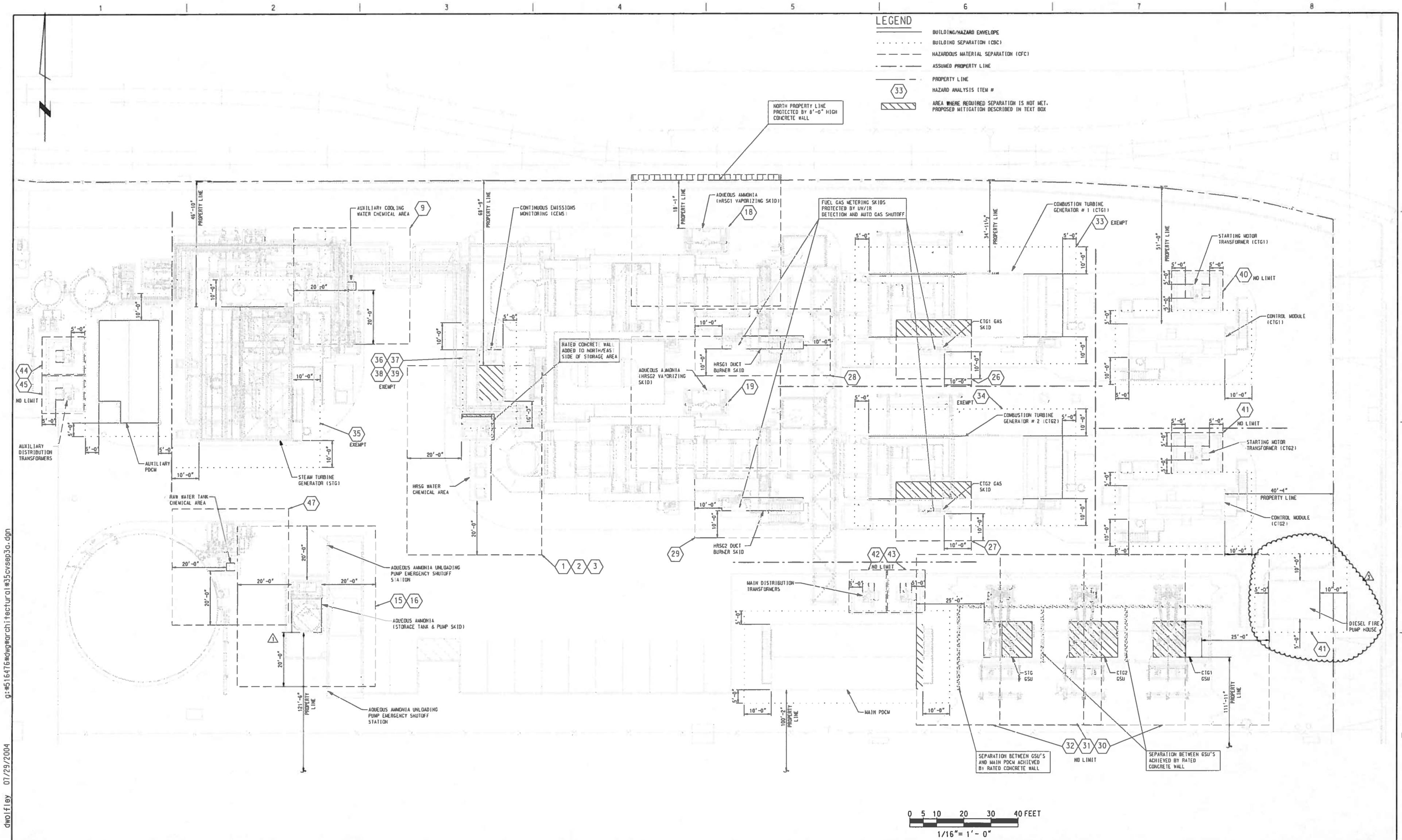

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FIGURE 3
HANDLING AND PROCESSING AREAS, MAP A

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD
3	REVISED PER DCN 108	07/30/04	SDS	HSD	DEJ	TLK
2	REVISED PER DCN 090	04/09/04	SDS	HSD	DEJ	TLK
1	REVISED PER DCN 070	12/23/03	SDS	HSD	DEJ	TLK
0	ISSUED FOR CONSTRUCTION	10/14/03	SDS	HSD	DEJ	TLK

REFERENCE DRAWINGS

DSGN	SDS	09/24/03
DRN	DEJ	09/24/03
CKD	TLK	09/24/03
SCALE:	1/16"=1'-0"	

FOR 22x34 DWG ONLY

POWER ENGINEERS
3940 GLENBROOK DRIVE HAILEY, ID 83333

CITY OF VERNON
MALBURG GENERATING STATION
SEPARATION ANALYSIS AREA A

JOB NUMBER 516476-04
DRAWING NO. SA-3A
REV 3

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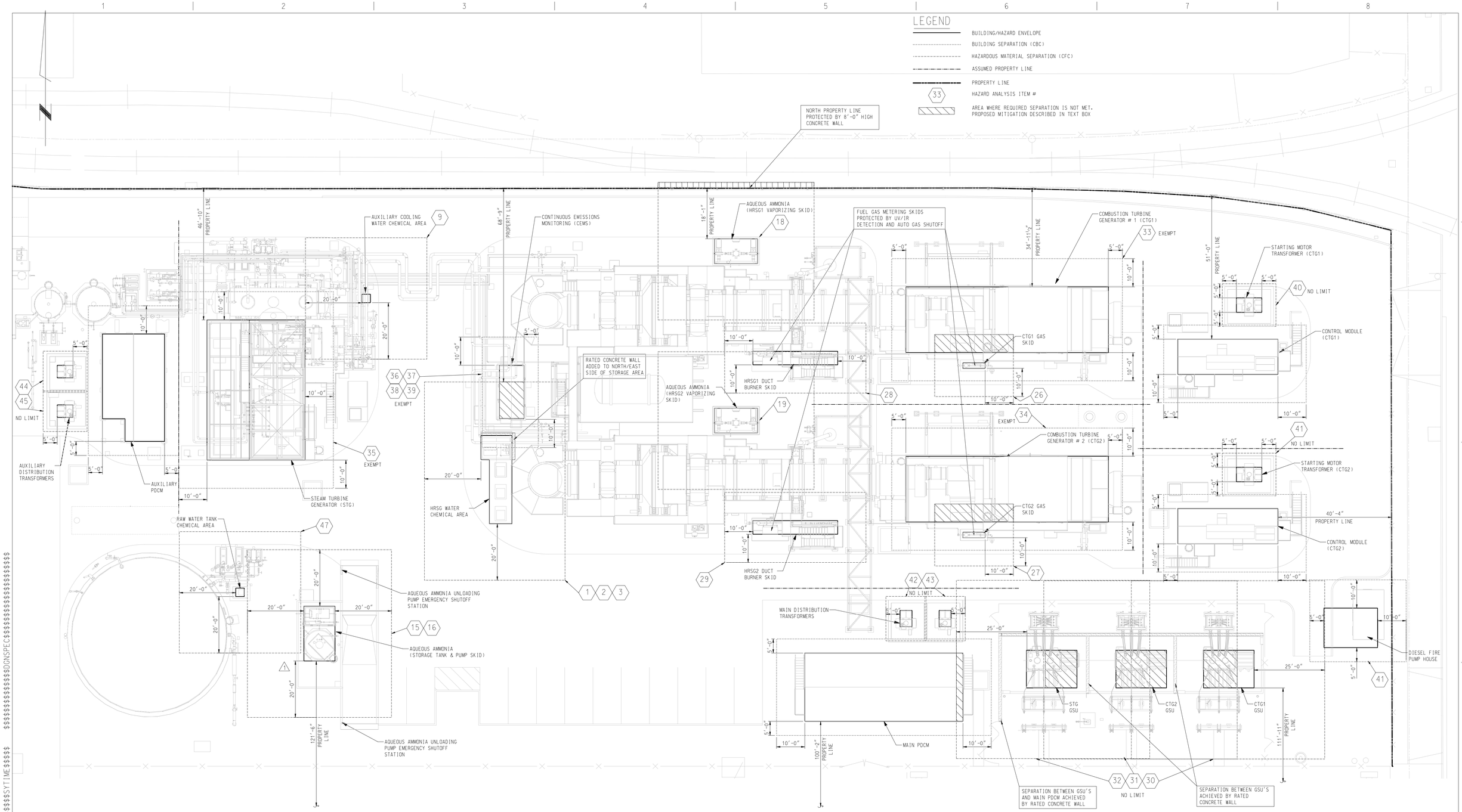

LEGEND

▬▬▬	BUILDING/HAZARD ENVELOPE
······	BUILDING SEPARATION (CBC)
- - - -	HAZARDOUS MATERIAL SEPARATION (CFC)
—·—·—	ASSUMED PROPERTY LINE
━ ━ ━	PROPERTY LINE
⬡ 33	HAZARD ANALYSIS ITEM #
▨	AREA WHERE REQUIRED SEPARATION IS NOT MET. PROPOSED MITIGATION DESCRIBED IN TEXT BOX

NORTH PROPERTY LINE PROTECTED BY 8'-0" HIGH CONCRETE WALL

FUEL GAS METERING SKIDS PROTECTED BY UV/IR DETECTION AND AUTO GAS SHUTOFF

RATED CONCRETE WALL ADDED TO NORTH/EAST SIDE OF STORAGE AREA

SEPARATION BETWEEN GSU'S AND MAIN PDCM ACHIEVED BY RATED CONCRETE WALL

SEPARATION BETWEEN GSU'S ACHIEVED BY RATED CONCRETE WALL

USERNAME $$$$$$$$$SYTIME$$$$ $$$$$$$$$$$$$$$$$DGNSPEC$$$$$$$$$$$$$$$$$$$$$

35cvsep3a.dgn

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REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD
4	ISSUED FOR RECORD	11/30/05	JET	HSD	DEJ	TLK
3	REVISED PER DCN 108	07/30/04	SDS	HSD	DEJ	TLK
2	REVISED PER DCN 090	04/09/04	SDS	HSD	DEJ	TLK
1	REVISED PER DCN 070	12/23/03	SDS	HSD	DEJ	TLK
0	ISSUED FOR CONSTRUCTION	10/14/03	SDS	HSD	DEJ	TLK

REFERENCE DRAWINGS

DSGN	SDS	09/24/03
DRN	DEJ	09/24/03
CKD	TLK	09/24/03

SCALE: 1/16"=1'-0"

FOR 22x34 DWG ONLY

POWER ENGINEERS
3940 GLENBROOK DRIVE
HAILEY, ID 83333

CITY OF VERNON

MALBURG GENERATING STATION

SEPARATION ANALYSIS
AREA A

JOB NUMBER
516476-04

DRAWING NO. SA-3A

REV 4

USERNAME $$$$$$$SYTIME$$$$$ $$$$$$$$$$$$$$$$DGNSPEC$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

35cvsep3b.dgn

REV	REVISIONS	DATE	DRN	DSGN	CKD	APPD
4	ISSUED FOR RECORD	11/30/05	SDS	HSD	DEJ	TLK
3	REVISED PER DCN 108	07/30/04	SDS	HSD	DEJ	TLK
2	REVISED PER DCN 090	04/09/04	SDS	HSD	DEJ	TLK
1	REVISED PER DCN 070	12/23/03	SDS	HSD	DEJ	TLK
0	ISSUED FOR CONSTRUCTION	10/14/03	SDS	HSD	DEJ	TLK

REFERENCE DRAWINGS

DSGN	SDS	09/24/03
DRN	DEJ	09/24/03
CKD	TLK	09/24/03

SCALE: $^{1}/_{16}$"=1'-0"

FOR 22x34 DWG ONLY

POWER ENGINEERS
3940 GLENBROOK DRIVE
HAILEY, ID 83333

CITY OF VERNON

MALBURG GENERATING STATION

SEPARATION ANALYSIS
AREA B

JOB NUMBER
516476-04

DRAWING NO. SA-3B

REV 4

CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM (CERS)

CONSOLIDATED EMERGENCY RESPONSE / CONTINGENCY PLAN

Prior to completing this Plan, please refer to the INSTRUCTIONS FOR COMPLETING A CONSOLIDATED CONTINGENCY PLAN

A. FACILITY IDENTIFICATION AND OPERATIONS OVERVIEW

FACILITY ID #	CERS ID A1.	DATE OF PLAN PREPARATION/REVISION A2.
	10451263	7/17/2013

BUSINESS NAME *(Same as Facility Name or DBA - Doing Business As)* 3.
Malburg Generating Station

BUSINESS SITE ADDRESS 103.
4963 S Soto St

BUSINESS SITE CITY 104.		ZIP CODE 105.
Vernon	CA	90058

TYPE OF BUSINESS (e.g., Painting Contractor) A3.	INCIDENTAL OPERATIONS (e.g., Fleet Maintenance) A4.
Electric Power Generation	

THIS PLAN COVERS CHEMICAL SPILLS, FIRES, AND EARTHQUAKES INVOLVING: (Check all that apply) A5.

☒ 1. HAZARDOUS MATERIALS; ☒ 2. HAZARDOUS WASTES

B. INTERNAL RESPONSE

INTERNAL FACILITY EMERGENCY RESPONSE WILL OCCUR VIA: (Check all that apply) B1.

☒ 1. CALLING PUBLIC EMERGENCY RESPONDERS (i.e., 9-1-1)
☒ 2. CALLING HAZARDOUS WASTE CONTRACTOR
☐ 3. ACTIVATING IN-HOUSE EMERGENCY RESPONSE TEAM

C. EMERGENCY COMMUNICATIONS, PHONE NUMBERS AND NOTIFICATIONS

Whenever there is an imminent or actual emergency situation such as an explosion, fire, or release, the Emergency Coordinator (or his/her designee when the Emergency Coordinator is on call) shall:

1. Activate internal facility alarms or communications systems, where applicable, to notify all facility personnel.
2. Notify appropriate local authorities (i.e., call 9-1-1).
3. Notify the California Emergency Management Agency at (800) 852-7550.

Before facility operations are resumed in areas of the facility affected by the incident, the emergency coordinator shall notify the California Department of Toxic Substances Control (DTSC), the local Unified Program Agency (UPA), and the local fire department's hazardous materials program that the facility is in compliance with requirements to:

1. Provide for proper storage and disposal of recovered waste, contaminated soil or surface water, or any other material that results from an explosion, fire, or release at the facility; and
2. Ensure that no material that is incompatible with the released material is transferred, stored, or disposed of in areas of the facility affected by the incident until cleanup procedures are completed.

INTERNAL FACILITY EMERGENCY COMMUNICATIONS OR ALARM NOTIFICATION WILL OCCUR VIA: (Check all that apply) C1.

☐ 1. VERBAL WARNINGS; ☒ 2. PUBLIC ADDRESS OR INTERCOM SYSTEM; ☐ 3. TELEPHONE;
☐ 4. PAGERS; ☒ 5. ALARM SYSTEM; ☒ 6. PORTABLE RADIO

NOTIFICATIONS TO NEIGHBORING FACILITIES THAT MAY BE AFFECTED BY AN OFF-SITE RELEASE WILL OCCUR BY: (Check all that apply) C2.

☒ 1. VERBAL WARNINGS; ☐ 2. PUBLIC ADDRESS OR INTERCOM SYSTEM; ☒ 3. TELEPHONE;
☐ 4. PAGERS; ☐ 5. ALARM SYSTEM; ☐ 6. PORTABLE RADIO

EMERGENCY RESPONSE PHONE NUMBERS:		
	AMBULANCE, FIRE, POLICE AND CHP	9-1-1
	CALIFORNIA EMERGENCY MANAGEMENT AGENCY (CAL/EMA)	(800) 852-7550
	NATIONAL RESPONSE CENTER (NRC)	(800) 424-8802
	POISON CONTROL CENTER	(800) 222-1222
	LOCAL UNIFIED PROGRAM AGENCY (UPA/CUPA)	(323) 583-8811 C3.
	OTHER (Specify): C4.	C5.
NEAREST MEDICAL FACILITY / HOSPITAL NAME:	Stacey Medical Center C6.	(323) 584-0779 C7.
AGENCY NOTIFICATION PHONE NUMBERS:	CALIFORNIA DEPT. OF TOXIC SUBSTANCES CONTROL (DTSC)	(916) 255-3545
	REGIONAL WATER QUALITY CONTROL BOARD	C8.
	U.S. ENVIRONMENTAL PROTECTION AGENCY (US EPA)	(800) 300-2193
	CALIFORNIA DEPT OF FISH AND GAME (DFG)	(916) 358-2900
	U.S. COAST GUARD	(202) 267-2180
	CAL/OSHA	(916) 263-2800
	STATE FIRE MARSHAL	(916) 445-8200
	OTHER (Specify): C9.	C10.
	OTHER (Specify): C11.	C12.

D. EMERGENCY CONTAINMENT AND CLEANUP PROCEDURES

SPILL PREVENTION, CONTAINMENT, AND CLEANUP PROCEDURES: (Check all boxes that apply to indicate your procedures for containing spills, releases, fires or explosions; and. preventing and mitigating associated harm to persons, property, and the environment.)

D1.

- ☒ 1. MONITOR FOR LEAKS, RUPTURES, PRESSURE BUILD-UP, ETC.;
- ☒ 2. PROVIDE STRUCTURAL PHYSICAL BARRIERS (e.g., Portable spill containment walls);
- ☒ 3. PROVIDE ABSORBENT PHYSICAL BARRIERS (e.g., Pads, pigs, pillows);
- ☒ 4. COVER OR BLOCK FLOOR AND/ OR STORM DRAINS;
- ☒ 5. BUILT-IN BERM IN WORK / STORAGE AREA;
- ☒ 6. AUTOMATIC FIRE SUPPRESSION SYSTEM;
- ☒ 7. ELIMINATE SOURCES OF IGNITION FOR FLAMMABLE HAZARDS (e.g. Flammable liquids, Propane);
- ☒ 8. STOP PROCESSES AND/OR OPERATIONS;
- ☒ 9. AUTOMATIC / ELECTRONIC EQUIPMENT SHUT-OFF SYSTEM;
- ☒ 10. SHUT-OFF WATER, GAS, ELECTRICAL UTILITIES AS APPROPRIATE;
- ☒ 11. CALL 9-1-1 FOR PUBLIC EMERGENCY RESPONDER ASSISTANCE / MEDICAL AID;
- ☒ 12. NOTIFY AND EVACUATE PERSONS IN ALL THREATENED AREAS;
- ☒ 13. ACCOUNT FOR EVACUATED PERSONS IMMEDIATELY AFTER EVACUATION CALL;
- ☐ 14. PROVIDE PROTECTIVE EQUIPMENT FOR ON-SITE RESPONSE TEAM;
- ☒ 15. REMOVE OR ISOLATE CONTAINERS / AREA AS APPROPRIATE;
- ☒ 16. HIRE LICENSED HAZARDOUS WASTE CONTRACTOR;
- ☒ 17. USE ABSORBENT MATERIAL FOR SPILLS WITH SUBSEQUENT PROPER LABELING, STORAGE, AND HAZARDOUS WASTE DISPOSAL AS APPROPRIATE;
- ☐ 18. SUCTION USING SHOP VACUUM WITH SUBSEQUENT PROPER LABELING, STORAGE, AND HAZARDOUS WASTE DISPOSAL AS APPROPRIATE;
- ☐ 19. WASH / DECONTAMINATE EQUIPMENT W/ CONTAINMENT and DISPOSAL OF EFFLUENT / RINSATE AS HAZARDOUS WASTE;
- ☒ 20. PROVIDE SAFE TEMPORARY STORAGE OF EMERGENCY-GENERATED WASTES;
- ☐ 21. OTHER (Specify):

D2.

E. FACILITY EVACUATION

THE FOLLOWING ALARM SIGNAL(S) WILL BE USED TO BEGIN EVACUATION OF THE FACILITY (CHECK ALL THAT APPLY): E1.

- ☐ 1. BELLS;
- ☒ 2. HORNS/SIRENS;
- ☒ 3. VERBAL (I.E., SHOUTING);
- ☒ 4. OTHER (Specify): Strobes

E2.

THE FOLLOWING LOCATION(S) IS/ARE EVACUEE EMERGENCY ASSEMBLY AREA(S) (i.e., Front parking lot, specific street corner, etc.) E3.

Southwest corner of 50th and Seville. In the case of an ammonia tank rupture and wind blowing to the southwest, the assembly location moves to the Northwest corner of Seville and Leonis.

Note: The Emergency Coordinator must account for all on site employees and/or site visitors after evacuation.

☒ EVACUATION ROUTE MAP(S) POSTED AS REQUIRED E4.

Note: The map(s) must show primary and alternate evacuation routes, emergency exits, and primary and alternate staging areas, and must be prominently posted throughout the facility in locations where it will be visible to employees and visitors.

F. ARRANGEMENTS FOR EMERGENCY SERVICES

Explanation of Requirement: Advance arrangements with local fire and police departments, hospitals, and/or emergency services contractors should be made as appropriate for your facility. You may determine that such arrangements are not necessary.

ADVANCE ARRANGEMENTS FOR LOCAL EMERGENCY SERVICES (Check one of the following) F1.

- ☒ 1. HAVE BEEN DETERMINED NOT NECESSARY; *or*
- ☐ 2. THE FOLLOWING ARRANGEMENTS HAVE BEEN MADE (Specify):

F2.

G. EMERGENCY EQUIPMENT

Check all boxes that apply to list emergency response equipment available at the facility and identify the location(s) where the equipment is kept and the equipment's capability, if applicable. [e.g., ☒ CHEMICAL PROTECTIVE GLOVES | Spill response kit | One time use, Oil & solvent resistant only.]

TYPE	EQUIPMENT AVAILABLE G1	LOCATION	CAPABILITY *(If applicable)*
Safety and First Aid	1. ☒ CHEMICAL PROTECTIVE SUITS, APRONS, OR VESTS	G2: Warehouse, Bulk Chemical	G3:
	2. ☒ CHEMICAL PROTECTIVE GLOVES	G4: Warehouse Safety Locker	G5:
	3. ☐ CHEMICAL PROTECTIVE BOOTS	G6:	G7:
	4. ☒ SAFETY GLASSES / GOGGLES / SHIELDS	G8: Warehouse Safety Locker, Lead Operators Office	G9:
	5. ☒ HARD HATS	G10: Warehouse	G11:
	6. ☐ CARTRIDGE RESPIRATORS	G12:	G13:
	7. ☐ SELF-CONTAINED BREATHING APPARATUS (SCBA)	G14:	G15:
	8. ☒ FIRST AID KITS / STATIONS	G16: Control Room, Wall behind Control Room, Machine Shop and Center Office	G17:
	9. ☒ PLUMBED EYEWASH FOUNTAIN / SHOWER	G18: Bulk Chemical, NH3 Skid, CEMS and Water Treatment Areas	G19:
	10. ☒ PORTABLE EYEWASH KITS	G20: Aux PDCM, Lab	G21:
	11. ☐ OTHER	G22:	G23:
	12. ☐ OTHER	G24:	G25:
Fire Fighting	13. ☒ PORTABLE FIRE EXTINGUISHERS	G26:	G27:
	14. ☒ FIXED FIRE SYSTEMS / SPRINKLERS / FIRE HOSES	G28:	G29:
	15. ☒ FIRE ALARM BOXES OR STATIONS	G30:	G31:
	16. ☐ OTHER	G32:	G33:
Spill Control and Clean-Up	17. ☒ ALL-IN-ONE SPILL KIT	G34: Outside Both CTG's and STG, Main Accumulation Area	G35:
	18. ☒ ABSORBENT MATERIAL	G36: Spill Kits, Tool Crib, Warehouse Safety Cabinet	G37:
	19. ☒ CONTAINER FOR USED ABSORBENT	G38: Main Accumulation Area, Satellite Accumulation Area	G39:
	20. ☐ BERMING / DIKING EQUIPMENT	G40:	G41:
	21. ☐ BROOM	G42:	G43:
	22. ☐ SHOVEL	G44:	G45:
	23. ☐ SHOP VAC	G46:	G47:
	24. ☐ EXHAUST HOOD	G48:	G49:
	25. ☐ EMERGENCY SUMP / HOLDING TANK	G50:	G51:
	26. ☐ CHEMICAL NEUTRALIZERS	G52:	G53:
	27. ☐ GAS CYLINDER LEAK REPAIR KIT	G54:	G55:
	28. ☐ SPILL OVERPACK DRUMS	G56:	G57:
	29. ☐ OTHER	G58:	G59:
Communi-cations and Alarm Systems	30. ☒ TELEPHONES (Includes cellular)	G60:	G61:
	31. ☒ INTERCOM / PA SYSTEM	G62:	G63:
	32. ☒ PORTABLE RADIOS	G64:	G65:
	33. ☐ AUTOMATIC ALARM CHEMICAL MONITORING EQUIPMENT	G66:	G67:
Other	34. ☐ OTHER	G68:	G69:
	35. ☐ OTHER	G70:	G71:

H. EARTHQUAKE VULNERABILITY

Identify areas of the facility that are vulnerable to hazardous materials releases / spills due to earthquake-related motion. These areas require immediate isolation and inspection.

VULNERABLE AREAS: (Check all that apply)		LOCATIONS (e.g., shop, outdoor shed, forensic lab)	
☒ 1. HAZARDOUS MATERIALS / WASTE STORAGE AREA	H1.	Main Accumulation Area near ammonia tank.	H2.
☐ 2. PROCESS LINES / PIPING			H3.
☐ 3. LABORATORY			H4.
☐ 4. WASTE TREATMENT AREA			H5.

Identify mechanical systems vulnerable to releases / spills due to earthquake-related motion. These systems require immediate isolation and inspection.

VULNERABLE SYSTEMS: (Check all that apply)		LOCATIONS	
☒ 1. SHELVES, CABINETS AND RACKS	H6.	Warehouse	H7.
☐ 2. TANKS (EMERGENCY SHUTOFF)			H8.
☒ 3. PORTABLE GAS CYLINDERS		CEMS Building	H9.
☒ 4. EMERGENCY SHUTOFF AND/OR UTILITY VALVES			H10.
☐ 5. SPRINKLER SYSTEMS			H11.
☐ 6. STATIONARY PRESSURIZED CONTAINERS (e.g., Propane dispensing tank)			H12.

I. EMPLOYEE TRAINING

Explanation of Requirement: Employee training is required for all employees handling hazardous materials and hazardous wastes in day-to-day or clean-up operations including volunteers and/or contractors. Training must be:

- Provided within 6 months for new hires;
- Amended as necessary prior to change in process or work assignment;
- Given upon modification to the Emergency Response / Contingency Plan, and updated/refreshed annually for all employees.

Required content includes all of the following:

- Material Safety Data Sheets;
- Hazard communication related to health and safety;
- Methods for safe handling of hazardous substances;
- Fire hazards of materials / processes;
- Conditions likely to worsen emergencies;
- Coordination of emergency response;
- Notification procedures;
- Applicable laws and regulations;
- Communication and alarm systems;
- Personal protective equipment;
- Use of emergency response equipment (e.g. Fire extinguishers, respirators, etc.);
- Decontamination procedures;
- Evacuation procedures;
- Control and containment procedures;
- UST monitoring system equipment and procedures (if applicable).

INDICATE HOW EMPLOYEE TRAINING PROGRAM IS ADMINISTERED (Check all that apply) I1.

☒ 1. FORMAL CLASSROOM; ☒ 2. VIDEOS; ☒ 3. SAFETY / TAILGATE MEETINGS;

☐ 4. STUDY GUIDES / MANUALS (Specify): Procedures, Powerpoint Presentations I2.

☐ 5. OTHER (Specify): I3.

☐ 6. NOT APPLICABLE BECAUSE FACILITY HAS NO EMPLOYEES

Large Quantity Generator (LQG) Training Records: Large quantity hazardous waste generators (i.e., who generate more than 270 gallons/1,000 kilograms of hazardous waste per month) must retain written documentation of employee hazardous waste management training sessions which includes:

- A written outline/agenda of the type and amount of both introductory and continuing training that will be given to persons filling each job position having responsibility for the management of hazardous waste (e.g., labeling, manifesting, compliance with accumulation time limits, etc.).
- The name, job title, and date of training for each hazardous waste management training session given to an employee filling such a job position; and
- A written job description for each of the above job positions that describes job duties and the skills, education, or other qualifications required of personnel assigned to the position.
- Current employee training records must be retained until closure of the facility.
- Former employee training records must be retained at least three years after termination of employment.

J. LIST OF ATTACHMENTS

(Check one of the following) J1.

☒ 1. NO ATTACHMENTS ARE REQUIRED; *or*

☐ 2. THE FOLLOWING DOCUMENTS ARE ATTACHED: J2.

K. SIGNATURE / CERTIFICATION

Certification: Based on my inquiry of those individuals responsible for obtaining the information, I certify under penalty of law that I have personally examined and am familiar with the information submitted and believe the information is true, accurate, and complete, and that a copy is available on site.

SIGNATURE OF OWNER/OPERATOR	DATE SIGNED K1.
[signature]	30 July 2013
NAME OF SIGNER (print) K2.	TITLE OF SIGNER K3.
DANIEL DUNLAP	SENIOR DIRECTOR, REGULATORY AFFAIRS

CALIFORNIA ENVIRONMENTAL REPORTING SYSTEM (CERS)

CONSOLIDATED EMERGENCY RESPONSE / CONTINGENCY PLAN

Prior to completing this Plan, please refer to the INSTRUCTIONS FOR COMPLETING A CONSOLIDATED CONTINGENCY PLAN

A. FACILITY IDENTIFICATION AND OPERATIONS OVERVIEW

FACILITY ID #	1. CERS ID	A1. DATE OF PLAN PREPARATION/REVISION A2.
	10451263	7/29/2015

BUSINESS NAME *(Same as Facility Name or DBA - Doing Business As)* 3.
Malburg Generating Station

BUSINESS SITE ADDRESS 103.
4963 S Soto St

BUSINESS SITE CITY 104.		ZIP CODE 105.
Vernon	CA	90058

TYPE OF BUSINESS (e.g., Painting Contractor) A3.	INCIDENTAL OPERATIONS (e.g., Fleet Maintenance) A4.
Electric Power Generation	

THIS PLAN COVERS CHEMICAL SPILLS, FIRES, AND EARTHQUAKES INVOLVING: (Check all that apply) A5.

☒ 1. HAZARDOUS MATERIALS; ☒ 2. HAZARDOUS WASTES

B. INTERNAL RESPONSE

INTERNAL FACILITY EMERGENCY RESPONSE WILL OCCUR VIA: (Check all that apply) B1

☒ 1. CALLING PUBLIC EMERGENCY RESPONDERS (i.e., 9-1-1)
☒ 2. CALLING HAZARDOUS WASTE CONTRACTOR
☐ 3. ACTIVATING IN-HOUSE EMERGENCY RESPONSE TEAM

C. EMERGENCY COMMUNICATIONS, PHONE NUMBERS AND NOTIFICATIONS

Whenever there is an imminent or actual emergency situation such as an explosion, fire, or release, the Emergency Coordinator (or his/her designee when the Emergency Coordinator is on call) shall:

1. Activate internal facility alarms or communications systems, where applicable, to notify all facility personnel.
2. Notify appropriate local authorities (i.e., call 9-1-1).
3. Notify the California Emergency Management Agency at (800) 852-7550.

Before facility operations are resumed in areas of the facility affected by the incident, the emergency coordinator shall notify the California Department of Toxic Substances Control (DTSC), the local Unified Program Agency (UPA), and the local fire department's hazardous materials program that the facility is in compliance with requirements to:

1. Provide for proper storage and disposal of recovered waste, contaminated soil or surface water, or any other material that results from an explosion, fire, or release at the facility; and
2. Ensure that no material that is incompatible with the released material is transferred, stored, or disposed of in areas of the facility affected by the incident until cleanup procedures are completed.

INTERNAL FACILITY EMERGENCY COMMUNICATIONS OR ALARM NOTIFICATION WILL OCCUR VIA: (Check all that apply) C1.

☐ 1. VERBAL WARNINGS;	☒ 2. PUBLIC ADDRESS OR INTERCOM SYSTEM;	☐ 3. TELEPHONE;
☐ 4. PAGERS;	☒ 5. ALARM SYSTEM;	☒ 6. PORTABLE RADIO

NOTIFICATIONS TO NEIGHBORING FACILITIES THAT MAY BE AFFECTED BY AN OFF-SITE RELEASE WILL OCCUR BY: (Check all that apply) C2.

☒ 1. VERBAL WARNINGS;	☐ 2. PUBLIC ADDRESS OR INTERCOM SYSTEM;	☒ 3. TELEPHONE;
☐ 4. PAGERS;	☐ 5. ALARM SYSTEM;	☐ 6. PORTABLE RADIO

EMERGENCY RESPONSE PHONE NUMBERS:		
	AMBULANCE, FIRE, POLICE AND CHP	9-1-1
	CALIFORNIA EMERGENCY MANAGEMENT AGENCY (CAL/EMA)	(800) 852-7550
	NATIONAL RESPONSE CENTER (NRC)	(800) 424-8802
	POISON CONTROL CENTER	(800) 222-1222
	LOCAL UNIFIED PROGRAM AGENCY (UPA/CUPA)	(323) 583-8811 C3.
	OTHER (Specify): C4.	C5.
NEAREST MEDICAL FACILITY / HOSPITAL NAME:	Stacey Medical Center C6.	(323) 584-0779 C7.
AGENCY NOTIFICATION PHONE NUMBERS:	CALIFORNIA DEPT. OF TOXIC SUBSTANCES CONTROL (DTSC)	(916) 255-3545
	REGIONAL WATER QUALITY CONTROL BOARD	C8.
	U.S. ENVIRONMENTAL PROTECTION AGENCY (US EPA)	(800) 300-2193
	CALIFORNIA DEPT OF FISH AND GAME (DFG)	(916) 358-2900
	U.S. COAST GUARD	(202) 267-2180
	CAL/OSHA	(916) 263-2800
	STATE FIRE MARSHAL	(916) 445-8200
	OTHER (Specify): C9.	C10.
	OTHER (Specify): C11.	C12.

D. EMERGENCY CONTAINMENT AND CLEANUP PROCEDURES

SPILL PREVENTION, CONTAINMENT, AND CLEANUP PROCEDURES: (Check all boxes that apply to indicate your procedures for containing spills, releases, fires or explosions; and. preventing and mitigating associated harm to persons, property, and the environment.)

D1.

- ☒ 1. MONITOR FOR LEAKS, RUPTURES, PRESSURE BUILD-UP, ETC.;
- ☒ 2. PROVIDE STRUCTURAL PHYSICAL BARRIERS (e.g., Portable spill containment walls);
- ☒ 3. PROVIDE ABSORBENT PHYSICAL BARRIERS (e.g., Pads, pigs, pillows);
- ☒ 4. COVER OR BLOCK FLOOR AND/ OR STORM DRAINS;
- ☒ 5. BUILT-IN BERM IN WORK / STORAGE AREA;
- ☒ 6. AUTOMATIC FIRE SUPPRESSION SYSTEM;
- ☒ 7. ELIMINATE SOURCES OF IGNITION FOR FLAMMABLE HAZARDS (e.g. Flammable liquids, Propane);
- ☒ 8. STOP PROCESSES AND/OR OPERATIONS;
- ☒ 9. AUTOMATIC / ELECTRONIC EQUIPMENT SHUT-OFF SYSTEM;
- ☒ 10. SHUT-OFF WATER, GAS, ELECTRICAL UTILITIES AS APPROPRIATE;
- ☒ 11. CALL 9-1-1 FOR PUBLIC EMERGENCY RESPONDER ASSISTANCE / MEDICAL AID;
- ☒ 12. NOTIFY AND EVACUATE PERSONS IN ALL THREATENED AREAS;
- ☒ 13. ACCOUNT FOR EVACUATED PERSONS IMMEDIATELY AFTER EVACUATION CALL;
- ☐ 14. PROVIDE PROTECTIVE EQUIPMENT FOR ON-SITE RESPONSE TEAM;
- ☒ 15. REMOVE OR ISOLATE CONTAINERS / AREA AS APPROPRIATE;
- ☒ 16. HIRE LICENSED HAZARDOUS WASTE CONTRACTOR;
- ☒ 17. USE ABSORBENT MATERIAL FOR SPILLS WITH SUBSEQUENT PROPER LABELING, STORAGE, AND HAZARDOUS WASTE DISPOSAL AS APPROPRIATE;
- ☐ 18. SUCTION USING SHOP VACUUM WITH SUBSEQUENT PROPER LABELING, STORAGE, AND HAZARDOUS WASTE DISPOSAL AS APPROPRIATE;
- ☐ 19. WASH / DECONTAMINATE EQUIPMENT W/ CONTAINMENT and DISPOSAL OF EFFLUENT / RINSATE AS HAZARDOUS WASTE;
- ☒ 20. PROVIDE SAFE TEMPORARY STORAGE OF EMERGENCY-GENERATED WASTES;
- ☐ 21. OTHER (Specify): D2.

E. FACILITY EVACUATION

THE FOLLOWING ALARM SIGNAL(S) WILL BE USED TO BEGIN EVACUATION OF THE FACILITY (CHECK ALL THAT APPLY): E1.

- ☐ 1. BELLS;
- ☒ 2. HORNS/SIRENS;
- ☒ 3. VERBAL (I.E., SHOUTING);
- ☒ 4. OTHER (Specify): Strobes

E2.

THE FOLLOWING LOCATION(S) IS/ARE EVACUEE EMERGENCY ASSEMBLY AREA(S) (i.e., Front parking lot, specific street corner, etc.) E3.

Southwest corner of 50th and Seville. In the case of ammonia tank rupture and wind blowing to the southwest, the assembly location moves to the northwest corner of Seville and Leonis.

Note: The Emergency Coordinator must account for all on site employees and/or site visitors after evacuation.

☒ EVACUATION ROUTE MAP(S) POSTED AS REQUIRED E4.

Note: The map(s) must show primary and alternate evacuation routes, emergency exits, and primary and alternate staging areas, and must be prominently posted throughout the facility in locations where it will be visible to employees and visitors.

F. ARRANGEMENTS FOR EMERGENCY SERVICES

Explanation of Requirement: Advance arrangements with local fire and police departments, hospitals, and/or emergency services contractors should be made as appropriate for your facility. You may determine that such arrangements are not necessary.

ADVANCE ARRANGEMENTS FOR LOCAL EMERGENCY SERVICES (Check one of the following) F1.

- ☒ 1. HAVE BEEN DETERMINED NOT NECESSARY; *or*
- ☐ 2. THE FOLLOWING ARRANGEMENTS HAVE BEEN MADE (Specify): F2.

G. EMERGENCY EQUIPMENT

Check all boxes that apply to list emergency response equipment available at the facility and identify the location(s) where the equipment is kept and the equipment's capability, if applicable. [e.g., ☒ CHEMICAL PROTECTIVE GLOVES | Spill response kit | One time use, Oil & solvent resistant only.]

TYPE	EQUIPMENT AVAILABLE G1.	LOCATION	CAPABILITY *(If applicable)*
Safety and First Aid	1. ☒ CHEMICAL PROTECTIVE SUITS, APRONS, OR VESTS	G2. Warehouse, Bulk Chemical	G3.
	2. ☒ CHEMICAL PROTECTIVE GLOVES	G4. Warehouse Safety Locker	G5.
	3. ☐ CHEMICAL PROTECTIVE BOOTS	G6.	G7.
	4. ☒ SAFETY GLASSES / GOGGLES / SHIELDS	G8. Warehouse Safety Locker	G9.
	5. ☒ HARD HATS	G10. Warehouse	G11.
	6. ☐ CARTRIDGE RESPIRATORS	G12.	G13.
	7. ☐ SELF-CONTAINED BREATHING APPARATUS (SCBA)	G14.	G15.
	8. ☒ FIRST AID KITS / STATIONS	G16. Control Room, West behind Control Room, Machine Shop, Center Office Tr	G17.
	9. ☒ PLUMBED EYEWASH FOUNTAIN / SHOWER	G18. Bulk Chemical, NH3 Skid, CEMS, Water Treatment Area	G19.
	10. ☐ PORTABLE EYEWASH KITS	G20.	G21.
	11. ☐ OTHER	G22.	G23.
	12. ☐ OTHER	G24.	G25.
Fire Fighting	13. ☒ PORTABLE FIRE EXTINGUISHERS	G26.	G27.
	14. ☒ FIXED FIRE SYSTEMS / SPRINKLERS / FIRE HOSES	G28.	G29.
	15. ☒ FIRE ALARM BOXES OR STATIONS	G30.	G31.
	16. ☐ OTHER	G32.	G33.
Spill Control and Clean-Up	17. ☒ ALL-IN-ONE SPILL KIT	G34. Outside both CTG's and STG, Main Accumulation Area	G35.
	18. ☒ ABSORBENT MATERIAL	G36. Spill Kits, Tool Crib, Warehouse Safety Cabinet	G37.
	19. ☒ CONTAINER FOR USED ABSORBENT	G38. Main Accumulation Area, Satellite Accumulation Area	G39.
	20. ☐ BERMING / DIKING EQUIPMENT	G40.	G41.
	21. ☐ BROOM	G42.	G43.
	22. ☐ SHOVEL	G44.	G45.
	23. ☐ SHOP VAC	G46.	G47.
	24. ☐ EXHAUST HOOD	G48.	G49.
	25. ☐ EMERGENCY SUMP / HOLDING TANK	G50.	G51.
	26. ☐ CHEMICAL NEUTRALIZERS	G52.	G53.
	27. ☐ GAS CYLINDER LEAK REPAIR KIT	G54.	G55.
	28. ☐ SPILL OVERPACK DRUMS	G56.	G57.
	29. ☐ OTHER	G58.	G59.
Communi-cations and Alarm Systems	30. ☒ TELEPHONES (Includes cellular)	G60.	G61.
	31. ☒ INTERCOM / PA SYSTEM	G62.	G63.
	32. ☒ PORTABLE RADIOS	G64.	G65.
	33. ☐ AUTOMATIC ALARM CHEMICAL MONITORING EQUIPMENT	G66.	G67.
Other	34. ☐ OTHER	G68.	G69.
	35. ☐ OTHER	G70.	G71.

H. EARTHQUAKE VULNERABILITY

Identify areas of the facility that are vulnerable to hazardous materials releases / spills due to earthquake-related motion. These areas require immediate isolation and inspection.

VULNERABLE AREAS: (Check all that apply)		LOCATIONS (e.g., shop, outdoor shed, forensic lab)	
☒ 1. HAZARDOUS MATERIALS / WASTE STORAGE AREA	H1.	Main Accumulation Area near Ammonia Tank	H2.
☐ 2. PROCESS LINES / PIPING			H3.
☐ 3. LABORATORY			H4.
☐ 4. WASTE TREATMENT AREA			H5.

Identify mechanical systems vulnerable to releases / spills due to earthquake-related motion. These systems require immediate isolation and inspection.

VULNERABLE SYSTEMS: (Check all that apply)		LOCATIONS	
☒ 1. SHELVES, CABINETS AND RACKS	H6.	Warehouse	H7.
☐ 2. TANKS (EMERGENCY SHUTOFF)			H8.
☒ 3. PORTABLE GAS CYLINDERS		CEMS Building	H9.
☒ 4. EMERGENCY SHUTOFF AND/OR UTILITY VALVES			H10.
☐ 5. SPRINKLER SYSTEMS			H11.
☐ 6. STATIONARY PRESSURIZED CONTAINERS (e.g., Propane dispensing tank)			H12.

I. EMPLOYEE TRAINING

Explanation of Requirement: Employee training is required for all employees handling hazardous materials and hazardous wastes in day-to-day or clean-up operations including volunteers and/or contractors. Training must be:

- Provided within 6 months for new hires;
- Amended as necessary prior to change in process or work assignment;
- Given upon modification to the Emergency Response / Contingency Plan, and updated/refreshed annually for all employees.

Required content includes all of the following:

- Material Safety Data Sheets;
- Hazard communication related to health and safety;
- Methods for safe handling of hazardous substances;
- Fire hazards of materials / processes;
- Conditions likely to worsen emergencies;
- Coordination of emergency response;
- Notification procedures;
- Applicable laws and regulations;
- Communication and alarm systems;
- Personal protective equipment;
- Use of emergency response equipment (e.g. Fire extinguishers, respirators, etc.);
- Decontamination procedures;
- Evacuation procedures;
- Control and containment procedures;
- UST monitoring system equipment and procedures (if applicable).

INDICATE HOW EMPLOYEE TRAINING PROGRAM IS ADMINISTERED (Check all that apply) I1.

☒ 1. FORMAL CLASSROOM; ☒ 2. VIDEOS; ☒ 3. SAFETY / TAILGATE MEETINGS;

☒ 4. STUDY GUIDES / MANUALS (Specify): Procedures, Powerpoint Presentations I2.

☐ 5. OTHER (Specify): I3.

☐ 6. NOT APPLICABLE BECAUSE FACILITY HAS NO EMPLOYEES

Large Quantity Generator (LQG) Training Records: Large quantity hazardous waste generators (i.e., who generate more than 270 gallons/1,000 kilograms of hazardous waste per month) must retain written documentation of employee hazardous waste management training sessions which includes:

- A written outline/agenda of the type and amount of both introductory and continuing training that will be given to persons filling each job position having responsibility for the management of hazardous waste (e.g., labeling, manifesting, compliance with accumulation time limits, etc.).
- The name, job title, and date of training for each hazardous waste management training session given to an employee filling such a job position; and
- A written job description for each of the above job positions that describes job duties and the skills, education, or other qualifications required of personnel assigned to the position.
- Current employee training records must be retained until closure of the facility.
- Former employee training records must be retained at least three years after termination of employment.

J. LIST OF ATTACHMENTS

(Check one of the following) J1.

☒ 1. NO ATTACHMENTS ARE REQUIRED; *or*

☐ 2. THE FOLLOWING DOCUMENTS ARE ATTACHED: J2.

K. SIGNATURE / CERTIFICATION

Certification: Based on my inquiry of those individuals responsible for obtaining the information, I certify under penalty of law that I have personally examined and am familiar with the information submitted and believe the information is true, accurate, and complete, and that a copy is available on site.

SIGNATURE OF OWNER/OPERATOR		DATE SIGNED	K1.
		7/30/2015	
NAME OF SIGNER (print)	K2.	TITLE OF SIGNER	K3.
Matt Richards		Plant Manager	