| DOCKETED | |
|---|---|
| **Docket Number:** | 99-AFC-05C |
| **Project Title:** | Otay Mesa Compliance |
| **TN #:** | 231029 |
| **Document Title:** | Otay Mesa Energy Center 2018 Report |
| **Description:** | N/A |
| **Filer:** | Joe Douglas |
| **Organization:** | California Energy Commission |
| **Submitter Role:** | Energy Commission |
| **Submission Date:** | 12/10/2019 8:30:34 AM |
| **Docketed Date:** | 12/10/2019 |

# OTAY MESA ENERGY CENTER, LLC

606 DE LA FUENTE COURT
SAN DIEGO, CA 92154

April 25, 2019

Mr. Joseph Douglas,
Compliance Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Re: 2017 - 2018 Annual Report
Otay Mesa Energy Center
Application for Certification # 99-AFC-5C

Dear Mr. Joseph Douglas,

As required for the Application for Certification 99-AFC-5C for Otay Mesa Energy Center, please find the attached annual report for October 2017 – September 2018.

If you have any questions or need more information, Please call me at (510) 731-1407.

Sincerely,

Lauren Bresnahan
Authorized Signatory and EH&S Specialist
Calpine-Otay Mesa Energy Center

# OTAY MESA ENERGY CENTER, LLC

606 De La Fuente Court
San Diego, CA 92154

**OTAY MESA ENERGY CENTER**
**99-AFC-5C**
**ANNUAL REPORT 2017-2018**

Annual Compliance Report

- Updated Compliance matrix which shows status of all conditions of certification Appendix A

- Summary of current project operating status and explanation of any significant changes to facility operation during the year.
  See Appendix B for current project operating status report.

- Documents that are required by specific conditions are attached as stated under each condition.

- There were no changes approved by Energy Commission or cleared by CPM during this reporting period.

- No submittal deadlines were missed during this reporting period.

- In December 2018, OMEC submitted the Title V Permit Renewal Application to SDAPCD. In August 2018 OMEC received a renewed Permit to Operate from SDAPCD. See Appendix B.

- No project compliance activities are scheduled for next year.

- There were no additions to on-site compliance file.

- No significant changes were made to the on-site contingency plan. A copy of the plan is in Appendix C.

- No NOV's for this reporting period.

# OTAY MESA ENERGY CENTER, LLC

606 De La Fuente Court
San Diego, CA 92154

**OTAY MESA ENERGY CENTER**
**99-AFC-5C**
**ANNUAL REPORT 2017-2018**

**BIO-3** An annual report from OMEC's designated biologist RECON Environmental Inc, is attached. See Appendix D.

**BIO-14** A statement for Quino checkerspot research fund is attached. See Appendix E.

**TSLN-2** There were no known complaints of any interference with radio or television signals caused by operation of project-related line and associated switchyards

**TSLN-4** San Diego Gas and Electric maintains the "right of way" under the transmission lines

**AQ-42,43** Annual MERC report was submitted to the District and the CPM in Feb 2019. See Appendix F.

**Haz-1** An updated list of hazardous materials contained in the facility is attached. See Appendix G.

**Waste-3** An updated Waste Management Plan is attached in Appendix H. Environmental Logistics picks up hazardous waste from OMEC on as need basis.

**VIS-1** All visible portions of power plant structures including heat recovery steam generators were treated with non-reflective finish and color that blends with natural surroundings as per California Energy Commission's CPM approval. A schedule to maintain them for life of the project has been implemented by inspecting the areas and performing any corrective action on as-need-basis.

**Trans-3** Permits/Licenses from vendors who transport hazardous material to OMEC are attached. See Appendix I.

# Appendix

# A

# OTAY MESA GENERATING PROJECT CEC COMPLIANCE MATRIX
## (This Matrix reflects the changes authorized under Amendment 1B 3/16/2015)

| Category | Condition # | Condition | Report | Status (Ongoing/Closed) | Verification |
|---|---|---|---|---|---|
| | **General Conditions** | | | | |
| Air Quality | AQ-1 | Operation of equipment shall be conducted in accordance with all data and specifications submitted with the application. | Inspection | Ongoing | Make the site available for inspection by representatives of the District, CARB, and the CEC. |
| Air Quality | AQ-2 | Equipment shall be properly maintained and kept in good operating condition at all times. | Inspection | Ongoing | Make the site and records available for inspection by representatives of the District, CARB, and the CEC. |
| Air Quality | AQ-3 | This equipment shall be fired on natural gas only. Natural gas specifications - <0.75 grains per 100 cu. ft. Use of non-PUC regulated gas shall be submitted to the district for written approval prior to use. | Quarterly Report | Ongoing | Make the site and records available for inspection by representatives of the District, CARB, and the CEC. |
| Air Quality | AQ-4 | Comply with 40CFR 73 reqiorements to offset, hold or retire SO2 allowances | Inspection | Ongoing | Make the site available for inspection by representatives of the District, CARB, and the CEC. |
| Air Quality | AQ-5 | Federal hazardous air pollutant emissions limits. Single pollutant - 10 tons, aggregate - 25 tons per 12 month period. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports. |
| Air Quality | AQ-6 | Provide access, facilities, utilities and any necessary safety equipment for sources testing and inspection upon request of the APCD. | Inspection | Ongoing | Make the site and records available for inspection by representatives of the District, CARB, and the CEC. |
| Air Quality | AQ-7 | Plant responsible for obtaining permits and authorizations required by other governmental agencies | Inspection | Ongoing | Make the site and records available for inspection by representatives of the District, CARB, and the CEC. |
| Air Quality | AQ-8 | Provide and comply with any requirements of Air Toxics "Hot Spots" . | Inspection | Ongoing | Make the site and records available for inspection by representatives of the District, CARB, and the CEC. |
| Air Quality | AQ-9 | Annual emissions of NOx shall not exceed 100 tons and 316 tons of CO from all emission units per each consecutive 12-calendar month period. Accrues at initial firing of each turbine. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-10 | Annual emissions of VOC shall not exceed 47.5 tons for each consecutive 12-calendar month period. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-11 | On going period NOx emissions limits shall not exceed 2.0 ppmv averaged over each rolling continuous 1 hour period, excluding startups and shutdowns. Submit exceedances as required by AQ-38 | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-12 | Emissions of NOx from each turbine shall not exceed 110 ppm corrected. This limit applies all time s including startup and shutdown as per 40 CFR Subpart GG subsection 60.334. | Inspection | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. |
| Air Quality | AQ-13 | Excess emissions report tp district as defined in 40 CFR Subpart GG subsection 60.334. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-14 | On going period CO emissions limits shall not exceed 6.0 ppmv averaged over each rolling continuous 3 hour period, excluding startups and shutdowns. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly report required in AQ-38. |
| Air Quality | AQ-15 | On going period VOC emissions limits shall not exceed 2.0 ppmv.averaged over a rolling continuous 1-Hr. period. Compliance with CO limits and the District approved CO/VOC surrogate relationship shall be | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |

# OTAY MESA GENERATING PROJECT CEC COMPLIANCE MATRIX
## (This Matrix reflects the changes authorized under Amendment 1B 3/16/2015)

| Category | Condition # | Condition | Report | Status (Ongoing/Closed) | Verification |
|---|---|---|---|---|---|
| Air Quality | AQ-16 | On going period emissions limits (during operation without duct firing). Nox - 13.14 lbs/hr, CO - 24.0 lbs/hr, VOC 4.58 lbs/hr. NOx and CO based on a rolling continuous 3 hour period. VOC based on a | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-17 | On going period emissions limits (during operation with duct firing) Nox - 15.95 lbs/hr, CO - 29.13 lbs/hr, VOC 5.56 lbs/hr. NOx and CO based on a rolling continuous 3 hour period,VOC based on a rolling continuous 1 hour averaging period. Except during | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-18 | PM10 hourly emissions limits. Shall not exceed 9.0 lbs/hr.when operated without duct firing. Shall not exceed 11.5 Lbs/Hr.for each turbine when operating with duct firing Based on initial compliance test and annual thereafter. | Submittal | Ongoing | Provide copies of initial compliance and annual source test reports to the District and the CEC CPM within 60 days after completion of the compliance or source tests. |
| Air Quality | AQ-19 | Emissions of NH3 from each gas turbine exhaust stack shall not exceed 10 ppmvd averaged over 1-hr period | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-20 | Duct Burners fuel consumption shall not exceed 3,881,000 MM BTU (HHV) per rolling 12 month period. CEMS shall record fuel usage. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-21 | When operating under start up conditions. Hourly emissions limits per turbine. Nox - 240.0 lbs/hr, CO - 2706 lbs/hr, VOC 48.0 lbs/hr. Based on a rolling continuous 1 hour averaging period. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-22 | Start up conditions emissions limits per event. NOx - 480 lbs/event, CO - 5412 lbs/event, VOC 96.0 lbs/event. Shut down conditions: NOx 80 Lbs/event, CO 902 Lbs./event and VOC 16 Lbs./event.Based on | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-23 | Start up defined as 360 minutes of continuous fuel flow or when 10 consecutive one minute data of compliance is reached. Not to NOx limit of 11.8 ppm after 120 minutes excluding extended startups. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-24 | Nox startup hourly limit. Shall not exceed 42ppm after first 120 minutes. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-25 | Shutdown defined as 60 minute period preceeding termination of fuel flow to gas turbine | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-26 | Both gas turbines shall not be operated simultaneously in start up mode. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-27 | Source Test requirements. Three subtest average shall be used to determine compliance with emission limits | Inspection | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. |
| Air Quality | AQ-28 | Valid clock hour definition. Needs at least 16 minutes of 1-minute data from 2 different quadrants. DB hour defined when DB heat input exceeds 38.8 MMBtu/hr. Data to be based on rolling 3-hour averaging period. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |

# OTAY MESA GENERATING PROJECT CEC COMPLIANCE MATRIX
## (This Matrix reflects the changes authorized under Amendment 1B 3/16/2015)

| Category | Condition # | Condition | Report | Status (Ongoing/Closed) | Verification |
|---|---|---|---|---|---|
| Air Quality | AQ-29 | 3-hour averaging of emission limits based on data collected at least every 15 minutes | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-30 | CEMS certification in accordance with Federal Reg Part 75 and Part 60 | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-31 | Data Substitution for Nox and CO as per 40 CFR 75 Appendix C. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-32 | Report any emission standard violation within 96 hours of occurance | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-33 | Onsite maintenance of records for additional general conditions shall be maintained on site for a minimum of 5 years. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-34 | The District shall be notified in writing at least two weeks prior to any proposed changes in CEM software | Submittal | Ongoing | Provide notices of any proposed changes to the CEM software to the District and the CPM at least 2 weeks prior to the changes. |
| Air Quality | AQ-35 | Onsite maintenance of records for additional general conditions shall be maintained on site for a minimum of 5 years. | Inspection | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. |
| Air Quality | AQ-36 | Compliance with emission monitoring requirements of 40 CFR Part 75 | Inspection | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. |
| Air Quality | AQ-37 | Compliance with total aggregate mass emission of Nox, CO and VOC in tons for 12 month calendar. | Inspection | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. |
| Air Quality | AQ-38 | Quarterly Report should include mass emissions and concentration during operation | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports with in 60 days aafter each calendar quarter. |
| Air Quality | AQ-39 | Annual source testing requirements with prior submittal of protocol. | Inspection | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. |
| Air Quality | AQ-40 | Annual source testing requirements- submittal of protocol. | Submittal | Ongoing | Provide copies of annual source test protocol to the District for review and written approval, and the CPM within 30 days after source testing. |
| Air Quality | AQ-41 | Annual source testing requirements-test report. | Submittal | Ongoing | Provide copies of annual source test report to the District for review and written approval, and the CPM within 45 days after source testing. |
| Air Quality | AQ-42 | MERC reporting - emission reduction monitoring years | Submittal | Ongoing | Submit an annual MERC report to the District and the CPM on or before the last day of the second calendar month following the end of each ongoing emission reduction monitoring year. |
| Air Quality | AQ-43 | Annual MERC reporting | Submittal | Ongoing | Submit a MERC monitoring report on or before March 1 of each calendar year to the District and the CPM. |

# OTAY MESA GENERATING PROJECT CEC COMPLIANCE MATRIX
## (This Matrix reflects the changes authorized under Amendment 1B 3/16/2015)

| Category | Condition # | Condition | Report | Status (Ongoing/Closed) | Verification |
|---|---|---|---|---|---|
| Air Quality | AQ-44 | Emissions of NOx 20 years after initial firing shall be 1.0 ppmv and 50 tons per rolling 12 month period. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-45 | Stack Height | Completed | Ongoing | None Required |
| Air Quality | AQ-46 | Mass Emissions and on-going permit conditions as per AQ 9,10,36,37,51. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-47 | Obtain any necessary District permits for all ancillary combustion equipment, including emergency engines, prior to onsite delivery of the equipment. | Submittal | Ongoing | Provide copies of annual source test report to the District for review and written approval, and the CPM within 45 dayProvide copies of the design details of the ancillary equipment to be installed , including emergency engines to the CPM and the District at least 90 days prior to delivery of equipment to the site. |
| Air Quality | AQ-48 | Exhaust stack test ports and access requirements consistent with all approved test protocols (District Method 3A, Appendix Figure 2). | Completed | Ongoing | None Required |
| Air Quality | AQ-49 | Log of all start ups and shut downs for each turbine to include type of start up or shut down, dates, times and duration shall be maintained. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-50 | Compliance with District Rule 69.3.1 (without post-combustion air pollution control equipment) NOX shall not exceed 19.8 ppmv per turbine over a 1-hour averaging period, excluding startups and shutdowns. | Quarterly Report | Ongoing | Maintain records onsite for a minimum of 5 years, and make the records available for inspection by District, CARB and CEC representative. Information to be included in quarterly reports required in AQ-38. |
| Air Quality | AQ-SC9 | WSAC PM10 compliance. Emission limit determined by circulating water sample by independent lab w/in 60 days of initial operation and quarterly thereafter. | Submittal | Ongoing | Results of sampling reported quarterly to CPM in accordance with AQ-38. |
| Biological Resources | BIO-3 | Designated Biologist shall monitor activities and notify the project owner and the CPM of any non-compliance with any biological resources condition of certification. | Submittal | Ongoing | The Designated Biologist shall maintain written records, summaries of these records shall be submitted in the Monthly Compliance Reports. During project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report. |
| Biological Resources | BIO-5 | Develop and implement a CPM-approved Worker Environmental Awareness Program. | Preconstruction Submittal | Ongoing | At least 30 days prior to start of rough grading, provide copies of the Worker Environmental Awareness Program and all supporting written materials and the name and qualifications of the persons(s) administering the program. Track participants and maintain records for 6 months. |
| Biological Resources | BIO-12 | Facility closure | Preclosure Submittal | N/A | At least 12 months prior to commencement of closure activities, address all biological resource related issues associated with the facility, to be included into the facility closure plan. |
| Biological Resources | BIO-13 | Future modeled NOx increases, additional compensation funds to QCB Fund. | Payment | Ongoing | Nitrogen deposition rate of 0.0594 Kilograms per hectare per year, averaged over the entire critical habitat area, along with the Mitigation fee ( alreadt paid) of $333,000 equates to:$56,117 added to the research endowement fund by project owner. At least 30 days prior to commercial operation that will result in an increase in deposition provide written confirmation to CPM of funds provided to san Diego QCB Endowement Fund. |
| Biological Resources | BIO-14 | QCB endowement Fund true up if it does not generate a 4.5% payout each year. | Annually | Ongoing | AS part of annual compliance report provide a copy of the San Diego QCB Endowement Fund Advisory Statement. If Fund indicates payout for the calander year fell below 4.5%. Within 30 days of filing the Annual Compliance report provide verification to the CPM that the required funds were provided to the SD-QCB-EF. |

# OTAY MESA GENERATING PROJECT CEC COMPLIANCE MATRIX
## (This Matrix reflects the changes authorized under Amendment 1B 3/16/2015)

| Category | Condition # | Condition | Report | Status (Ongoing/Closed) | Verification |
|---|---|---|---|---|---|
| Facility Design | GEN-9 | File a closure/decommissioning plan with the CBO and the CPM for review and approval at least 12 months (or other mutually agreed to time) prior to commencing the closure activities. | Preclosure Submittal | N/A | At least 12 months prior to closure or decommissioning activities, file a copy of the closure/decommissioning plan with the CBO and the CPM for review and approval. |
| Geology & Paleontology | PAL-7 | Include a description regarding closure activity's potential to impact paleontological resources in the facility closure plan. | Closure Submittal | NA | Include a description of closure activities described above in the facility closure plan. |
| Hazardous Materials Management | HAZ-1 | No non-CPM-approved hazardous materials. | Annual Report | Ongoing | Provide to the CPM, in the Annual Compliance Report, a list of hazardous materials contained at the facility in reportable quantities. Submitted a Petition to Modify Table 3.4-7 on 4-17-09. |
| Noise | NOISE-2 | Document, investigate, evaluate, and attempt to resolve all project related noise complaints. | Response to Complaints | Ongoing | Within 30 days of receiving a noise complaint, file a copy of the Noise Complaint Resolution Form with San Diego County and the CPM documenting the resolution of the noise 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. |
| Traffic & Transportation | TRANS-3 | Ensure that permits and/or licenses are secured from the U.S. Department of Transportation, California Highway Patrol and Caltrans for the transport of hazardous materials. Contractor(s) to provide copies [illegible] | Monthly and Annual Submittal | Ongoing | Include in the Monthly and Annual Compliance Reports, copies of all permits/licenses acquired by the project owner and/or subcontractors concerning the transport of hazardous substances. |
| Transmission Line Safety & Nuisance | TLSN-2 | Identify and correct all complaints of interference with radio or television signals from operation of the line and related facilities. | Annual Report | Ongoing | All reports of the line-related complaints shall be summarized and included in the Annual Compliance Report to the CPM. |
| Waste Management | WASTE-2 | Notify the CPM of any waste management-related enforcement action that has either been taken or is known to be pending against it or against any waste hauler or treatment, storage, or disposal facility with which it contracts. | Notification | Ongoing | Notify the CPM in writing within 10 working days of becoming aware of any such enforcement action. |

# Appendix

# B

**CALPINE NERC GADS DATABASE**
**GADS ANALYSIS & REPORTING**

**Operating Data Summary**

**October 2017 Through September 2018**

| MONTH | GENERATION MWh GROSS | GENERATION MWh NET | STARTS ATT | STARTS ACT | SERVICE HOURS | OUTAGE HOURS | PRIMARY FUEL QUANTITY BURNED | SECONDARY FUEL QUANTITY BURNED | HEAT RATE Btu/kWh GROSS | HEAT RATE Btu/kWh NET |
|---|---|---|---|---|---|---|---|---|---|---|
| OTAY MESA CT1 | | | | | | | | | | |
| Oct 2017 | 36,645 | 35,170 | 13 | 13 | 281.06 | 96.82 | 379.945 MMcf GG | | 10,783 | 11,235 |
| Nov 2017 | 18,411 | 17,998 | 8 | 8 | 136.42 | 0.00 | 196.654 MMcf GG | | 11,108 | 11,363 |
| Dec 2017 | 9,416 | 9,048 | 7 | 7 | 79.57 | 6.25 | 102.265 MMcf GG | | 11,316 | 11,776 |
| Jan 2018 | 1,999 | 1,901 | 1 | 1 | 18.55 | 0.00 | 22.408 MMcf GG | | 11,725 | 12,329 |
| Feb 2018 | 6,233 | 5,988 | 3 | 3 | 52.62 | 0.00 | 67.796 MMcf GG | | 11,355 | 11,820 |
| Mar 2018 | 14,501 | 14,048 | 2 | 2 | 98.68 | 0.00 | 145.905 MMcf GG | | 10,504 | 10,843 |
| Apr 2018 | 1,595 | 1,499 | 1 | 1 | 11.82 | 261.33 | 18.229 MMcf GG | | 11,714 | 12,463 |
| May 2018 | 12,121 | 11,871 | 6 | 6 | 93.37 | 28.80 | 133.163 MMcf GG | | 11,315 | 11,553 |
| Jun 2018 | 12,884 | 12,342 | 9 | 9 | 111.75 | 0.00 | 141.951 MMcf GG | | 11,381 | 11,881 |
| Jul 2018 | 34,585 | 33,160 | 24 | 24 | 266.73 | 0.00 | 368.235 MMcf GG | | 10,945 | 11,415 |
| Aug 2018 | 17,015 | 16,299 | 12 | 12 | 133.54 | 46.88 | 182.370 MMcf GG | | 11,018 | 11,502 |
| Sep 2018 | 19,547 | 18,750 | 9 | 9 | 149.30 | 1.23 | 207.523 MMcf GG | | 10,934 | 11,399 |
| **TOTALS** | 184,953 | 178,074 | 95 | 95 | 1,433.41 | 441.31 | | | 11,002 | 11,427 |

**CALPINE NERC GADS DATABASE**
**GADS ANALYSIS & REPORTING**

**Operating Data Summary**

**October 2017 Through September 2018**

| MONTH | GENERATION MWh GROSS | GENERATION MWh NET | STARTS ATT | STARTS ACT | SERVICE HOURS | OUTAGE HOURS | PRIMARY FUEL QUANTITY BURNED | SECONDARY FUEL QUANTITY BURNED | HEAT RATE Btu/kWh GROSS | HEAT RATE Btu/kWh NET |
|---|---|---|---|---|---|---|---|---|---|---|
| OTAY MESA CT2 | | | | | | | | | | |
| Oct 2017 | 51,387 | 49,305 | 19 | 19 | 384.14 | 93.53 | 532.756 MMcf GG | | 10,782 | 11,237 |
| Nov 2017 | 22,157 | 21,325 | 10 | 10 | 169.23 | 0.00 | 232.263 MMcf GG | | 10,901 | 11,327 |
| Dec 2017 | 17,340 | 16,806 | 12 | 12 | 139.67 | 17.25 | 184.583 MMcf GG | | 11,091 | 11,444 |
| Jan 2018 | 4,112 | 3,956 | 2 | 2 | 38.00 | 0.00 | 45.763 MMcf GG | | 11,641 | 12,101 |
| Feb 2018 | 10,257 | 9,927 | 5 | 5 | 90.55 | 0.00 | 112.348 MMcf GG | | 11,435 | 11,815 |
| Mar 2018 | 16,369 | 15,771 | 3 | 3 | 116.53 | 0.00 | 166.010 MMcf GG | | 10,587 | 10,989 |
| Apr 2018 | 3,115 | 3,025 | 3 | 3 | 29.52 | 261.70 | 35.386 MMcf GG | | 11,643 | 11,991 |
| May 2018 | 9,972 | 9,719 | 5 | 5 | 90.42 | 41.15 | 111.002 MMcf GG | | 11,465 | 11,764 |
| Jun 2018 | 12,836 | 12,342 | 10 | 10 | 107.39 | 9.58 | 139.362 MMcf GG | | 11,215 | 11,664 |
| Jul 2018 | 39,425 | 37,692 | 24 | 24 | 316.58 | 0.00 | 422.834 MMcf GG | | 11,025 | 11,532 |
| Aug 2018 | 15,999 | 15,341 | 11 | 11 | 135.65 | 89.37 | 174.680 MMcf GG | | 11,224 | 11,705 |
| Sep 2018 | 28,886 | 26,151 | 13 | 13 | 214.88 | 3.57 | 310.415 MMcf GG | | 11,068 | 12,226 |
| **TOTALS** | 231,854 | 221,359 | 117 | 117 | 1,832.56 | 516.15 | | | 11,019 | 11,542 |

**CALPINE NERC GADS DATABASE**
**GADS ANALYSIS & REPORTING**

**Operating Data Summary**

**October 2017 Through September 2018**

| MONTH | GENERATION MWh GROSS | GENERATION MWh NET | STARTS ATT | STARTS ACT | SERVICE HOURS | OUTAGE HOURS | PRIMARY FUEL QUANTITY BURNED | SECONDARY FUEL QUANTITY BURNED | HEAT RATE Btu/kWh GROSS | HEAT RATE Btu/kWh NET |
|---|---|---|---|---|---|---|---|---|---|---|
| OTAY MESA ST1 | | | | | | | | | | |
| Oct 2017 | 45,286 | 44,978 | 16 | 16 | 314.14 | 288.79 | 0.000 WH | 30.365 MMcf GG | 697 | 702 |
| Nov 2017 | 23,706 | 23,620 | 11 | 11 | 170.20 | 15.00 | 0.000 WH | 16.663 MMcf GG | 730 | 733 |
| Dec 2017 | 13,729 | 13,607 | 18 | 18 | 155.70 | 11.35 | 0.000 WH | 3.513 MMcf GG | 266 | 269 |
| Jan 2018 | 1,219 | 1,207 | 1 | 1 | 16.50 | 65.00 | 0.000 WH | 0.887 MMcf GG | 761 | 768 |
| Feb 2018 | 9,222 | 9,155 | 5 | 5 | 79.60 | 46.13 | 0.000 WH | 1.860 MMcf GG | 210 | 212 |
| Mar 2018 | 16,655 | 16,549 | 3 | 3 | 109.23 | 0.00 | 0.000 WH | 1.563 MMcf GG | 97 | 98 |
| Apr 2018 | 2,561 | 2,542 | 2 | 2 | 21.35 | 261.33 | 0.000 WH | 1.340 MMcf GG | 536 | 540 |
| May 2018 | 13,769 | 13,654 | 6 | 6 | 92.37 | 28.80 | 0.000 WH | 10.150 MMcf GG | 759 | 765 |
| Jun 2018 | 16,521 | 16,082 | 10 | 10 | 115.57 | 0.00 | 0.000 WH | 14.467 MMcf GG | 904 | 929 |
| Jul 2018 | 46,408 | 46,103 | 24 | 24 | 293.42 | 0.00 | 0.000 WH | 44.559 MMcf GG | 987 | 993 |
| Aug 2018 | 20,568 | 20,408 | 14 | 14 | 156.29 | 46.88 | 0.000 WH | 23.383 MMcf GG | 1,168 | 1,177 |
| Sep 2018 | 30,002 | 29,180 | 12 | 11 | 194.55 | 6.37 | 0.000 WH | 31.099 MMcf GG | 1,067 | 1,097 |
| **TOTALS** | 239,646 | 237,085 | 122 | 121 | 1,718.92 | 769.65 | | | 774 | 783 |

**CALPINE NERC GADS DATABASE**
**GADS ANALYSIS & REPORTING**

**Operating Data Summary**

**October 2017 Through September 2018**

| MONTH | GENERATION MWh GROSS | GENERATION MWh NET | STARTS ATT | STARTS ACT | SERVICE HOURS | OUTAGE HOURS | PRIMARY FUEL QUANTITY BURNED | SECONDARY FUEL QUANTITY BURNED | HEAT RATE Btu/kWh GROSS | HEAT RATE Btu/kWh NET |
|---|---|---|---|---|---|---|---|---|---|---|
| ALL UNITS | | | | | | | | | | |
| Oct 2017 | 133,318 | 129,453 | 48 | 48 | 979.34 | 479.14 | | | 7,356 | 7,576 |
| Nov 2017 | 64,274 | 62,943 | 29 | 29 | 475.85 | 15.00 | | | 7,209 | 7,362 |
| Dec 2017 | 40,485 | 39,461 | 37 | 37 | 374.94 | 34.85 | | | 7,473 | 7,667 |
| Jan 2018 | 7,330 | 7,064 | 4 | 4 | 73.05 | 65.00 | | | 9,854 | 10,225 |
| Feb 2018 | 25,712 | 25,070 | 13 | 13 | 222.77 | 46.13 | | | 7,390 | 7,579 |
| Mar 2018 | 47,525 | 46,368 | 8 | 8 | 324.44 | 0.00 | | | 6,886 | 7,058 |
| Apr 2018 | 7,271 | 7,066 | 6 | 6 | 62.69 | 784.36 | | | 7,747 | 7,971 |
| May 2018 | 35,862 | 35,244 | 17 | 17 | 276.16 | 98.75 | | | 7,304 | 7,432 |
| Jun 2018 | 42,240 | 40,766 | 29 | 29 | 334.71 | 9.58 | | | 7,233 | 7,495 |
| Jul 2018 | 120,418 | 116,955 | 72 | 72 | 876.73 | 0.00 | | | 7,133 | 7,344 |
| Aug 2018 | 53,582 | 52,048 | 37 | 37 | 425.48 | 183.13 | | | 7,298 | 7,513 |
| Sep 2018 | 78,436 | 74,081 | 34 | 33 | 558.73 | 11.17 | | | 7,209 | 7,633 |
| **TOTALS** | 656,452 | 636,518 | 334 | 333 | 4,984.89 | 1,727.11 | | | 7,275 | 7,502 |

**CALPINE NERC GADS DATABASE**
**GADS ANALYSIS & REPORTING**

**Operating Data Summary**

**October 2017 Through September 2018**

| MONTH | GENERATION MWh GROSS | GENERATION MWh NET | STARTS ATT | STARTS ACT | SERVICE HOURS | OUTAGE HOURS | PRIMARY FUEL QUANTITY BURNED | SECONDARY FUEL QUANTITY BURNED | HEAT RATE Btu/kWh GROSS | HEAT RATE Btu/kWh NET |
|---|---|---|---|---|---|---|---|---|---|---|

October 2017 Through September 2018

Custom Selection
OTAY MESA CT1
OTAY MESA CT2
OTAY MESA ST1

APCD
AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO

**COUNTY OF SAN DIEGO, AIR POLLUTION CONTROL DISTRICT**
**10124 OLD GROVE ROAD, SAN DIEGO, CA 92131**
**PHONE (858) 586-2600 FAX (858) 586-2601**
**www.sdapcd.org**



**Sectors:** 5, R
**Site Record ID:** APCD1999-SITE-10882
**Application Record ID:** APCD2012-APP-002154

**PERMIT RECORD ID**
APCD2011-PTO-000947
*APCD2011-PTO-000947*

Otay Mesa Energy Center LLC
Shubhi Love
606 De La Fuente Ct
San Diego CA 92154

EQUIPMENT ADDRESS
Otay Mesa Energy Center LLC
Shubhi Love
606 De La Fuente Ct
San Diego CA 92154

# PERMIT TO OPERATE

**EXPIRES: September 30, 2019**

This permit is not valid until required fees have been paid.

The above is hereby granted a Permit To Operate the article, machine, equipment or contrivance described below. This permit is not transferable to a new owner nor is it valid for operation of the equipment at another location except as specified. This Permit To Operate or copy must be posted on or within 25 feet of the equipment, or readily available on the operating premises.

**EQUIPMENT OWNER**

**EQUIPMENT DESCRIPTION**

Power Station #1 consisting of: one Gas Turbine (171.7 MW nominal): General Electric, Model 7FA, S/N 298093, with DLN 2.6 low-NOx burners, natural gas fired, 1767.8 MMBtu/hr nominal heat input (HHV), with a heat recovery steam generator (HRSG) with a 388.1 MMBtu/hr duct burner, Nooter-Eriksen, vented to a selective catalytic reduction (SCR) system, equipped with a continuous emission monitoring system (CEMS); common to both power stations are a steam turbine generator (277 MW nominal), Siemans-Westinghouse, Model KN; two air-cooled condensers, GEA, 295'L x 123'W x 76'H; a wet surface air cooler, Niagara Blower Co., Model RWC 48240-2F16; equipped with GE OpFlex control system software.

Every person who owns or operates this equipment is required to comply with the conditions listed below and all applicable requirements and District rules, including but not limited to Rules 10, 20, 40, 50, 51.

Fee Schedules: 1 [93A] Test Witness and Report Review (T&M)
1 [92R] VOC Lab Analysis
1 [92A] Particulate Matter Source Test
1 [92F] NOx and CO Source Test
1 [92I] Ammonia Source Test
1 [20F] Non- Aircraft Turbine Engine

BEC: APCD2011-CON-000277

**FAILURE TO OPERATE IN COMPLIANCE IS A MISDEMEANOR SUBJECT TO CIVIL AND CRIMINAL PENALTIES**

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be properly maintained and kept in good operating condition at all times.
3. The unit shall be fired on Public Utility Commission (PUC) quality natural gas only. The permittee shall maintain quarterly records of sulfur content (grains/100 dscf) and higher and lower heating values (Btu/dscf) of the natural gas and provide such records to the District personnel upon request. [Rule 62; 40 CFR 60 Subpart GG]

4. The permittee shall comply with all the applicable provisions of 40 CFR 73, including requirements to offset, hold and retire SO2 allowances. (40 CFR Part 73)
5. The emissions of any single federal hazardous air pollutant (HAP) shall not equal or exceed 10 tons, and the aggregate of all federal HAPs, shall not equal or exceed 25 tons in any rolling 12 calendar month period. Compliance with the HAP limits shall be based on a surrogate VOC/HAP correlation factor determined during initial source testing If emissions exceed these limits, the permittee shall apply to amend this permit to reflect applicable Federal Maximum Achievable Control Technology (MACT) standards and requirements in accordance with applicable provisions (including timing requirements) of 40 CFR 63. [40 CFR 63]
6. Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District.
7. This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.
8. The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)
9. The total aggregate annual emissions from all emission units at the stationary source shall not exceed 100 tons of oxides of nitrogen (NOx), calculated as nitrogen dioxide, and shall not exceed 316 tons of carbon monoxide (CO) for each consecutive 12-calendar month period. The NOx and CO emissions shall begin accruing at the initial firing of each turbine. Compliance with this limit shall be verified using the CEMS system on each gas turbine as well as EPA- or ARB-certified NOx emissions factors, testing results, or other representative emissions information for all other combustion equipment. [Rule 20.3]
10. The total aggregate emissions of volatile organic compounds (VOC) from all emission units at the stationary source shall not exceed 47.5 tons for each consecutive 12-calendar month period. The VOC emissions shall begin accruing at the initial firing of each piece of equipment. Compliance shall be verified using testing results, EPA- or ARB-certified VOC emissions factors, and/or other representative emissions information for all other combustion equipment. [Rule 20.3]
11. The emissions of oxides of nitrogen (NOx) from each turbine, calculated as nitrogen dioxide, shall not exceed 2.0 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen. Compliance with this limit shall be based on CEMS data for each unit and averaged over each 1-hour period, excluding time when the equipment is operated under startup or shutdown conditions and time that the equipment is not in operation. Compliance with this limit shall also be verified through annual source testing. This limit shall not apply to the first fifteen 1-hour average NOx emissions measurements above 2.0 ppmvd corrected to 15% oxygen in any rolling 12-month period for each gas turbine provided the following requirements are met:
    a. this equipment operates under any one of the following:
    i) Rapid combustion turbine load changes due to the following conditions:
    A) Load changes initiated by the California Independent Systems Operator (ISO) or a successor entity when the plant is operating under Automatic Generation Control; or
    B) Activation of a plant automatic safety or equipment protection system which rapidly decreases turbine load
    ii) The first two 1-hour reporting periods following the initiation or shutdown of a system injection pump
    iii) The first two 1-hour reporting periods following the initiation of HRSG duct burners
    iv) Events as the result of technological limitation identified by the operator and approved in writing by the District.
    b. the 1-hour average NOx emissions above 2.0 ppmvd corrected to 15% oxygen did not occur as a result of operator neglect, improper operation or maintenance, and is a qualified breakdown under District Rule 98.
    c. the qualified operating conditions described in (a) above are recorded in the plant's operating log within 24 hours of the event. The notations in the log shall describe the data and time of entry into the log and the plant operating conditions responsible for NOx emissions exceeding the 2.0 ppmvd 1-hour average limit.
    d. the 1-hour average NOx concentration for periods that result from a qualified operating condition described in (a) above does not exceed 25 ppmvd corrected to 15% oxygen.
    All NOx emissions during these events shall be included in all calculations of hourly, daily, and annual mass emission rates as required by this Permit to Operate. [Rule 20.3]

12. The emissions of oxides of nitrogen (NOx) from each turbine, calculated as nitrogen dioxide, shall not exceed 110 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen. This limit shall apply at all times, including periods of startup and shutdown. Compliance with this limit shall be based on CEMS data for each unit as averaged in accordance with 40 CFR 60 Subpart GG Subsection 60.334. [40 CFR 60 Subpart GG]

13. Excess emissions, as defined in 40 CFR 60 Subpart GG Subsection 60.334, shall be reported pursuant for all periods of unit operation, including startup, shutdown, and malfunction in accordance with 40 CFR 60 Subpart A Subsection 60.7(c). These reports shall be postmarked by the 30th day following the end of each calendar 6-month period unless more frequent reporting is required in accordance with 40 CFR 60 Subpart A Subsection 60.7(c). These reports shall be submitted to the District's Compliance Division. [40 CFR 60 Subpart GG]

14. The emissions of carbon monoxide (CO) from each turbine shall not exceed 6.0 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen. Compliance with these limits shall be based on CEMS data for each unit and averaged over each continuous 3-hour period, excluding time when the equipment is operated under startup or shutdown conditions and time that the equipment is not in operation. Compliance with this limit shall also be verified annual source testing. [Rule 20.3]

15. The emissions of volatile organic compounds (VOC) from each turbine, calculated as methane, shall not exceed 2.0 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen. Compliance with this limit shall be based on CO CEMS data for each unit, averaged over each 1-hour period, excluding time when the equipment is operated under startup or shutdown conditions and time that the equipment is not in operation, and the District approved CO/VOC surrogate relationship. The CO/VOC surrogate relationship shall be verified and/or modified, if necessary, based on annual source testing. [Rule 20.3]

16. When operated with the duct burner at or below 38.8 MMBtu/hr heat input, the emissions from each turbine shall not exceed the following emission limits, except during startup or shutdown conditions, as determined by the Continuous Emissions Monitoring System (CEMS), the District approved CO/VOC surrogate relationship, and/or District approved emission source testing. Compliance with the NOx and CO limits shall be based on a continuous 3-hour averaging period and compliance with the VOC limit shall be based on a 1-hour averaging period.

| Pollutant | Emission Limit, lbs/hr |
|---|---|
| Oxides of Nitrogen, NOx (calculated as NO2) | 13.14 |
| Carbon Monoxide, CO | 24.0 |
| Volatile Organic Compounds, VOC | 4.58 |

[Rule 20.3]

17. When operated with the duct burner above 38.8 MMBtu/hr heat input, the emissions from this equipment shall not exceed the following emission limits, except during startup or shutdown conditions, as determined by the Continuous Emissions Monitoring System (CEMS), the District approved CO/VOC surrogate relationship, and/or District approved emission source testing. Compliance with the NOx and CO limits shall be based on a continuous 3-hour averaging period and compliance with the VOC limit shall be based on a 1-hour averaging period.

| Pollutant | Emission Limit, lbs/hr |
|---|---|
| Oxides of Nitrogen, NOx (calculated as NO2) | 15.95 |
| Carbon Monoxide, CO | 29.13 |
| Volatile Organic Compounds, VOC | 5.56 |

[Rule 20.3]

18. The emissions of particulate matter less than 10 microns (PM10) from each turbine shall not exceed 9.0 lbs/hr when operated with the duct burner at or below 38.8 MMBtu/hr heat input and shall not exceed 11.5 lbs/hr from each turbine when operated with the duct burner above 38.8 MMBtu/hr. Compliance with this limit shall be based on annual source testing (only with the duct burner operating in accordance with Condition 37). [Rule 20.3]

19. Except during startups and shutdowns, the emissions of ammonia (slippage) from each gas turbine exhaust stack shall not exceed 10.0 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen and averaged over a 1-hour period. Compliance with this limit shall be based on a District approved calculation methodology and verified during annual source testing. [Rule 1200]

20. Fuel consumption by the duct burners for both turbines shall not exceed 3,881,000 MMBtu (HHV) per rolling 12-month period. Whenever the duct burners are in operation, the CEMS shall record the dates and fuel consumption for each duct burner. The CEMS shall also record the total duct burner fuel usage for each rolling 12-month period (in MMBtu). The applicant shall maintain a log that contains, at a minimum, the dates and fuel usage when one or both turbines are operated with duct firing. These records shall be maintained on site for a minimum of five years and made available to District personnel upon request. [Rule 20.3]

21. When operated under startup conditions, the emissions from each turbine shall not exceed the following emission limits, averaged over each 1-hour period, as determined by the Continuous Emissions Monitoring System (CEMS), the District approved CO/VOC surrogate relationship, and continuous monitors and/or District approved emission source testing:

| Pollutant | Emission Limit, lbs/hr |
|---|---|
| Oxides of Nitrogen, NOx (calculated as NO2) | 240.0 |
| Carbon Monoxide, CO | 2706 |
| Volatile Organic Compounds, VOC | 48.0 |

[Rule 20.3]

22. When operated under startup or shutdown conditions, the emissions from each turbine shall not exceed the following emission limits, totaled per event, as determined by the Continuous Emissions Monitoring System (CEMS), the District approved CO/VOC surrogate relationship, and continuous monitors and/or District approved emission source testing:

| Pollutant (during startups) | Emission Limit, lbs/ event |
|---|---|
| Oxides of Nitrogen, NOx (calculated as NO2) | 480 |
| Carbon Monoxide, CO | 5412 |
| Volatile Organic Compounds, VOC | 96 |

| Pollutant (during shutdowns) | Emission Limit, lbs/ event |
|---|---|
| Oxides of Nitrogen, NOx (calculated as NO2) | 80 |
| Carbon Monoxide, CO | 902 |
| Volatile Organic Compounds, VOC | 16 |

[Rule 20.3]

23. Startup for each gas turbine shall be defined as the period beginning with the introduction of fuel to the combustion turbine following a non-operational period and ending after the lesser of either 360 minutes of continuous of fuel flow or when the CEMS records ten consecutive one-minute data points in compliance with the emission concentration limits of Conditions 11, 14, and 19 for the gas turbine. Excluding extended startups and the first 120 minutes of all other startups, the gas turbines shall comply with a NOx emission concentration limit of 11.8 ppmvd corrected to 15% oxygen. Compliance with this limit shall be based on CEMS data averaged over each one-hour period. For the purposes of this Permit to Operate, an extended startup shall be defined as the time during any startup when the steam turbine inner casing temperature is less than or equal to 500 °F. [Rules 20.3, 69.3.1]

24. During startups, including extended startups as defined in Condition 23, excluding the first 120 minutes of the startup, NOx emissions from the gas turbine shall not exceed 42 ppm corrected to 15% oxygen. Compliance with this limit shall be based on CEMS data averaged over each one-hour period. [Rule 69.3]

25. Shutdown for each gas turbine shall be defined as the 60-minute period preceding the termination of fuel flow to the gas turbine. [Rules 20.3, 69.3.1]

26. Both gas turbines shall not be operated simultaneously in startup mode. [Rule 20.3]

27. For purposes of determining compliance based on source testing, the average of three subtests shall be used. For purposes of determining compliance with emission limits based on the CEMS, data collected in accordance with the CEMS protocol shall be used and averaging periods shall be as specified herein. [40 CFR 75]

28. For each emission limit expressed as pounds per hour or parts per million based on a 1-hour averaging period, compliance shall be based on each 1-clock hour period using data collected at least once every 15 minutes when compliance is based on continuous emissions monitoring data. A valid clock hour shall be defined as one that includes at least 16 minutes of valid 1-minute data or includes a data point from at least two different quadrants that are spaced at least 15 minutes apart. A duct burner clock hour shall be defined as a valid clock hour in which the duct burner heat input exceeds 38.8 MMBtu/hr. [40 CFR 75]

29. For each emission limit expressed as pounds per hour or parts per million based on a 3-hour averaging period, compliance shall be based on rolling 3-clock hour period, not including startup and shutdown periods, using data collected at least once every 15 minutes when compliance is based on continuous emissions monitoring data. [40 CFR 75]

30. The Oxides of Nitrogen (NOx) and Oxygen (O2) CEMs shall be certified and maintained in accordance with applicable Federal Regulations including the requirements of: -Sections 75.10 and 75.12 of Title 40 -Code of Federal Regulations Part 75 (40 CFR 75) -the performance specifications of Appendix A of 40 CFR 75 -the quality assurance procedures of Appendix B of 40 CFR 75 -the CEMs protocol approved by the District. The Carbon Monoxide (CO) CEMS shall be certified and maintained in accordance with 40 CFR 60. (40 CFR Part 75, 40 CFR Part 60), and a CEMS protocol approved by the District, unless otherwise specified in this permit. [40 CFR 60; 40 CFR 75]

31. When the CEMS is not recording data and the unit is operating, hourly NOx emissions shall be determined in accordance with 40 CFR 75 Appendix C. Additionally, hourly CO emissions for the annual emission calculations shall be determined using the hourly emission rate recorded by the CEMS during the most recent hours in which the unit operated 3 continuous hours at no less than 80% of full power rating of each power station, either with or without duct firing. [40 CFR 60; 40 CFR 75]

32. Any violation of any emission standard as indicated by the CEMS shall be reported to the District's Compliance Division within 96 hours after such occurrence. [40 CFR 75]

33. The CEMs shall be maintained and operated, and reports submitted, in accordance with the requirements of Rule 19.2 Sections (D), (E), (F)(2), (F)(3), (F)(4) and (F)(5) and CEMs Protocol approved by the District. [Rule 19.2]

34. The District shall be notified at least two weeks prior to any changes made in CEMS software that affect the measurement, calculation or correction of data displayed and/or recorded by the CEMS. [40 CFR 75]

35. Operating logs or Data Acquisition System (DAS) records shall be maintained to record the following:
a. dates of all startups and shutdowns;
b. beginning and end times, to the nearest minute, of all startups and shutdowns;
c. fuel usage, in standard cubic feet, for each clock hour, calendar month, and 12-calendar month period;
d. hours of daily operation; and
e. total cumulative hours per calendar year.
[Rules 20.3, 69.3.1]

36. Continuous monitors shall be installed on each turbine to monitor or calculate and record the following:
a. gas turbine natural gas flow rate (scfh),
b. duct burner natural gas flow rate (scfh),
c. gas turbine heat input rate (MMBtu/hr), HHV,
d. duct burner heat input rate (MMBtu/hr), HHV,
e. ammonia stack concentration (ppmvd, corrected to 15% oxygen),
f. ammonia injection rate (lbs/hr),
g. steam turbine inner casing temperature (°F),
h. SCR inlet temperature (°F),
i. exhaust gas temperature (°F), and
j. power output (gross MW).
The monitors shall be installed, calibrated, and maintained in accordance with an approved protocol. The monitors shall be in full operation at all times when the turbine is in operation. [Rule 69.3.1]

37. The applicant shall maintain records, at least on a calendar monthly basis, of total aggregate mass emissions of NOx, CO and VOC, in tons per year, from all emission units, at this stationary source for the previous 12-calendar month period. These records shall be made available for inspection within 30 calendar days after the end of each calendar month. [Rule 20.3]

38. All records required by this written permit shall be maintained on site for a minimum of five years and made available to the District upon request. [Rules 20.3, 69.3.1, 1421(b)]

39. This equipment shall be source tested once each permit year (annual source test) to demonstrate compliance with the emission standards specified in Conditions 11, 14, 15, 17, 18, and 19 of this permit. For the purposes of this permit, a permit year is the 12-month period ending on the last day of the permit expiration month. It is the responsibility of the permittee to schedule the source test with the District. The source test shall be performed or witnessed by the District. Each annual source test shall be separated by at least 90 days from any annual source test performed in a different permit year. If this testing will be performed by someone other than the District, a source test protocol shall be submitted to the District for written approval at least 60 days prior to source testing. The source test protocol shall comply with the following requirements:
a. Measurements of oxides of nitrogen (NOx), carbon monoxide (CO), and stack gas oxygen content (O2) shall be conducted in accordance with U.S. Environmental Protection Agency (EPA) Methods 7E, 10 and 3A, respectively, and the San Diego Air Pollution Control District Method 100, or alternative methods approved by the District and the EPA.
b. Measurements of particulate matter less than 10 microns shall be conducted in accordance with the U.S. Environmental Protection Agency (EPA) Methods 201A and 202, or alternative methods approved by the District and the EPA.
c. Measurements of volatile organic compounds (VOC) shall be conducted in accordance with San Diego Air Pollution Control District Methods 18 and/or 25A, or alternative methods approved by the District and the EPA.
d. Measurements of ammonia emissions shall be conducted in accordance with Bay Area Air Quality Management District (BAAQMD) Method ST-1B, or alternative methods approved by the District and the EPA.
e. Source testing shall be performed only with both the combustion turbine and duct burner in operation. The duct burner shall be operated at not less than 80% of the rated heat input unless it is demonstrated to the satisfaction of the District that the unit cannot operate under these conditions. If the demonstration is accepted, then the emissions source testing shall be performed at the highest achievable continuous heat input.
f. Source testing shall be performed at not less than 80% of the unit's rated load unless it is demonstrated to the satisfaction of the District that the unit cannot operate under these conditions. If the demonstration is accepted, then emissions source testing shall be performed at the highest achievable continuous power level.
g. The following additional operating characteristics shall also be measured or calculated and recorded:
gas turbine natural gas flow rate (scfh),
duct burner natural gas flow rate (scfh),
fuel higher heating value (Btu/scf),
gas turbine heat input rate (MMBtu/hr),
duct burner heat input rate (MMBtu/hr),
ammonia injection rate (lbs/hr),
SCR inlet temperature (°F),
exhaust gas temperature (°F),
power output (gross MW).

[Rules 20.3, 69.3.1; 40 CFR 60 Subpart GG]

40. A Relative Accuracy Test Audit (RATA) and all other required certification tests shall be performed and completed on the CEMS in accordance with applicable provisions of 40 CFR part 75 Appendix A and B performance specifications. At least 30 days prior to the test date, the permittee shall submit a test protocol to the District for approval. Additionally, the District shall be notified a minimum of 21 days prior to the test so that observers may be present. [40 CFR 75]

41. Within 45 days after completion of the renewal source test or RATA, a final test report shall be submitted to the District for review and approval. [40 CFR 75]

42. Beginning with the start of the ongoing emission reduction monitoring period as defined in "Alternative Mobile Source Emission Reduction Program for Replacing Heavy and Medium Heavy-Duty Diesel Powered Vehicles and Repowering of Marine Vessels Under Rule 27 (c)(1)(vi)" as approved on September 8, 2000 (herein referred to as the Alternative MERC Program), the owner or operator shall, on or before the last day of the second calendar month following the end of each ongoing emission reduction monitoring year:
a. for each ongoing emission reduction monitoring year, based on the quarterly activity levels submitted by the mobile source owners and the applicable calculation method specified in the Alternative MERC Program, perform a calculation of the annual average and annual aggregate ongoing emission reductions and the ongoing emission reduction deficit, if any, for the MERCs surrendered to offset the facility's emissions;
b. provide an annual report to the District that summarizes the annual average ongoing emission reductions for each MERC, aggregate ongoing emission reductions, and the ongoing emission reduction deficit, if any, and provides supporting calculations and documentation; and
c. if the calculated annual ongoing emission reduction deficit is positive, notify the District, provide a compliance schedule to correct the ongoing emission reduction deficit, and correct the ongoing emission reduction deficit in accordance with Subsection (h)(4) of the Alternative MERC Program. [Rule 27.1]

43. Beginning with the second calendar year following the calendar year that the facility commences operations, the owner or operator shall, on or before March 1 of each calendar year:
a. based on information supplied by the mobile source owners for each MERC surrendered to the District, notify the District if the MERC fractional employment is less than 0.8;
b. based on information supplied by the mobile source owners for each MERC surrendered to the District, notify the District if the MERC fractional employment in primary service is less than 0.8; and
c. if one or more MERCs fractional employment or fractional employment in primary service is less than 0.8, provide a compliance schedule to correct any MERC shortfall and correct any MERC shortfall in accordance with Subsection (j)(4) of the Alternative MERC Program.
[Rule 27.1]

44. On or before the expiration date, if any, of a MERC surrendered to offset the NOx emissions from this facility, additional Class A emission reduction credits equivalent to the expiring MERC shall be surrendered to the District to offset project emissions unless project emissions are reduced such that the emissions of oxides of nitrogen (NOx) shall not exceed 1.0 parts per million by volume on a dry basis (ppmvd) corrected to 15% oxygen. Compliance with this limit shall be based on CEMS data for each unit and averaged over each 3-hour period, excluding hours when the equipment is operated under any startup condition. If the project NOx emissions limit is reduced to 1.0 ppm, the total annual emissions of oxides of nitrogen (NOx), calculated as nitrogen dioxide, shall not exceed 50 tons per rolling 12-month period. Compliance with this limit shall be verified using the CEMS system on each gas turbine. [Rule 27.1]

# Appendix

# C

# OMEC

# Closure Plan

## On-Site Contingency Plan for Temporary and Permanent Facility Closure

Approved: _____

Dale Donmoyer, Plant Manager

Date: 4/25/19

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# 1.0 PURPOSE

This plan was developed in order to provide an on-site contingency plan in order to ensure that the unexpected closure occurs in such a way that public health and safety and the environment are protected from adverse impacts. The plan covers written procedures concerning site security, hazardous materials and waste removal, and insurance and warranty coverage.

# 2.0 SCOPE

The plan was prepared in accordance with the California Energy Commission's (CEC) Decision, Docket Number 99-AFC-05 and covers the following facility

**Otay Mesa Energy Center, LLC (OMEC)**
**606 De La Fuente Court**
**San Diego, CA 92154**

Telephone Number: (619) 210-1198
Type and Nature of Business: SIC 4911 Electric Power Production

# 3.0 RESPONSIBILITIES

## 3.1 GENERAL MANAGER

The General Manager has the overall responsibility for ensuring all provisions of this plan are administered and adhered to.

## 3.2 OPERATIONS & MAINTENANCE MANAGER

The O&M Manger is responsible for overseeing the program, and notification to the CEC.

# 4.0 GENERAL

## 4.1 NOTIFICATION PROCEDURES

In the event of an unexpected temporary or permanent closure, the General Manager or designee shall notify the CEC Compliance Project Manager (CPM) and other responsible agencies within 24 hours, and take all necessary steps to implement this Plan. Notification shall be made by either telephone, fax, or e-mail (see table 1). The O&M Manager shall keep the CPM informed of the circumstances and expected duration of the closure.

If it is determined that a temporary closure is likely to be permanent, or for a duration of more than twelve months, a closure plan consistent with CEC requirements for a planned closure shall be developed and submitted to the CPM within 90 days or the CPM's determination (or other period of time mutually agreed to by the owner and the CPM).

**TABLE 1**
**AGENCIES TO BE NOTIFIED**

| **California Energy Commission** | |
|---|---|
| Mr. Joseph Douglas<br>Compliance Project Manager<br>California Energy Commission<br>1516 Ninth Street, MS-2000<br>Sacramento, CA 95814-5512 | Tel: (916) 653-4677<br>Fax: (916) 654-3882<br>e-mail: joseph.douglas@energy.ca.gov |
| **San Diego Fire Department (Cal Fire)** | |
| Mike Meyer<br>Cal Fire, OM Fire Station #22<br>446 Alta Road, Bldg 32<br>San Diego, Ca 92154 | Tel: (619) 661-2820<br>Fax: (619) 661-2823<br>e-mail: MVU.OTAY@fire.ca.gov |
| | |
| **Regional Water Quality Control Board** | |
| Paul Nguyen<br>Industrial Wastewater Control Program<br>9192 Topaz Way<br>San Diego, CA 92123 | Tel: (858) 654-4114<br>Fax: (858) 654-4110<br>e-mail: phnguyen@sandiego.gov |
| | |

| **San Diego Air Quality Management District** | |
|---|---|
| John Annicchiarico<br>San Diego Air Pollution Control Engineer<br>10124 Old Grove Road<br>San Diego, Ca 92131 | Tel: (858) 586-2733<br>Fax: (858) 586-2801<br>e-mail: John.Annicchiarico@sdcounty.ca.gov |
| | |
| **Cal-ISO** | |
| Felix Gonzalez<br>CAL-ISO Outage Coordination<br>P.O. Box 639014<br>Folsom, CA 95763-9014 | Tel: (916) 351-2241<br>e-mail: |

| US Environment Protection Agency – Region IX | |
|---|---|
| Steve Frey<br>US EPA Region IX<br>75 Hawthorne Street<br>San Francisco, CA 94105-3901 | Tel: (415) 972-3990<br>Fax: (415) 947-3579<br>e-mail: frey.steve@epa.gov |

## 4.2 PLANT SHUT DOWN PROCEDURE

In the event of a plant closure, OMEC, personnel will shut down all operating equipment that is not necessary to respond to an emergency, in accordance with plant operating procedures. In the event of an emergency shutdown (e.g., fire, earthquake, sabotage, etc.), OMEC personnel should consult the OMEC Emergency Action Plan, EAP. The purpose of the EAP is to provide emergency response guidelines so that the OMEC shift and management personnel can adequately evaluate the situation and respond in the interests of protecting personnel, company resources, and the environment.

The EAP provides guidelines for emergencies, including accidental release of toxic gases, chemical spills, fires, explosions, bomb threats, civil disobedience, and personnel injuries. There are several situations that may require emergency response by site personnel. The response required for each situation may vary, and each requires a separate course of action. Personnel should reference the EAP for proper response.

## 4.3 SITE SECURITY AND EMERGENCY RESPONSE

The plant perimeter is surrounded by chain link fence. The main gate is located on De La Fuente Court. Remote cameras monitor the perimeter entry into the Plant 24 hours per day, 365 days per year by Control Room Personnel. Duties of the Plant Operators include checking plant security measures during the shift.

In the event of an unexpected closure, OMEC will ensure that all fencing is intact and a manned guard or private security services it used to maintain site security, if necessary.

In the event of an emergency, the San Diego Fire Department (SDFD) will have access through the main gate. Additionally the SDFD has been supplied with a Hazardous Materials Business Plan, Risk Management Plan, and Fire Protection and Prevention Plan. The information contained in these plans will enable SDFD to respond to any emergency in the event that the plant personnel have evacuated the premises.

## 4.4 HAZARDOUS MATERIAL AND WASTE REMOVAL

Handling and disposal of all hazardous materials and wastes shall be in accordance with all applicable laws, ordinances, regulations, and standards. Figure 1 identifies all hazardous

materials that are located at OMEC in reportable quantities. In the event of an unexpected temporary closure, not all hazardous materials will require removal. If such an event occurs, OMEC will conduct visual inspections of all hazardous material storage vessels on a daily basis to assess container condition. This process can be done remotely via site cameras if necessary.

OMEC has implemented a Hazardous Materials Business Plan, HMBP, to assist with identification and handling of all hazardous materials. In addition to the HMBP other plans have been developed to assist plant personnel and emergency responders with handling of the hazardous materials located at OMEC.
Whenever practical, hazardous materials will be returned to the vendor or transferred to another Calpine site that has the need for the material(s). The following transporters or other qualified transporters will be used if it is deemed necessary to remove any hazardous material(s).

| TRANSPORTER | TELEPHONE NUMBER |
|---|---|
| Environmental Logistics | (888) 641-3940 |
| Safety-Kleen Systems | (888) 375-5336 |

If the unexpected temporary closure also results in a release of hazardous materials or waste, plant personnel will consult the Emergency Action Plan, HMBP, and/or Risk Management Plan. These plans address accidental release prevention and emergency policies, a hazardous materials inventory, employee training, and location of safety equipment, main utility shutoffs, notification methods, and accident investigation procedures.

In addition, the Storm Water Pollution Prevention Plan, SWPP, and the Spill Prevention Control and Countermeasure Plan, SPCC, describe the necessary actions in the event of a spill that might threaten off site locations. Both structural and non-structural Best Management Practices (BMPs) are utilized at the site to reduce pollutants in storm water discharge. Structural BMPs include such measures as valves, berms, curbs, and containment structures that are used to hold or divert storm water. Non-structural BMPs include such measures as regular inspections, good housekeeping, employee training, and special procedures for storing/loading hazardous materials and wastes. Plant personnel shall consult all of these plans prior to proceeding with any hazardous material or waste removal.

## 5.0 INSURANCE AND WARRANTY COVERAGE

OMEC is insured under an “All-Risk” Builder’s Risk policy for property damage and business interruption. The policy is provided by a number of insurance companies led by Underwriters at Lloyds of London. Liability insurance is provided by Liberty Mutual.

The warranties on the major equipment at OMEC have expired.

# 6.0 UNEXPECTED TEMPORARY CLOSURE

In the event that the OMEC closed temporarily, there are additional tasks to be performed, including notifications for areas of transmission line engineering and biological resources.

## 6.1 TRANSMISSION LINE ENGINEERING

OMEC does not own any transmission lines.

## 6.2 BIOLOGICAL RESOURCES

In the case of temporary closure, measures to protect biological resources would be needed only if there were a potential to surface disturbances or releases of harmful materials. If such an event occurs, OMEC will consult with responsible agencies to plan clean up and mitigation of impacts to biological resources.

# 7.0 PERMANENT CLOSURE

In the event the OMEC is closed permanently, there are additional tasks that need to be performed, including preparing a facility closure plan, notifying agencies, ensuring site security, removing hazardous materials and waste.

## 7.1 FACILITY CLOSURE PLAN

In order to ensure that the permanent closure does not create adverse impacts, a closure process will be undertaken by OMEC that provides for careful consideration of available options, applicable laws, ordinances, regulations, standards, and local plans in existence at the time of closure. OMEC will meet with the CEC and other agencies as necessary prior to the development of the closure plan to establish the elements of the plan. In accordance with CEC Conditions of Certification, the plan will include the following:

1) Identify and discuss any impacts and mitigation to address significant adverse impacts associated with proposed closure activities and to address facilities, equipment, or other project related remnants that will remain at the site.
2) Identify a schedule of activities for closure of the power plant site, transmission line corridor, and all other appurtenant facilities constructed as part of the project.
3) Identify any facilities or equipment intended to remain on site after closure, the reason, and any future use.
4) Address conformance of the plan with all applicable laws, ordinances, regulations, standards, local/regional plans in existence at the time of facility closure, and applicable conditions of certification.

5) Removal of transmission conductors when they are no longer used or useful.
6) Removal of all power plant site facilities and related facilities.
7) Measures to restore wildlife habitat to promote the re-establishment of native plant and wildlife species.
8) Revegetation of the plant site and other disturbed areas utilizing appropriate seed mixture.

The plan will be submitted to the CEC CPM, San Diego County, and City of San Diego for review and approval at least 12 months (or other mutually agreed to time) prior to commencing the permanent closure activities.

## 7.2 AGENCY NOTIFICATION

Additional notification may be necessary in the event of a permanent closure, including re-notifying each of the agencies listed in Table 1. The Closure Plan will also be sent to those appropriate agencies with which OMEC has a current permit (e.g., Regional Water Quality Control Board, San Diego Air Quality Management District, USEPA, etc.)

## 7.3 SITE SECURITY

Prior to permanent closure, the General Manager or designee will notify the San Diego Fire Department and Police Department, giving the notice that the existing level of site surveillance will not be in effect. This will enable these agencies to respond appropriately in the event of a disturbance or fire. It may be necessary for OMEC to provide site security for a period of time following permanent closure, the General Manger or designee will determine the need for such interim security and will address it in the Closure Plan, if necessary.

## 7.4 REMOVAL OF HAZARDOUS MATERIALS AND WASTE

As required by the CEC Commission Decision, OMEC is responsible for removing all hazardous materials from the site as part of permanent site closure. If OMEC intends to redevelop the site, other plans may be made to either remove or store materials in different location. The details of the removal will be covered in the Closure Plan.

## 7.5 BIOLOGICAL, CULTURAL, AND PALEONTOLOGICAL RESOURCES

When a permanent Closure Plan is prepared, it will include the take avoidance and mitigation requirements in effect at the time for the species that would be impacted. The plan will also include the removal of the transmission facilities when they are no longer used and useful and reclamation of areas where facilities would be removed. This may

include ripping of soil contouring of disturbed areas, implementation of erosion control, revegetation, and other measures deemed appropriate at the time the Closure Plan is developed.

Biological resources compliance reporting for closure activities would likely include pre-activity survey reports, environmental monitoring reports during reclamation, and a final report describing the closure activities and any follow-on reclamation work that would be required.

The permanent Closure Plan will include a description regarding the potential of the closure activities to impact cultural and paleontological resources. The closure requirements are to be based upon the Cultural Resources and Paleontological Resources Final Report. If no activities are proposed that would potentially impact either of these resources, no mitigation measures will be required. Should a discovery be made it will be necessary to update the Cultural Resources and Paleontological Resources final report.

The facility will comply with all COC's including contracting with qualified Cultural, Paleontological, Native American and Biological Monitors when condition require. These monitors will be identified in the final Closure Plan if required.

# Appendix

# D

RECON

*An Employee-Owned Company*

October 4, 2018

Ms. Lauren Bresnahan
Environmental Health and Safety Specialist
Calpine Corporation
606 De La Fuente Court
San Diego, CA 92154

Reference: Results of 2018 Otay Tarplant Monitoring for the Otay Mesa Energy Center
(RECON Number 3496.3)

Ms. Bresnahan:

This letter summarizes the 2018 monitoring results for the restored population of Otay tarplant (*Deinandra conjugens*) within the Route 2C temporary impact area associated with the Otay Mesa Energy Center (OMEC) project.

**Background**

Construction of the natural gas pipeline, Route 2C, associated with the OMEC project resulted in direct impacts to the federally threatened Otay tarplant. The habitat restoration requirements for Otay tarplant, which were established in the 2005 revised biological opinion (FWS-SDG-783.16), are described in detail in the Otay Mesa Energy Center Project (AFC-99-5) Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) dated August 9, 2007, prepared by RECON Environmental, Inc. (RECON) and approved by the U.S. Fish and Wildlife Service (USFWS; RECON 2007). To summarize, a total of 0.59 acre, comprising a minimum of 0.25 acre of occupied habitat and an additional 0.34 acre of suitable habitat, was to be restored within the grassland along Route 2C. Success criteria associated with the Otay tarplant restoration require that the occupied Otay tarplant habitat must have a self-sustaining population of at least 18 individuals with no supplemental seeding for at least two growing seasons, and the population cannot show a downward trend in abundance in years three through five following seeding unless a natural population chosen as a reference site exhibits the same pattern and magnitude of decline over those same years.

Within the 0.59-acre Otay tarplant revegetation area, a mix of native grasses and annuals initially was seeded and planted in 2008. Restoration efforts continued through 2012 and required the following remedial measures: weeding, supplemental seeding, and installation and maintenance of temporary fencing to minimize impacts from off-highway vehicle activity on-site. As part of these remedial measures, Otay tarplant was seeded in a total of eight 5-foot-by-5-foot plots, six of which were seeded in 2012 and two of which were seeded in 2013. The plot locations are shown on Figure 1. Temporary fencing was installed around five of these plots to provide protection from herbivory. By June 2013, all plots were occupied by Otay tarplant, and a total of approximately 590 individuals was observed. The fenced plots had a higher abundance of Otay tarplant individuals than unfenced plots.

On November 4, 2014, Calpine Corporation (Calpine) Environmental Manager Barbara McBride, prior OMEC Environmental Health and Safety (EHS) Specialist Shubhi Love, and RECON biologist Brenna Ogg (OMEC designated biologist) met with Jody Batten from Calpine, Eric Porter from USFWS, Meredith Osborne from the California Department of Fish and Wildlife, and Dale Rundquist from the California Energy Commission to conduct a site visit and assess the status of progress toward meeting the habitat restoration requirements for the OMEC project temporary impact areas, including Route 2C. Following review of the BRMIMP, the November 4, 2014 site visit, and subsequent correspondence with Calpine and

its representatives, USFWS determined that additional sampling of the restored population of Otay tarplant was required to assess the final success criteria for this species.

Additional sampling of the Otay tarplant revegetation area commenced in 2015 and was conducted by RECON biologist Brenna Ogg on April 10 and 24, 2015 (RECON 2015); April 13 and June 24, 2016 (RECON 2016); and April 17 and June 14, 2017 (RECON 2017). In 2015, a minimum of 496 Otay tarplant individuals was observed in the revegetation area with a minimum of 90 of these individuals observed outside the fenced plots. At least 21 of these Otay tarplant individuals were observed with flower buds or in flower and likely achieved reproductive success. However, as with the other annual plant species observed on-site in 2015, the majority of the observed Otay tarplant were seedlings that had desiccated before flowering. In 2016, no Otay tarplant individuals were observed, and in 2017, one Otay tarplant individual was observed in the revegetation area but likely did not achieve reproductive success. Therefore, the number of Otay tarplant individuals observed in the revegetation area exceeded the 3:1 replacement criterion of 18 individuals in 2015 but did not meet the 3:1 replacement criterion in 2016 or 2017. In 2016 and 2017, years three and four following the most recent seeding event, the revegetation area showed a downward trend in abundance.

**Otay Tarplant Monitoring Methods**

To satisfy USFWS's request for additional sampling of the Otay tarplant revegetation area, as detailed in the letter dated February 24, 2015, a qualified biologist monitored annually the eight seeded plots of Otay tarplant within the Route 2C revegetation area from 2015 to 2018. As Otay tarplant is an annual species influenced by weather conditions, it can experience substantial year-to-year variability in its growing and blooming periods. Therefore, two monitoring visits took place each year, one early and one late in the typical flowering period of April to June, to ensure at least one visit occurred during the blooming period and to enable the biologist to monitor both germination and survival rates. During each monitoring visit, live and dead Otay tarplant individuals were counted at each plot. Photographs were taken of each plot, and notes on plant germination, phenology, survival, and seeding success were recorded.

As Otay tarplant can exhibit extreme annual population fluctuations due to changes in environmental conditions, reference sites were monitored in conjunction with the restored population to determine if the sites were exhibiting the same annual pattern and magnitude of fluctuation. In coordination with the City of San Diego (City), the following two reference sites with known populations of Otay tarplant were identified: Dennery Ranch East and Proctor Valley. Figure 2 shows these reference site locations in relation to the OMEC project site. City staff monitor the populations of Otay tarplant on these two sites as part of annual Multiple Species Conservation Program monitoring and provided the annual monitoring results to the OMEC Designated Biologist from 2015 to 2018. Monitoring methods used for the reference populations follow the Management Strategic Plan (MSP) monitoring protocol (San Diego Management and Monitoring Team 2015), which varies from the monitoring methods used for the revegetation area. However, the MSP requires collection of more than sufficient data to allow for an assessment of whether the revegetation area and reference sites show the same pattern and magnitude of success or decline year to year.

**Otay Tarplant Revegetation Area 2018 Monitoring Results**

Ms. Ogg conducted surveys on April 6 and June 4, 2018, to monitor the Otay tarplant revegetation area. As summarized in Table 1 below, no Otay tarplant individuals were observed in the revegetation area during the 2018 surveys. Temporary fencing remained in place around five of the plots as originally installed. Rabbit scat was commonly observed within the unfenced plots and larger revegetation area.

Each of the plots had a dense cover of annual plant species, predominantly comprising non-native grasses and forbs with scattered native annuals. Non-native grasses included wild oat (*Avena fatua*), red brome (*Bromus madritensis* ssp. *rubens*), and rye grass (*Festuca perennis*). Non-native forbs included Russian thistle (*Salsola tragus*), prickly sow thistle (*Sonchus asper* ssp. *asper*), prickly lettuce (*Lactuca serriola*), bristly ox-tongue (*Helminthotheca* [=*Picris*] *echioides*), sourclover (*Melilotus indicus*), California burclover (*Medicago polymorpha*), and cheeseweed (*Malva parviflora*). Native annuals included blue dicks

(*Dichelostemma capitatum*) and one sensitive plant species, small-flowered morning-glory (*Convolvulus simulans*; California Native Plant Society Rare Plant Rank 4.2), which was observed in four of the eight tarplant plots. By the April visit, most grasses and prickly sow thistle were setting seed. By the June visit, nearly all non-native annual species–except Russian thistle and a few prickly sow thistle, cheeseweed, and prickly lettuce–had set seed. The majority of small-flowered morning-glory individuals observed had set and dropped seed prior to the June visit.

**Table 1**
**2018 Otay Tarplant Revegetation Area Monitoring Results**

| Plot Number | Fenced Plot? | Otay Tarplant Count | Notes |
|---|---|---|---|
| 1 | Yes | 0 | Approximately 100 percent cover of non-native grasses and annual forbs (red brome, wild oat, rye grass, and Russian thistle) and scattered prickly sow thistle and California burclover. By June, all grasses, prickly sow thistle, and California burclover had set or dropped seed. No small-flowered morning-glory observed. Plot shown in Photograph 1. |
| 2 | No | 0 | Between 90 and 95 percent cover of wild oat, red brome, Russian thistle, prickly sow thistle, and prickly lettuce. By June, Russian thistle mostly still in vegetative state. All grasses and some prickly sow thistle had set or dropped seed. Approximately 15 individual small-flowered morning-glory observed. Plot shown in Photograph 2. |
| 3 | No | 0 | Approximately 90 percent cover of red brome, Russian thistle, wild oat, prickly sow thistle, and bristly ox-tongue. By June, all annuals except Russian thistle had set or dropped seed. No small-flowered morning-glory observed. Plot shown in Photograph 3. |
| 4 | Yes | 0 | Approximately 100 percent cover of red brome, wild oat, rye grass, and Russian thistle, prickly sow thistle, prickly lettuce, and bristly ox-tongue. By June, all annuals except Russian thistle had set or dropped seed. One small-flowered morning-glory individual observed and was fruiting at the time of the April visit. Plot shown in Photograph 4. |
| 5 | Yes | 0 | Approximately 100 percent cover of wild oat, red brome, Russian thistle, and prickly sow thistle observed. By June, all annuals except Russian thistle had set or dropped seed. No small-flowered morning-glory observed. Plot shown in Photograph 5. |
| 6 | Yes | 0 | Between 95 and 100 percent cover of red brome, Russian thistle, wild oat, sourclover, prickly sow thistle, and prickly lettuce. By June, all annuals except Russian thistle had set or dropped seed. One blue dicks individual and one small-flowered morning-glory individual observed. Plot shown in Photograph 6. |
| 7 | No | 0 | Approximately 100 percent cover of wild oat, prickly lettuce, Russian thistle, rye grass, red brome and prickly sow thistle. By June, all annuals except Russian thistle had set or dropped seed. Approximately 20 small-flowered morning-glory individuals observed, with most fruiting. Plot shown in Photograph 7. |
| 8 | Yes | 0 | Approximately 100 percent cover of ripgut grass, red brome, wild oat, prickly sow thistle, Russian thistle, prickly lettuce, and cheeseweed. By June, most annuals had set or dropped seed. Russian thistle and some cheeseweed and prickly sow thistle still in vegetative state. No small-flowered morning-glory observed. Plot shown in Photograph 8. |
| | TOTAL | 0 | |

As of September 28, 2018, a season-to-date total of 4.14 inches of rainfall was recorded for the 2017–2018 wet season (October 1, 2017–September 27, 2018) at Brown Field, the closest available weather station in the Otay Mesa area. This season-to-date rainfall total is well below the normal value of 12.34 inches (based on the period of 1981 to 2010; National Weather Service 2018). Observed germination of native annual plants was noticeably lower than was observed in previous monitoring years. As an example, fascicled

tarplant (*Deinandra fasciculata*) was observed in very low numbers or not observed at all in areas near the Otay tarplant plots where it had been common to abundant during previous monitoring years. Similarly, fewer individuals of small-flowered morning-glory were observed within the revegetation area, with only four plots supporting the species as compared to seven plots in 2017, eight plots in 2016, and seven plots in 2015.

This year, 2018, marks five years following the most recent seeding effort for Otay tarplant in the Route 2C revegetation area. As shown in Table 2 below, the number of Otay tarplant individuals observed in the revegetation area in 2015 exceeded the 3:1 replacement criterion of 18 individuals (RECON 2015). However, with no Otay tarplant observed in 2016, the Otay tarplant revegetation area did not meet the 3:1 replacement criterion in 2016 and began to show a downward trend in abundance in year three following seeding. With only one Otay tarplant individual observed and no reproductive success confirmed in 2017, and no Otay tarplant observed in 2018, the revegetation effort continues to fall short of the 3:1 replacement criterion and continues to show a downward trend in abundance in year five following seeding.

**Table 2**
**2012–2018 Otay Tarplant Revegetation Area Monitoring Results Summary**

| Monitoring Year | Otay Tarplant Count | Notes |
|---|---|---|
| 2012 | 80+ | 100 percent flowered and set seed. |
| 2013 | 590 | Majority of plants were in flower or had set seed. |
| 2014 | N/A | No monitoring was conducted. |
| 2015 | 496+ | Majority observed were seedlings that had desiccated before flowering. Approximately 3 percent had formed flower buds, and 1 percent was flowering. |
| 2016 | 0 | |
| 2017 | 1 | Could not confirm whether individual achieved reproductive success. |
| 2018 | 0 | |

**Otay Tarplant Reference Sites Monitoring Results**

As mentioned above, two reference sites–Dennery Ranch East and Proctor Valley–with known populations of Otay tarplant have been identified. City staff conducted the 2018 monitoring visits on May 10 and 22, 2018. The year 2012 through 2018 monitoring results for these two sites are summarized in Table 3 below. The abundance of Otay tarplant in each of the reference sites has fluctuated from year to year. Both sites showed declining population sizes from 2012 to 2014, followed by an upward trend in abundance from 2014 to 2016. As of the 2017 monitoring visit, the Otay tarplant abundance in each reference site had again declined compared to the numbers observed in 2015 and 2016. As of 2018, only the Dennery Ranch East site showed a slight rebound in population size with 388 individuals.

**Table 3**
**2012–2018 Otay Tarplant Reference Site Monitoring Results Summary**

| Monitoring Year | Otay Tarplant Count | Notes |
|---|---|---|
| Dennery Ranch East | | |
| 2012 | 10,000+ | No phenology data were collected. |
| 2013 | 4,500 | No phenology data were collected. |
| 2014 | 2 | Between 50 and 75 percent were flowering. None were recorded as fruiting. |
| 2015 | 35,000 | Over 75 percent were flowering. None were recorded as fruiting. Total percent cover of vegetation was greater than 70 percent. |
| 2016 | 116,000 | Over 75 percent were flowering. None were recorded as fruiting. Total percent cover of vegetation was greater than 82 percent. |
| 2017 | 20 | Total approximate percent cover of vegetation was 75 percent. |
| 2018 | 388 | Over 75 percent were flowering and stunted. Total percent cover of vegetation was 24 percent. |
| Proctor Valley | | |
| 2012 | 30 | No phenology data were collected. |
| 2013 | 0 | N/A |
| 2014 | 0 | N/A |
| 2015 | 380 | Between 50 and 75 percent were flowering. None were recorded as fruiting. Total percent cover of vegetation was 100 percent. |
| 2016 | 858 | Over 75 percent were flowering. None were recorded as fruiting. Total percent cover of vegetation was greater than 91 percent. |
| 2017 | 128 | Over 75 percent were flowering, and less than 10 percent showed stunted growth. None were recorded as fruiting. Total approximate percent cover of vegetation was 92 percent. |
| 2018 | 0 | Total percent cover of vegetation was 78 percent. |

**Discussion**

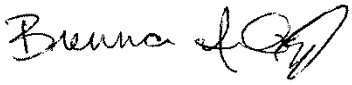
In 2018, monitoring visits were conducted in April and June for the revegetation area and in May for the reference sites, which should allow for a comparison of total count of individuals, as well as a comparison of phenology. By the May 2018 monitoring visit, over 75 percent of the Dennery Ranch East reference population was in flower, confirming that the revegetation area surveys were conducted at an appropriate time of year to detect the species. Otay tarplant individuals in the revegetation area would have likely been apparent by April and showing similar to or more advanced phenology than the reference populations by the time of the June survey.

As discussed above, the Otay tarplant revegetation area exceeded the 3:1 replacement criterion of 18 individuals in 2015. However, the revegetation area did not meet this replacement criterion in 2016 and has shown an overall downward trend in abundance from 2016 to 2018. Therefore, the Otay tarplant revegetation area has not met the required success criteria. The low number or lack of Otay tarplant individuals in the revegetation area in 2016, 2017, and 2018 has likely resulted from the compounding effects of herbivory, seed bank depletion in 2015, and competition from aggressive annual species, including non-native grasses and Russian thistle. Sign of herbivory within the revegetation area continues to be observed each year. However, the early desiccation of seedlings and low rates of reproductive success observed in 2015 were likely the greatest contributors to the reduction of the on-site seed bank and appear to have negatively impacted the Otay tarplant population more than many other on-site species, similar to what has been observed at the reference sites. Ongoing competition from the abundant non-native weedy

species such as red brome, wild oat, and Russian thistle continues to have a detrimental effect on the already reduced population of Otay tarplant and other native annuals including small-flowered morning-glory. The on-site population of Otay tarplant is not anticipated to recover naturally. Therefore, intensive on-site remedial measures or an alternative mitigation approach would be necessary to fulfill the Otay tarplant mitigation requirements for the OMEC project.

Please email or call me at bogg@reconenvironmental.com or (619) 308-9333 extension 118 if you have any questions or require further information pertaining to these monitoring results.

Sincerely,



Brenna Ogg
Senior Biologist

**References Cited**

National Weather Service

2018 San Diego Brown Field Climate Report for September 28, 2018. http://w2.weather.gov/climate/getclimate.php?wfo=sgx.

RECON Environmental, Inc. (RECON)

2007 Otay Mesa Energy Center Project (AFC-99-5) Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP). RECON Number 3496-1B. Approved September 5, 2001. Updated August 9.

2015 Results of 2015 Otay Tarplant Monitoring for the Otay Mesa Energy Center. August 5.

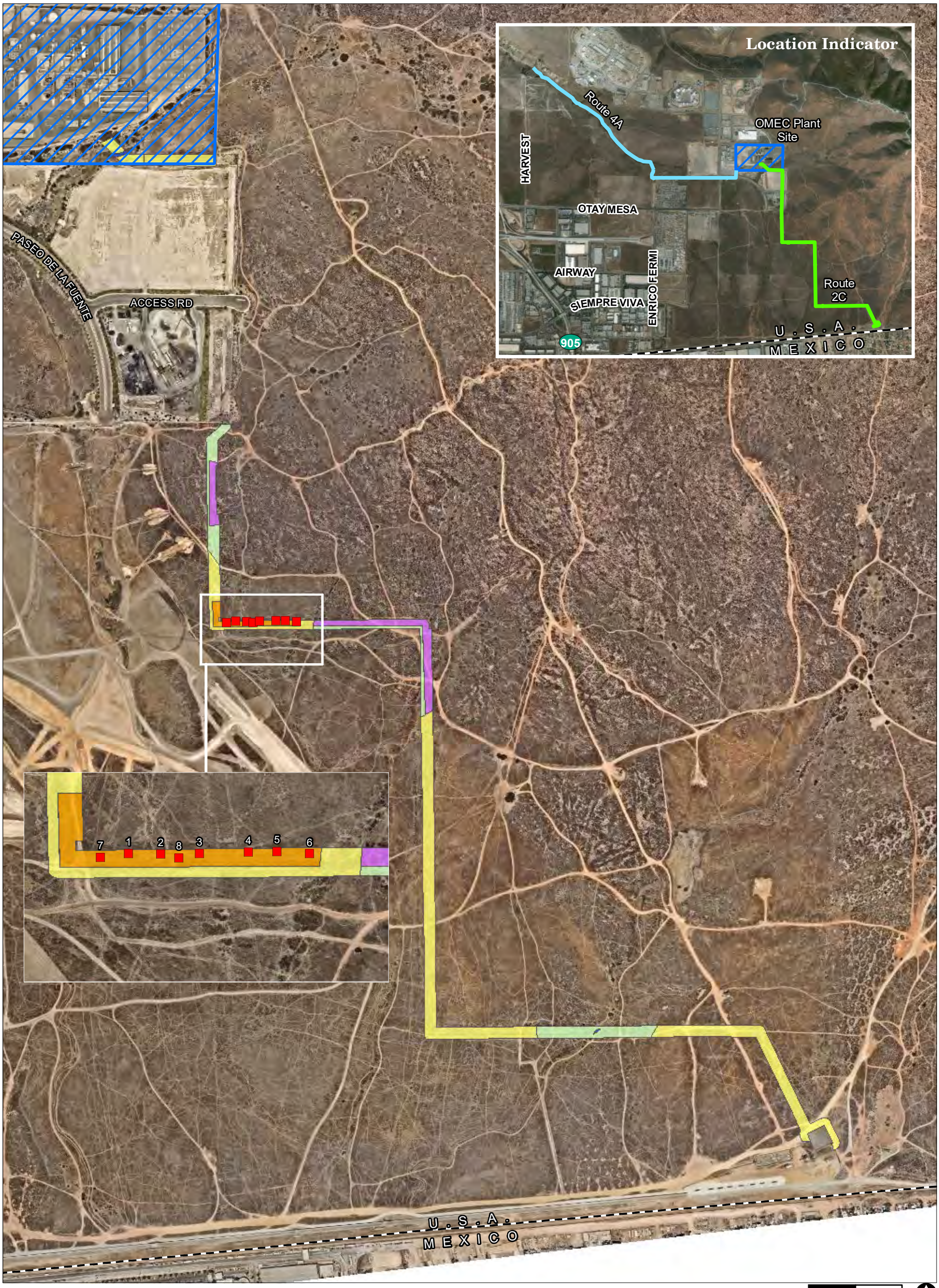
2016 Results of 2016 Otay Tarplant Monitoring for the Otay Mesa Energy Center. July 29.

2017 Results of 2017 Otay Tarplant Monitoring for the Otay Mesa Energy Center. September 26.

San Diego Management and Monitoring Team

2015 Management Strategic Plan (MSP) 2015 Monitoring Protocol for Rare Plan Occurrences on Conserved Lands in Western San Diego County. March 11, 2014. Revised March 5, 2015.

Image source: Nearmap (flown June 2018)




OMEC Plant Site

**Route 2C Temporary Impact Revegetation Areas**

- Coastal Sage Scrub
- Freshwater Marsh
- Grassland
- Quino Checkerspot Butterfly Habitat (Coastal Sage Scub)
- Otay Tarplant Habitat (Non-native Grassland)
- Otay Tarplant Plots

RECON

M:\JOBS\3496-1\common_gis\fig1_reveg_2018.mxd 10/3/2018 sab

FIGURE 1

Otay Mesa Energy Center Route 2C

Otay Tarplant Seeded Plot Locations on Aerial Photograph

Image source: DigitalGlobe (flown Feb & July 2016)

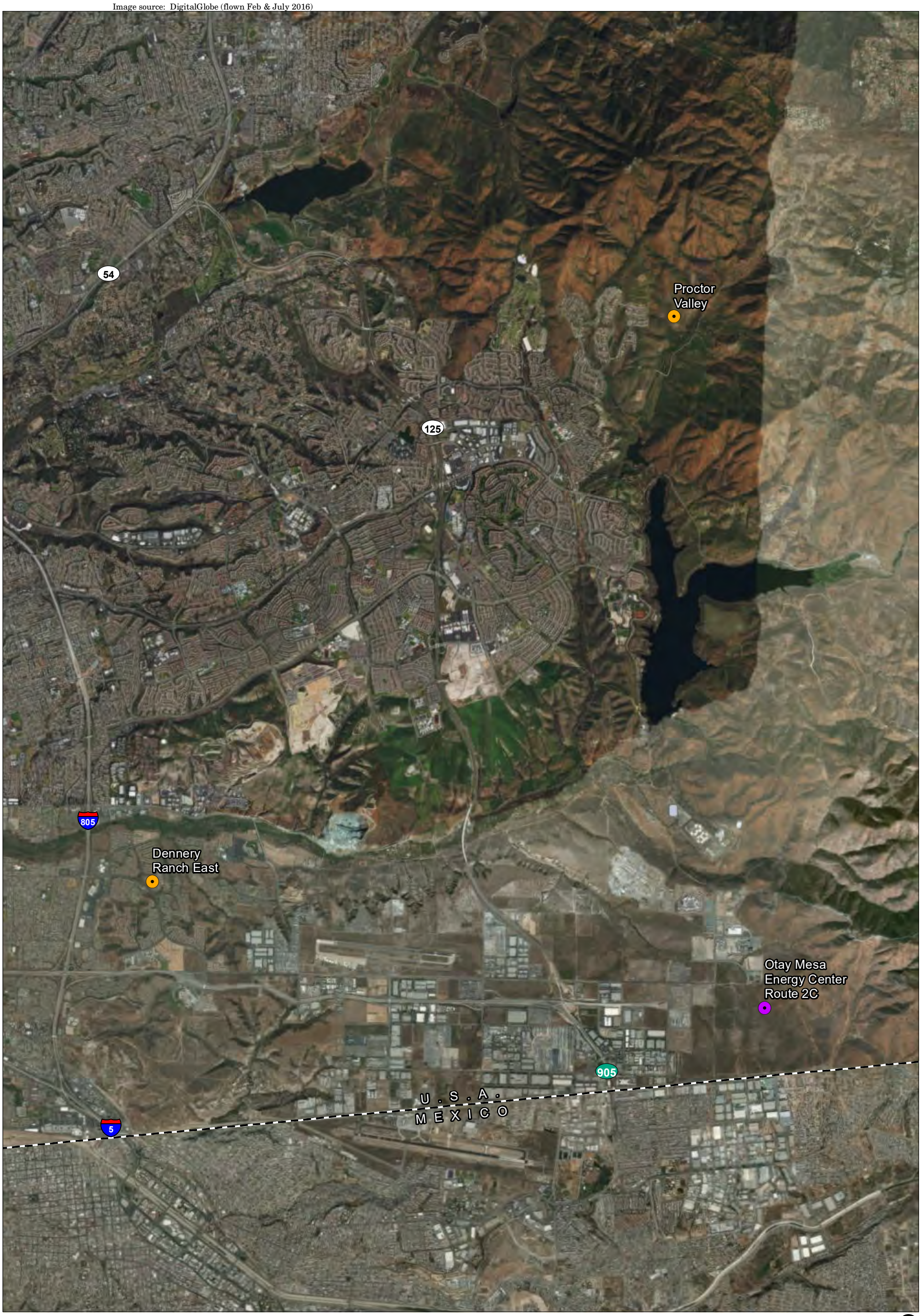



FIGURE 2

Otay Tarplant Revegetation Area and Reference Sites for the Otay Mesa Energy Center Project

RECON

M:\JOBS\3496-1\common_gis\fig2_reveg_2018.mxd 10/2/2018

PHOTOGRAPH 1
Plot 1, Facing East, Taken June 4, 2018

PHOTOGRAPH 2
Plot 2, Facing East, Taken June 4, 2018

PHOTOGRAPH 3
Plot 3, Facing East, Taken June 4, 2018

PHOTOGRAPH 4
Plot 4, Facing East, Taken June 4, 2018

PHOTOGRAPH 5
Plot 5, Facing East, Taken June 4, 2018

PHOTOGRAPH 6
Plot 6, Facing East, Taken June 4, 2018

PHOTOGRAPH 7
Plot 7, Facing East, Taken June 4, 2018

PHOTOGRAPH 8
Plot 8, Facing East, Taken June 4, 2018

# Appendix

# E

# Vouchers For a Payment

Back To Payment Inquiry

**Bank Name:** MUFG Union Bank, N.A.
**Bank Account #:** 9080015035
**Pay Cycle:** UBEHNV **Seq Num:** 2940
**Vendor Name:** THE SAN DIEGO FOUNDATION
**Address:** 2508 HISTORIC DECATUR RD STE 200

SAN DIEGO CA 92106-6138 USA

**Payment Amount:** 5,000.00 USD **Payment Method:** CHK

**Description**

**Pymnt Ref ID:** 1000034438
**Accounting Date:** 01/18/2018
**Payment Date:** 01/18/2018
**Days Outstanding:** 11
**Payment Clear Date:** 01/29/2018
**Reconcile Date:** 01/30/2018
**Value Date:** 01/18/2018

**Details** Personalize | Find | View All | First 1 of 1 Last

| Business Unit | Voucher ID | Advice Seq | Advice Date | Invoice Number | Gross Paid Amount | Paid Amount | Currency | Discount Taken | Late Charge | Source |
|---|---|---|---|---|---|---|---|---|---|---|
| 10000 | 00118962 | 1 | 01/11/2018 | 470790118 | 5,000.00 | 5,000.00 | USD | | | Accounts Payable Vouchers |

Notify

# Appendix

# F

# OTAY MESA ENERGY CENTER, LLC

606 De La Fuente Court
San Diego, CA 92154

Feb 28, 2019

William Jacques
Compliance Department
San Diego Air Pollution Control District
9150 Chesapeake Drive
San Diego, CA 92123-1096

Re: Docket No. 99-AFC-5C
Order No. 09-603-2
Otay Mesa Energy Center, LLC
Air Quality Conditions of Certification AQ-42 and AQ-43

Dear Mr. Jacques,

This letter is to submit the annual MERC report for the Emission Offset Conditions for Otay Mesa Energy Center, LLC: AQ-42 and AQ-43

**1. AQ-42**

(b) Provide an annual report that summarizes the annual average ongoing emission reductions for each MERC, aggregate ongoing emission reductions and ongoing emission reductions deficit.

The Average Ongoing Emission Reductions for each MERC:

| **MERC Certificate #** | **Eo** |
|---|---|
| 979157-01 | 15.98 |
| 979158-01 | 16.40 |
| 979159-01 | 14.91 |
| 979160-01 | 14.52 |
| 980622-01 | 7.21 |
| 980623-01 | 6.46 |
| 980624-01 | 7.17 |
| 980625-01 | 5.03 |
| 980626-01 | 2.60 |
| 976624A-01 | 4.06 |
| 976624B-01 | 3.07 |

The Aggregate Average Ongoing Emission Reductions Eoa = 97.40

# OTAY MESA ENERGY CENTER, LLC

606 DE LA FUENTE COURT
SAN DIEGO, CA 92154

The supporting calculations and documentation for (a) and (b) are provided in the attachment. In addition, please refer to the quarterly data submitted by Waste Management, Pacific Tugboat Services. San Diego Harbor Excursion has completed their MERC reporting requirements as of December 31, 2012.

(c) If the calculated annual ongoing emission reduction deficit is positive, notify the District, provide a compliance schedule to correct ongoing emission reduction deficit.

The MERC Emission Reduction Deficit is negative, Emd = -51.73. Therefore, this condition does not apply.

**2. AQ-43**

(a) Notify the District if the MERC fractional employment is less than 0.8;

(b) Notify the District if the MERC fractional employment in primary service is less than 0.8.

As of December 31, 2014, MERC Certificates #979157-01 and 979158-01 are no longer required to report fractional employment and fractional employment in primary service calculated in accordance with the Alternative Program.

As of December 31, 2011, MERC Certificate #979159-01 and 979160-01 are no longer required to report fractional employment and fractional employment in primary service calculated in accordance with the Alternative Program.

Therefore, this condition does not apply.

If you have any questions or require more information, please contact me at (619) 210-1207.

Sincerely,

Dale Donmoyer
Plant Manager
Otay Mesa Energy Center,
606 De La Fuente Court
San Diego, CA 92154

# OTAY MESA ENERGY CENTER, LLC

606 De La Fuente Court
San Diego, CA 92154

| MERC | Cms | n | D1 | Aof | Aoi | Eo |
|---|---|---|---|---|---|---|
| 979157-01 | 9.89 | 68 | 0.5946 | 73150 | 1194689 | 15.98 |
| 979158-01 | 9.22 | 67 | 0.5367 | 75550 | 1207950 | 16.40 |
| 979159-01 | 8.75 | 64 | 0.4946 | 77786 | 1048625 | 14.91 |
| 979160-01 | 7.39 | 64 | 0.4328 | 75063 | 1021067 | 14.52 |
| 980622-01 | 7.62 | 41 | 1 | 42000 | 407152 | 7.21 |
| 980623-01 | 6.79 | 41 | 1 | 39400 | 383992 | 6.46 |
| 980624-01 | 5.83 | 43 | 1 | 19400 | 256467 | 7.17 |
| 980625-01 | 4.39 | 44 | 1 | 13100 | 165201 | 5.03 |
| 980626-01 | 2.53 | 41 | 1 | 12327 | 130064 | 2.60 |
| 976624A-01 | 6.67 | 63 | 1 | 23720 | 230792 | 4.06 |
| 976624B-01 | 5.25 | 63 | 1 | 24880 | 232298 | 3.07 |
| **Eoa** | | | | | | **97.40** |
| Emd | | | | | | -51.73 |

Updated as of 02/27/19

980622-980626: no longer required to report. Data ia either based on 2011 or 2012

# Appendix

# G

| Location Information | | Chemical Identification | | |
|---|---|---|---|---|
| 1a* | 201 | 205 | 207* | 215 |
| **CERSID** | **ChemicalLocation** | **ChemicalName** | **CommonName** | **LargestContainer** |
| 10394278 | North side of Unit 1 & 2 (tanks), cylinder area, steam turbine area | CARBON DIOXIDE LIQUID | CARBON DIOXIDE LIQUID | 1417 |
| 10394278 | By Steam Turbine chemical skid area and WET SAC | | CHEM TREAT BL 153 | 400 |
| 10394278 | By WET SAC | | CHEM TREAT CL 4400 (dispersant) | 1000 |
| 10394278 | North of the plant | HYDROGEN | HYDROGEN | 45000 |
| 10394278 | East of CNG pipeline | AMMONIUM HYDROXIDE: 29.4% | AMMONIUM HYDROXIDE: 29.4% | 16000 |
| 10394278 | By WET SAC | SULFURIC ACID | SULFURIC ACID 93% | 1000 |
| 10394278 | By WET SAC | | CL49 | 1000 |
| 10394278 | All Over the facility in Equipment | Transformer Oil | Transformer Oil | 20000 |
| 10394278 | Hazardous Materials Locker | | Lubricating Oil | 55 |
| 10394278 | By Steam Turbine chemical skid area | | BL1798 | 400 |
| 10394278 | By WET SAC | | CT708 | 1000 |
| 10394278 | Cylinder storage-North of the plant | ARGON | ARGON | 250 |
| 10394278 | Batteries located at various locations | Sulfuric Acid, 40% | ELECTROLYTE/SULFURIC ACID | 16 |
| 10394278 | Hazardous Waste Area | | Used lubricating oils--recycled | 55 |
| 10394278 | | | Oily Debris | 500 |
| 10394278 | Hazardous Materials Locker and By Steam Turbine skid area | - | CHEM TREAT BL8100 | 250 |
| 10394278 | north of warehouse | PROPANE | Propane | 342 |
| 10394278 | by Units 1 & 2 CEMS | Nitrogen, Liquid | Nitrogen, Liquid | 15 |
| 10394278 | North of plant, Cylinder storage area, all over plant | NITROGEN | NITROGEN | 305 |
| 10394278 | Cylinder storage-North of the plant | ACETYLENE | ACETYLENE | 130 |
| 10394278 | Cylinder storage-North of the plant | OXYGEN | OXYGEN | 250 |

# Appendix

# H

# EHS-11

# Waste Management Plan

## April 2019

Approved: _____

Dale Dommoyer, Plant Manager

Date: 4/25/19

**Document History**

| Revision: | Date | Author(s) | Description |
|---|---|---|---|
| 0 | 2/18/11 | Betty Chu, Jeff Sorenson | Western Region Plan Template for adapting to site |
| 1 | 5/15/2011 | Site Manager, Site Waste Management Coordinator and Calpine EHS | Adapted template to site |
| 2 | 11/28/11 | Betty Chu, Jeff Sorenson, Scott Vickers | Updated Section 3.4a; Table 3; Appendix A |
| 2 | 12/20/12 | Shubhi Love | Reviewed, No changes |
| 2 | 3/20/14 | Shubhi Love | Reviewed, No changes |
| 2 | 4/20/15 | Shubhi Love | Reviewed, No changes |
| 2 | 1/21/16 | Shubhi Love | Reviewed, No changes |
| 2 | 2/28/17 | Shubhi Love | Reviewed, No changes |
| 2 | 4/25/18 | Lauren Bresnahan | Reviewed, No changes |
| 2 | 4/25/19 | Lauren Bresnahan | Reviewed, No changes |

## 1. PURPOSE AND SCOPE

In accordance with EHS-11, the purpose of this plan is to provide detailed procedures and guidance for managing wastes generated from various site activities.

This Waste Management Plan provides general descriptions of the various waste categories along with information on accumulation practices, container labeling, regulatory compliance, employee training and disposal practices associated with each waste category. This plan forms the basic template for complying with Federal waste management requirements and shall be modified by the Site Manager to include relevant state specific regulatory requirements.

This plan and its parent document EHS-11: Waste Management must be adhered to by all Calpine personnel and contractors. In accordance with applicable Federal and state regulation, employees should be trained and/or familiar with their responsibilities prior to being involved with waste management activities. The Roles and Responsibilities section identifies groups and/or positions with specific duties at a site, with ultimate responsibility for compliance resting with the Site Manager.

## 2. ROLES AND RESPONSIBILITIES

**2.1 Calpine EHS** shall**:**

2.1.a - Maintain knowledge of waste programs and applicable state, EPA, DOT/PHMSA, and OSHA regulation;

2.1.b - Provide technical assistance to Calpine sites with aspects of waste management, including training, waste characterization, handling, accumulation, transportation, disposal, reporting and recordkeeping; and,

2.1.c - Maintain this Standard.

**2.2 Calpine Employees** shal**l:**

2.2.a - Properly handle, store, label, and track waste generated during work activities; and,

2.2.b - Ensure the Calpine Site Waste Management Coordinator is aware of all waste related activities.

**2.3 Site Managers** shall:

2.3.a - Ensure implementation and compliance with all aspects of this standard at their site;

2.3.b - Designate a Site Waste Management Coordinator;

2.3.c - Ensure site compliance with waste program procedures, guidance, and applicable regulation;

2.3.d - Ensure that site personnel receive the appropriate training required by this standard; and,

2.3.e - Ensure that Contractors manage their wastes in accordance with this standard.

2.4 **Site Waste Management Coordinators** shall:

2.4.a - Manage waste related activities in compliance with the Waste Management Standard and associated Federal and state regulations; and,

2.4.b - Maintain knowledge of waste programs and applicable state, EPA, DOT/PHMSA, and OSHA regulation.

2.4.c - Track site hazardous waste generation on a monthly basis to confirm appropriate Site generator status per the compliance matrix in Section 6 of this standard.

## 3. ON-SITE MANAGEMENT OF WASTES

This section consists of waste information and procedures necessary for normal day to day operations and maintenance up to, but not including, the off-site transportation of waste.

**Always contact Calpine EHS prior to generating any waste not previously identified in Table 4 of this Plan. This shall help to ensure that potential hazards are identified, the waste is characterized, and proper handling and management processes are put in place (i.e. container, labels, etc.).**

### 3.1 Hazardous Wastes

Hazardous wastes are wastes that can pose a substantial or potential hazard to human health or the environment when improperly managed. They are either specifically listed or exhibit at least one of four hazardous characteristics (ignitability, corrosivity, reactivity, or toxicity).

Many states have regulations for identifying hazardous wastes that go beyond the Federal regulations. Contact Calpine EHS to identify state hazardous wastes generated at your site.

#### 3.1.a - Generator Status

With respect to Hazardous Waste generator status, this site is generally a **small quantity generator.** Table 1 lists the generation and accumulation thresholds that define generator status.

**TABLE 1. CLASSIFICATIONS OF HAZARDOUS WASTE GENERATORS**

| Each site shall track their hazardous waste generation to confirm their appropriate classification Small Quantity Generator (SQG) or Large Quantity Generator (LGQ). Classification is determined by monthly generations and maximum quantity of RCRA hazardous waste on site, | **SQG** | **LQG** |
|---|---|---|
| RCRA hazardous waste generation Kg per month (pounds) : | >100 and <1,000 (>220 and < 2200) | ≥1,000 (≥2,200) |
| RCRA acutely hazardous waste generation Kg per month (pounds): | ≤1 (≤2.2) | >1 (>2.2) |
| Maximum on site accumulation at one time limit of RCRA hazardous waste in Kgs (pounds): | 6,000 (13,200) | NA |

The Calpine Waste Management Coordinator shall complete a monthly inventory of hazardous wastes and determine the appropriate generator status using the form provided in Appendix A. Databases or spread sheets may be used as well.

**Episodic Generator**

During outages, sites can go from a SQG to a LQG. If you generate more than 1,000 kilograms/2,200 pounds, occasionally then you are an episodic generator. DTSC & EPA does not require episodic generators to follow the regulatory requirements for LQG throughout the entire year if they only generate greater than 1,000 kilograms for one or two months out of the entire year. However, for the "month" that you do generate more than 1,000 kilograms you must follow the requirements for an LQG for that month. After you ship the waste that month off site, you can revert to your normal SQG management standards.

***BMP***: Dispose of all wastes in 90 days.
Send a letter to your CUPA to notify of the change in generator status.

### 3.1.b - EPA Identification Numbers

An EPA ID number is a unique three letter, nine digit number assigned to a site that generates hazardous wastes (see Table 2). Each generating site is a contiguous geographic location that requires only one EPA ID number. Calpine employees may not transport hazardous wastes on public roads unless specifically authorized by Calpine EHS. If you identify an activity that may generate hazardous waste at a remote site that must be accessed by public roads, call Calpine EHS for guidance.

**TABLE 2. HAZARDOUS WASTE GENERATOR INFORMATION**

| Site | Site Address | EPA ID Number |
|---|---|---|
| **Calpine Otay Mesa Energy Center** | **606 De La Fuente Court, San Diego, CA 92154** | **CAL000183558** |

### 3.1.c - Satellite Accumulation

Satellite accumulation, or “workplace accumulation,” is the collection of hazardous waste at or near its point of generation. Generally, this refers to the accumulation of waste from a routine process and is intended to minimize the risk and/or inconvenience of frequently moving small amounts of waste to the central accumulation area. The use of satellite accumulation must be approved by the Site Waste Management Coordinator and comply with the following regulatory requirements:

- The waste must be accumulated in containers at or near the point of generation.
- For satellite accumulation of liquid hazardous wastes secondary containment is required.

- The waste must be under the control of the person(s) generating the waste. In the case of contractors, site employees should be in control.
- The initial date of waste accumulation is clearly marked and visible for inspection on each container used for the accumulation of hazardous waste.
- Up to 55 gallons of hazardous waste can be accumulated on-site for up to 1 year. *BMP:* California DTSC believes that the 1-year time limit also includes the 90-day accumulation time. This means that in no case can a "satellite waste" be held on site for more than 1 year.
- Full containers must be moved to the central accumulation area within 3 days.
- Satellite accumulation areas must be monitored and inspected to assure that the containers are:
  - in good condition
  - compatible with waste
  - closed except when it is necessary to add waste.
  - properly segregated


- All hazardous waste on-site counts toward a generator's status.

### 3.1.d - Waste Accumulation Areas

Waste accumulation areas serve as locations for the temporary holding of wastes awaiting transportation off site. The waste accumulation area for this site is Hazardous Waste Storage Area.

Waste Accumulation Areas shall be maintained such that:

- Waste is accumulated no longer than the time allowed in 3.1.e
- Hazardous waste containers are kept closed, except when adding or removing waste from the container;
- Secondary containment is adequate to contain the contents of the largest liquid container;
- Provide sufficient signage to identify that the area is for hazardous waste accumulation;
- Containers are properly labeled in accordance with the compliance matrix in Section 6 of EHS 11;
- Adequate aisle spaces are maintained to assure containers and their labels are visible for inspection;
- Incompatible materials are kept separated; Wastes must be segregated; drums with used filters should not contain trash, rags, etc.

- There are documented weekly inspections; and,
- There is a written emergency action plan for emergency response including instructions for responding to hazardous waste spills, provisions for internal and external emergency communications, and the locations and inventory of appropriate emergency and spill response equipment.

### 3.1.e - Accumulation Time

LQG may accumulate hazardous waste up to 90 days. SQG may accumulate hazardous waste up to 180 days.

***BMP*** - Dispose of all waste according to LQG accumulation time of 90 days to avoid accumulating greater than 2,200 lbs during an unplanned outage.

Accumulation time is measured from the start date on the label (the date waste is first placed in the container to the date of off-site shipment.) Satellite Accumulation time starts when 55 gallons of hazardous waste (or 1 quart of acute hazardous waste) is exceeded in an Satellite Accumulation Area, the generator needs to date the container, so that the generator can move the excess to the 90-day or 180-day waste accumulation area within three days

***BMP*** – If Satellite Accumulation is necessary, include a procedure to track satellite storage time. Example: If a satellite drum was moved to the waste area on day 364, the accumulation time is 1 day in the waste accumulation area.

### 3.1.f - Labeling Requirements for Hazardous Waste Containers (Except Satellite Containers)

The site shall be responsible for providing hazardous waste labels for each EPA ID number/site and guidance on container labeling.

- Labels must be complete, legible, and permanent.
- Labels must be placed on the hazardous waste container and dated upon start of the accumulation (first waste placed into the container).
- All on site hazardous waste containers must be labeled, including:

  - ✓ Generator Name = Otay Mesa Energy Center
  - ✓ Site Address = 696 De La Fuente Court, San Diego, CA 92154
  - ✓ EPA ID = CAL000183558

- ✓ The date when the waste was first placed in container. (Except for waste brought in from satellite accumulation which is relabeled at the time of entering the waste accumulation area.)
- ✓ Name of waste (Contents, Composition). [1]
- ✓ Physical state (Solid or Liquid) (CA Only). [1]
- ✓ Hazardous properties (Flammable, toxic, corrosive or reactive) (CA Only). [1]


[1] **Refer to Table 4, section 3.5 for waste specific information.**

The DOT proper shipping name, EPA and/or state waste code and manifest number **are not required** until the waste is shipped.

### 3.1.g - Hazardous Waste Inspections

Waste Accumulation Areas shall be inspected weekly for signs of leakage, spills, proper labeling, and to confirm accumulation time and/or total quantity, as applicable. Inspections shall be documented using an equivalent form to Appendix B. Completed inspection forms shall be filed on site for 3 years. The weekly inspections are a scheduled PM. The completed inspections are filed in MAXIMO

## 3.2 Universal Wastes

Universal wastes are by definition specific hazardous wastes that are allowed to be managed under less stringent requirements. Common examples generated at this site include batteries, fluorescent bulbs, waste pesticides, and mercury containing devices such as thermostats.

Universal Waste has a specific label that should be used to identify the container and accumulation start date. Universal Waste may accumulate on-site for up to one year. All Calpine sites shall be managed as a Small Quantity Handler of Universal Wastes per 40 CFR 273; therefore on-site accumulation of Universal Waste shall not exceed 11,000 pounds for a total combined weight of all universal waste products.

Specific management methods at this site for each Universal Waste may be found in Table 3.

## 3.3 Used Oil

This site generates used oil as well as rags and other solids contaminated with oil. These wastes shall be accumulated in containers and be managed per the requirements in EHS-11 and 40 CFR 279

Used Oil has a specific label that shall be used to identify the container and accumulation start date.

***California Only***

- Used Oil is managed as Hazardous Waste (Health & Safety Code 25250.4)
- Containers (drums/tanks) accumulating used oil must be labeled as "Used Oil" and contain a "Hazardous Waste Label" that indicates the following: (CCR, title 22, section 66262.34 subsection (f))
    - Hazardous properties
    - Physical state
    - Plant name and address
    - Accumulation start date

***Oregon Only***

- Used oil can be exempt from hazardous waste regulations when properly recycled.
- Containers and above-ground tanks must be clearly labeled or marked with the words "used oil".

### 3.3.a Used Filters

Drain and collect the free-flowing oil from the filters.

- Collected oil shall be managed under the requirements for used oil.
- Labeled as "Drained Used Oil Filters", clearly marked with the initial date of accumulation or receipt.
- Transport under a bill of lading to an appropriate destination for eventual metal recycling.

- Keep a copy of the bill of lading for three years.

- 1 ton of Used oil filters may be stored for a period of up to one year.

***California Only***

Used Filters: If not sent for recycling, used oil filters must be managed as hazardous waste unless they are proven to be non-hazardous by laboratory analysis.

***Oregon Only***

Used oil filters shall be recycled for their scrap metal value when recycling is reasonably available. Used oil filters with the oil removed are exempt from being a hazardous waste when recycled for their scrap metal value.

### 3.3.b Oily Water

Oily water is generally considered hazardous waste due to toxicity (CCR Title 22), unless proven non-hazardous by analysis.

## 3.4 Non-Hazardous Waste

Non Hazardous Waste is general office and plant refuse that is not Hazardous Waste, Universal Waste, Used Oil (not for CA sites), Radioactive Waste or Infectious Waste.

Non hazardous waste shall be managed as follows:

- Non Hazardous Waste shall be stored in Containers or piles that prevent the generation of wind-blown litter or leachate.
- Putrescible Non Hazardous Waste (Waste that is not inert such as household trash containing food scraps and other decomposable refuse) shall be stored in covered containers.
- Management of Non Hazardous Waste shall also adhere to applicable requirements contained in the compliance matrix in Section 6 of EHS 11 and the Waste Management Plan template.
- Empty gas cylinders (at atmospheric pressure) shall be sent to recycling.

Industrial Non-Hazardous waste has a specific label that should be used to identify the container.

***BMP***- Ensure dumpsters are covered to prevent rain from leaching into storm drains
Ensure dumpsters used for metal recycling are specifically labeled as Metal Only

### 3.4.a Aerosol Containers

Aerosol containers that are empty can be disposed of as solid waste or recycled.

Aerosol containers with hazardous material remaining in the container, including those due to a clogged nozzle, damaged valve, or loss of propellant must be managed as hazardous wastes. In CA, this can be treated as Universal Waste. See Below.

**Do not puncture or process non-empty Aerosol Cans.**

***California Only*** (SB1158; H&S 25201.16 (e), (f ), and (g).):

Universal Waste – Aerosol Cans

- Cover storage containers – 55 gal drum
- Place accumulation containers in a location with sufficient ventilation to prevent formation of an explosive atmosphere;
- Provide proper storage to prevent leaks
- Place aerosol cans in containers that are designed, built, and maintained to withstand pressures reasonably expected during storage and transportation
- Segregate incompatible materials in separate containers;
- Keep containers of flammable wastes a safe distance from heat and open flames;
- Label containers “Universal Waste-Aerosol Cans,” and start date.
- Accumulation – Up to 1 year

***Oregon Only*** (2005-PO-001):

Aerosol cans that contain residual product that meet the definition of hazardous waste will need to determine if the contents remaining in the can are hazardous waste. A discarded aerosol can is a hazardous waste if the can and its contents exhibit a hazardous waste characteristic/listed hazardous waste. In addition, an empty aerosol can which is not fully depressurized is regulated as a reactive characteristic hazardous waste.

Cans that are empty and fully depressurized or, depressurized aerosol cans that contain materials that are not themselves hazardous wastes may be recycled or disposed as a solid waste.

## 3.5 Specific Wastes Managed On-Site

Personnel should be familiar with their responsibilities and the overall waste management program prior to handling wastes or other material described in this plan. Table 3&4 lists those wastes that have been properly characterized and assigned handling procedures. Any wastes not listed shall be referred to the Site Waste Management Coordinator and Calpine EHS to ensure compliance with applicable requirements.

### 3.5.a Special Wastes:

1. Cooling Tower Wood:

**Federal Reg**

- Exempted from hazardous waste regulation any arsenically treated wood wastes provided that the wastes are being disposed of by the end user who used the wood for its intended purpose.

40 CFR 261.4(b)(9)]:

Solid wastes which are not hazardous wastes. The following solid wastes are not hazardous wastes: (9) Solid waste which consists of discarded arsenical-treated wood or wood products which fails the test for the Toxicity Characteristic for Hazardous Waste Codes D004 through D017 and which is not a hazardous waste for any other reason if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials' intended end use.

**California only**

- Treated Wood Waste (TWW) is considered Hazardous Waste but can be handled under Alternative Management Standards (AMS)
- Review for additional requirements: http://www.dtsc.ca.gov/HazardousWaste/upload/Treated-Wood-Waste-Generators-Fact-Sheet.pdf

- Label all TWW bundle/shipments with the following information:

***TREATED WOOD WASTE – Do not burn or scavenge. TWW Handler Name:_____***

***Address:_____ Accumulation Date:_____***

2. Spent Demineralizer resins- See Table 3.

3. HRSG Water Wash- Test water for Metals. If water has metals, treat as hazardous waste.

4. Distallates/Condensate Natural Gas – Not considered a Hazardous Waste. Please contact CPN Pipeline.

**TABLE 3. WASTE SPECIFIC LABELING AND MANAGEMENT PROCEDURES FOR UNIVERSAL and NON-HAZARDOUS WASTES**

| Waste Name | Label Information<br>Non Hazardous Waste<br>Recyclable<br>Universal Waste | Source of Generation | Procedures | Collection Container | DOT Hazardous Material Description and Shipping Name |
|---|---|---|---|---|---|
| Batteries: Dry cell batteries | Universal Waste- Batteries | Dry cell re-chargeable batteries including: Ni-Cad, NiMH, Zinc Carbon, Mercury, and Alkaline | Accumulated for up to 1 year under universal Waste rules.<br><br>Use purple and white waste label. | 5 gallon poly bucket with tight fitting lid.<br>DOT approved | Universal Waste Batteries |
| Batteries: Lead acid wet cell (Automotive style) | No Label | Vehicles, various equipment, UPS systems and power plants. | Recycled back to vendor that supplies batteries. Accumulate in contained area until vendor pick up. | None required | Picked up by vendor |
| Batteries: lithium-ion | Universal Waste- Batteries | Portable tools and equipment | Accumulate for 1year under Universal Waste rules. Battery terminals must be taped over to prevent short circuit. **When shipping batteries refer to DOT shipping requirements.** | 5 gallon steel drum<br>DOT approved | Waste Lithium Batteries 9, UN3090 PG II |
| Fluorescent Bulbs | Universal Waste- Lamps | Site indoor lighting | Place used bulbs in designated box or tube. Apply Universal Waste label that includes material and accumulation start date. Can accumulate on-site for a maximum of 1 year. | Designated box or tube for fluorescent bulbs. Can use original shipping box or container provided by Universal Waste vendor. | Universal Waste – Lamps |
| Municipal Waste (Trash) | Name and telephone number of the collection service operator ( for containers over one cubic yard) | Food waste, office trash | Place trash in bin and close lid. | Vendor supplied dumpster | Picked up by vendor |

**TABLE 3. WASTE SPECIFIC LABELING AND MANAGEMENT PROCEDURES FOR UNIVERSAL and NON-HAZARDOUS WASTES**

| Waste Name | Label Information<br>Non Hazardous Waste<br>Recyclable<br>Universal Waste | Source of Generation | Procedures | Collection Container | DOT Hazardous Material Description and Shipping Name |
|---|---|---|---|---|---|
| E-wastes – CPUs, monitors, phones, etc | Universal Waste – CRT/Electronic Device | CPUs, monitors, phones, etc… | Accumulate for up to 1 year under Universal Waste Rules.<br><br>Contact Helpdesk to have vendor setup to dispose.<br><br>Maintain records of disposal. | None Required | Universal Waste – E Waste |
| Empty Paint Can | No Label | Leftover from Construction | If can in empty, dispose of as solid waste | None required | Solid Waste |
| Empty Gas Cylinders | Label “Empty” | Calibration Gases | Recycle | None required | Recycle |
| Aerosol Cans Universal Waste (CA only) | Universal Waste – Aerosol Cans | Various products | Accumulation time 1 year | Open top drums only with liner at temperature below 130F | NA |
| Ballasts | Universal Waste | Light Fixture | Accumulation time 1 year | Recycler supplied packaging material. | NA |

**TABLE 3. WASTE SPECIFIC LABELING AND MANAGEMENT PROCEDURES FOR UNIVERSAL and NON-HAZARDOUS WASTES**

| Waste Name | Label Information<br>Non Hazardous Waste<br>Recyclable<br>Universal Waste | Source of Generation | Procedures | Collection Container | DOT Hazardous Material Description and Shipping Name |
|---|---|---|---|---|---|
| Empty Drums (CA only) | Label "Empty" and start date | Various | Accumulation time 1 year. | None required | NA |
| Water treatment solids: anthracite, resin beads, RO filters | Non-hazardous | Various water treatment vessels, sumps, etc. | | Drums, bags | Special Wastes |
| HRSG Water Wash | Non-Hazardous | Water from HRSG | Test for Metals. If it tests positive for metals, then treat as Hazardous Wastes. | 55 gallon Drum | NA |
| Oil Filter (OR only) | Non-hazardous | Various | Puncture hot & dispose of as municipal waste. | 55 gallon Drum | NA |
| Cooling Tower Sludge (OR only) | Non-hazardous | Cooling Tower | Analyze profile once a year to determine non-hazardous. Special waste permit to landfill. | 55 gallon Drum | NA |
| Filter Cake (OR only) | Non-Hazardous | Various | Analyze profile once a year to determine non-hazardous. Special waste permit to landfill. | Dumpster | NA |

**TABLE 3. WASTE SPECIFIC LABELING AND MANAGEMENT PROCEDURES FOR UNIVERSAL and NON-HAZARDOUS WASTES**

| Waste Name | Label Information<br>Non Hazardous Waste<br>Recyclable<br>Universal Waste | Source of Generation | Procedures | Collection Container | DOT Hazardous Material Description and Shipping Name |
|---|---|---|---|---|---|
| Oil<br>(AZ & OR only) | Label "Used Oil" | Various | Recycle with local recycler | 55 gallon drum or double walled holding tank | NA |
| Oil Filters | Label "Used Oil Filters"<br>*If not recyclable, add Hazardous Waste Label | Various | Recycle with local recycler.<br>Accumulation time 1 year<br><br>*If not recycled, treat as hazardous waste. | 55 gallon drum or closed Tote | If recycled, considered non-hazardous.<br><br>*If not recycled, treat as hazardous waste. |

**TABLE 4. WASTE SPECIFIC LABELING AND MANAGEMENT PROCEDURES FOR NON-RCRA and RCRA-HAZARDOUS WASTES**

| Waste Name | Label Information<br>**Plant name**<br>**Plant address**<br>**Accumulation start date**<br>Hazardous Waste | | | Source of Generation | Procedures | Collection Container | DOT Hazardous Material Description and Shipping Name |
|---|---|---|---|---|---|---|---|
| | Contents, Composition | Physical State | Hazardous Properties | | | | |
| Oil Solids (drained) | Filters, Rags | Soild | Toxic | Plant equipment | Accumulate up to 1 year.<br><br>Recycle | DOT approved Cubic Yard Box lined with industrial strength plastic.<br><br>55 Gallon Drum | NON-RCRA Hazardous Waste Solid (Oil, Filters, Clay absorbent) |
| Oil (CA Only) | Used oil | Liquid | Toxic Flammable | Changing oil in power plant equipment | Stored in Haz. Waste storage area. Dispose of in 90 or 180 days | DOT approved 55 gallon drums | NON-RCRA Hazardous Waste liquids (used oil) |
| Paints, solvents, resins, etc. | Used Paint | Liquid | Flammable Toxic | Leftover from Construction | Store in flammable cabinet. Dispose of in 90 or 180 days | 55 gallon drum –Bung Top | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Oily Water (CA Only) | Oily Water | Liquid | 223 | Plant Equipment | Accumulation time in 90 or 180 days | Storage Totes | Non RCRA Hazardous Waste Liquid |
| Oily Absorbent (CA Only) | Oily Absorbent | Solid | 352 | Plant Usage | Accumulation time in 90 or 180 days | Storage Drums | Non RCRA Hazardous Waste Solid |
| HRSG Cleaning Sludge | Chromium contaminated waste | Solid | D007 | HRSG | Accumulation time in 90 or 180 days | 55 gallon Drum | RQ HazardousWaste Solid N.O.S.,9.NA3077,PGIII |
| Caustic Cleaning Solution | Caustic, possibly with metals | Liquid | Corrosive D002 | Equipment cleaning solution. | Accumulation time in 90 or 180 days | Steel frac tank on-site. Vacuum or tanker truck loaded for off-site shipment. | Waste Corrosive Liquids, N.O.S. 8 UN 1760 PGIII |

**[ADD ADDITIONAL PAGES AND ROWS AS NECESSARY]**

**TABLE 7 –HAZARDOUS WASTE REGULATORY LIMITS**

## 4. OFF-SITE TRANSPORTATION AND DISPOSAL

### 4.1 Off-Site Transportation of Wastes

The Site Waste Management Coordinator shall ensure that waste is only transported off-site by a licensed transporter to a Treatment, Storage and Disposal Facility (TSDF). A copy of the transporter license shall be requested. Waste shipments shall be packaged, labeled, marked, placarded, and manifested in accordance with applicable requirements.

Each waste shipment shall be accompanied by a shipping paper, which may include the Uniform Hazardous Waste Manifest, non-hazardous waste manifest, or a bill of lading that contains the proper Department of Transportation (DOT) shipping name, state and/or Federal waste number and codes, and related waste management site information. Copies of shipping papers shall be retained in accordance with the Recordkeeping and Reporting Requirements.

The Site Waste Management Coordinator shall oversee all pre-transport activities, scheduling, and associated paperwork and is responsible for ensuring that all paperwork and material identification is accurate before releasing the waste for transport.

### 4.2 Manifesting of Hazardous Waste

The Hazardous Waste Manifest System is designed to track hazardous waste from the time it leaves the generator site where it was produced, until it reaches the off-site waste management site that shall store, treat, or dispose of the hazardous waste. The system allows the waste generator to verify that its waste has been properly delivered, and that no waste has been lost or unaccounted for in the process.

A Uniform Hazardous Waste Manifest is prepared by all generators who transport, or offer for transport, hazardous waste for off-site treatment, recycling, storage, or disposal. Currently, the manifest is a paper document containing multiple copies of a single form. When completed, it contains information on the type and quantity of the waste being transported, instructions for handling the waste, and signature lines for all parties involved in the disposal process. The manifest is required by both Department of Transportation and EPA. Each party that handles the waste signs the manifest and retains a copy for themselves. This ensures critical accountability in the transportation and disposal processes. Once the waste reaches its destination and is accepted, the receiving site is required to send a signed copy of the manifest to the generator, confirming that the waste has been received within 30 days of receipt. An example of a hazardous waste manifest and EPA instructions are included in Appendix C. The timeline for return of signed manifests shall be monitored by the Site Waste Management Coordinator in accordance with appropriate state and Federal generator requirements. Minimum Federal level requirements are as follows:

<u>Small Quantity Generators</u>

**TABLE 7 –HAZARDOUS WASTE REGULATORY LIMITS**

If, within 60 days of the date the waste was accepted by the initial transporter, a signed manifest is not received from the designated disposal site, the generator shall submit a legible copy of the manifest, with some indication that the generator has not received confirmation of delivery, to the EPA Regional Administrator for the Region in which the generator is located.

Large Quantity Generators

If, within 35 days of the date the waste was accepted by the initial transporter, a signed manifest is not received from the designated disposal site, the generator shall contact the transporter and/or the owner or operator of the designated site to determine the status of the hazardous waste.

If, within 45 days of the date the waste was accepted by the initial transporter, a signed manifest is not received from the designated disposal site, the generator shall submit an Exception Report to the EPA Regional Administrator for the Region in which the generator is located. The Exception Report shall include:

1) A legible copy of the manifest for which the generator does not have confirmation of delivery; and
2) A cover letter signed by the generator or his authorized representative explaining the efforts taken to locate the hazardous waste and the results of those efforts.

***California Only:***

All manifests copies shall be submitted DTSC within 30 days of shipment. Signed receipt from TSDF must be returned 45 days after shipment.

***Arizona Only:***

All manifest copies shall be submitted to the ADEQ no later than 45 days following the end of the month of shipment.

***Oregon Only:***

Signed receipt from TSDF shall be returned 35 days after shipment.

**ORDEQ/ADEQ/DTSC Exception Report**

- Contact your TSDF to request signed manifest copies before the following due dates listed above for your state.
- After contact with your TSDF, if you do not receive copies you must file an Exception Report with the local agencies.

## 4.3 Off-Site Disposal or Recycling of Hazardous Waste

Ensure the Transporter and Designated Facility (TSDF) are permitted and licensed by verifying their respective U.S. EPA ID Number is listed on the manifest(s) and/or bill of lading(s). Calpine EHS will assist the site with auditing and approval for use of transportation companies and TSDF's, as needed.

**TABLE 7 –HAZARDOUS WASTE REGULATORY LIMITS**

## 5. ADDITIONAL WASTE MANAGEMENT REQUIREMENTS

### 5.1 Emergency Response and Accidental Release

To prevent incidents and to respond to an incident if one occurs, the Emergency Action Plan (EAP) must be followed. The EAP encompasses Hazardous waste Contingency Plan requirements and is available in the control room.

### 5.2 Recordkeeping and Reporting Requirements

All regulatory reports, shipping manifests, land disposal restriction records (if applicable), and waste characterization information related to hazardous waste management shall be retained on-site in accordance with Table 5 below.

**TABLE 5. RECORDKEEPING AND REPORTING REQUIREMENTS**

| **Document** | **Retention** |
|---|---|
| EPA ID number | Life of site or ownership (Regulatory) |
| Waste classification decisions and supporting documentation, i.e., Waste profiles generated by the Transporter | 3 years since last disposal (Regulatory) |
| Weekly inspection reports | 3 years (Regulatory) |
| Hazardous waste and Non-Hazardous waste manifests | 3 years (Regulatory), Indefinite (Calpine) |
| Land Disposal Records | 5 years (Regulatory), Indefinite (Calpine) |
| Annual and/or Biennial reports, exception reports | 3 years (Regulatory) |
| EPA ID and/or Waste generator fee payments | 3 years at site (EHS); 13 years (Calpine Accounting) |
| Training Logs and Training Programs for hazardous waste management | Term of employment + 6 years (Calpine) |
| Job titles, descriptions, and names of personnel assigned to positions related to hazardous waste management | Term of employment + 6 years (Calpine) |

### 5.3 Training

Facility personnel shall successfully complete the training required in this section within six months after the date of their employment or assignment to a facility, or to a new position at a facility

**TABLE 7 –HAZARDOUS WASTE REGULATORY LIMITS**

**Table 6. Introductory and Continuing Training Matrix for Personnel Handling Hazardous Waste as required under California Code of Regulation section 66265.16**

| CCR Section 66265.16 | Applicable Requirements | Training Module (Program) | Training Unit And Refresher Frequency |
|---|---|---|---|
| (a)(2) | Employee hazardous waste management procedures relevant to the positions in which they are employed. | Waste Management | Refer to EHS Training Matrix |
| | | Hazardous Communication | Refer to EHS Training Matrix |
| | | Respiratory Protection | Refer to EHS Training Matrix |
| | | Respirator Fit test | Refer to EHS Training Matrix |
| (a)(2) | Contingency Plan Training. | Emergency Action Plan | Refer to EHS Training Matrix |
| (a)(3)(A) | Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment. | Confined Space Entry Procedures | Refer to EHS Training Matrix |
| (a)(3)(C)(D) | Respond effectively to emergencies including: communications or alarm systems, response to fires or explosions. | Emergency Response-Awareness and Evacuation | Refer to EHS Training Matrix |
| | | Fire prevention | Refer to EHS Training Matrix |
| | | Fire Extinguisher | Refer to EHS Training Matrix |
| | | Fire Protection- Small hose and Standpipe | Refer to EHS Training Matrix |
| | | SPCC | Refer to EHS Training Matrix |
| | | Hazardous Materials Business Plan (CA only) | Refer to EHS Training Matrix |

In addition to the above training, employees involved with hazardous waste shipping and manifest tracking shall complete DOT shipping training every 3 years.

### 5.4 Waste Minimization-

Waste minimization refers to reducing the amount of waste generated through the application of sound engineering practices, good housekeeping, and waste management procedures. In order of preference, the priorities are:

- Reduce
- Reuse

**TABLE 7 –HAZARDOUS WASTE REGULATORY LIMITS**

- Recycle/Reclaim
- Disposal

Additionally, all Calpine employees are encouraged to work towards reducing the generation of waste. Ideas for waste minimization activities should be discussed with one's supervisor and EHS.

***California Only-LQG Requirement SB14***

Large Quantity Generators: Every 4th year, shall evaluate quantity of waste generated during last calendar year (2006, 2010, etc.) If exceed 12,000 kg/yr during every 4th year, SB14 report must be prepared and submitted to DTSC. Please contact Calpine EHS for assistance.

## 5.5 Board of Equalization Hazardous Waste Generator Fee (CA ONLY)

Conduct an Annual Review of total waste: If you generate 5 or more tons of hazardous waste in a calendar year regardless of the final disposition of the waste, you must contact the Board of Equalization to obtain a generator fee account number. Please contact the Board of Equalization if you have any questions regarding the requirements of registering, at http://www.boe.ca.gov/pdf/boe400-efa.pdf or at (916) 323-9555

# TABLE 7 –HAZARDOUS WASTE REGULATORY LIMITS

## FEDERAL (RCRA-TCLP) AND STATE (TITLE 22-STLC,TTLC) HAZARDOUS WASTE CRITERIA

**Inorganic Parameters/Metals (Methods: EPA 6010B, 7000 Series)**

| Parameters | TCLP mg/l | STLC mg/l | TTLC[a] mg/kg |
|---|---|---|---|
| Antimony | | 15 | 500 |
| Arsenic | 5.0 | 5.0 | 500 |
| Barium | 100 | 100 | 10,000[b] |
| Beryllium | | 0.75 | 75 |
| Cadmium | 1.0 | 1.0 | 100 |
| Chromium | 5 | 5 (560) | 2,500 |
| Cobalt | | 80 | 8,000 |
| Copper | | 25 | 2,500 |
| Lead | 5.0 | 5.0 | 1,000 |
| Mercury | 0.2 | 0.2 | 20 |
| Molybdenum | | 350 | 3,500 |
| Nickel | | 20 | 2,000 |
| Selenium | 1.0 | 1.0 | 100 |
| Silver | 5 | 5 | 500 |
| Thallium | | 7.0 | 700 |
| Vanadium | | 24 | 2,400 |
| Zinc | | 250 | 5,000 |
| Chromium (VI) | | 5 | 500 |
| Fluoride Salts | | 180 | 18,000 |
| Asbestos | | | 1% |

**Volatiles (Method: EPA 8260B)**

| | | | |
|---|---|---|---|
| Benzene | 0.5 | | |
| Carbon tetrachloride | 0.5 | | |
| Chlorobenzene | 100.0 | | |
| Chloroform | 6.0 | | |
| 1,4-Dichlorobenzene | 7.5 | | |
| 1,2-Dichloroethane | 0.5 | | |
| 1,1-Dichloroethylene | 0.7 | | |
| Methyl ethyl ketone (MEK) | 200.0 | | |
| Tetrachloroethylene (PCE) | 0.7 | | |
| Trichloroethylene (TCE) | 0.5 | 204 | 2,040 |
| Vinyl chloride | 0.2 | | |

[a] *Values expressed as wet weight* [b] *Excluding barium sulfate.*

**Chlorophenoxy Acid Herbicides (Method: EPA 8151A)**

| Compound | TCLP mg/l | STLC mg/l | TTLC[a] mg/kg |
|---|---|---|---|
| 2,4-Dichlorophenoxyacetic acid | 10.0 | 10 | 100 |
| 2,4,5-TP (Silvex) | 1.0 | 1.0 | 10 |

**Organochlorine Pesticides / PCBs (Method: EPA 8081A)**

| | | | |
|---|---|---|---|
| Aldrin | | 0.14 | 1.4 |
| Chlordane | 0.03 | 0.25 | 2.5 |
| DDT/DDE/DDD | | 0.1 | 1.0 |
| Dieldrin | | 0.8 | 8.0 |
| Endrin | 0.02 | 0.02 | 0.2 |
| Heptachlor (& its Epoxide) | 0.008 | 0.47 | 4.7 |
| Kepone | | 2.1 | 21 |
| Lindane | 0.4 | 0.4 | 4.0 |
| Methoxychlor | 10.0 | 10 | 100 |
| Mirex | | 2.1 | 21 |
| Toxaphene | 0.5 | 0.5 | 5.0 |

**Semi-Volatiles (Method: EPA 8270C)**

| | | | |
|---|---|---|---|
| o-Cresol | 200.0 | | |
| m-Cresol | 200.0 | | |
| p-Cresol | 200.0 | | |
| Cresols (Total) | 200.0 | | |
| 2,4-Dinitrotoluene | 0.13 | | |
| Hexachlorobenzene | 0.13 | | |
| Hexachlorobutadiene | 0.5 | | |
| Hexachloroethane | 3.0 | | |
| Nitrobenzene | 2.0 | | |
| Pentachlorophenol | 100.0 | 1.7 | 17 |
| Pyridine | 5.0 | | |
| 2,4,5-Trichlorophenol | 400.0 | | |
| 2,4,6-Trichlorophenol | 2.0 | | |

**Miscellaneous (Methods: EPA 8280*, CADHS-LUFT/7420**)**

| | | | |
|---|---|---|---|
| Dioxin (2,3,7,8-TCDD)* | | 0.001 | 0.01 |
| Organic Lead Compounds** | | | 13 |

*See Sec 22-66261.27.(a).(7) for Additional Toxicity Compound/Criteria. Title (26) 22 Toxicity Criteria Section 22-66261.24*

**HAZARDOUS WASTE CHARACTERISTICS**

| | Matrix | Method | Criteria |
|---|---|---|---|
| ***Ignitability (40 CFR 261.21) (T22: 22-66261.21)*** | Liquid | ASTM D-93 | Exhibits the characteristic of ignitability: if it is a liquid, and has a flash point <60°C (140°F). Aqueous solutions containing >24% alcohol by volume are considered ignitable and do not require flash point testing. |
| | Solid | | Exhibits the characteristic of ignitability: if it is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard. |
| ***Corrosivity (40 CFR 261.22) (T22: 22-66261.22)*** | Liquid | EPA 9040<br>EPA 1110, NACE | Exhibits the characteristic of corrosivity if it is aqueous and has a pH ≤ 2 or ≥12.5 (Sec 260.20 and 260.21)<br>If it corrodes steel (SAE 1020) at rate >6.35 mm or 0.250 in. per year at a test temperature of 55°C (130°F) |
| | Solid | EPA 9045 | If it is not aqueous and, when mixed with an equivalent weight of water, produces a solution having a pH ≤ 2 or ≥12.5 |
| ***Reactivity (40 CFR 261.22) (T22:22-66261.23)*** | | SW846, Chapter 7<br><br><br><br><br><br><br><br>Sec.7.3.3. | Exhibits the characteristic of reactivity: if the waste has any of the following properties:<br>1. It is normally unstable and readily undergoes violent change without detonating.<br>2. It reacts violently with water.<br>3. It forms potentially explosive mixtures with water.<br>4. When mixed with water, it generates toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or environment.<br>5. It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5 can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.<br>The current EPA guidance level is: Total releasable cyanide: 250 mg HCN/kg waste.<br>The current EPA guidance level is: Total releasable sulfide: 500 mg $H_2S$/kg waste.<br>6. It is readily capable of detonation or explosive reaction if it is a subjected to a strong initiating source or if heated under confinement.<br>7. It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure<br>8. It is a forbidden explosive, as defined in 49 CFR 173.51 or a class A or B explosive, as defined in 49 CFR 173.53 and 173.88. |

***TOXICITY Fish {Title 26 sec 66261.24(6)}*** **SMWW 18th Ed.** A waste, or material is toxic and hazardous if (6) has an acute aquatic 96-Hour LC50 less than 500mb/L.

NOTE: Criteria and limits are abbreviated for quick reference purposes only. Specific sources should always be referenced for a detailed, complete and up-to-date listing of regulatory criteria.

Calscience Environmental Laboratories, Inc.

Laboratory Location:
7440 Lincoln Way
Garden Grove, CA 92841-1432

For information, please contact Sales Department at
t:(800)888-5221, f:(714)894-7501 or
email: bstearns@calscience.com

Revision Date: 1/25/2007

# Appendix A: Hazardous Waste Generation Log

## Hazardous Waste Generation Log

**Plant:** _____

_____

_____

**Log of Hazardous Waste Generation:** _____

| Date | Manifest # | Hazardous Waste Generated ( in kg or lbs) | | | | |
|---|---|---|---|---|---|---|
| | | RCRA (Federal) Kg or lbs | Non-RCRA Hazardous (state) Kg or lbs | Acutely/ Extremely | Location | Total for Month (kg or lbs) |
| | | | | | | |
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# Appendix B: Weekly HW Collection Area Inspection Checklist

All Weekly Hazardous Material Inspections sheets are filed under MAXIMO WO

*Enough aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, *unless* aisle space is not needed for any of these purposes.

# Appendix C: Uniform Hazardous Waste Manifest

# Appendix D: Example Waste Labels (Optional)

# Appendix

I

State of California - California Environmental Protection Agency

Department of Toxic Substances Control
Transportation Unit
8800 Cal Center Drive, Sacramento, CA 95826
Phone (916) 440-7145 Fax (916) 255-6436

# CONSOLIDATED TRANSPORTER NOTIFICATION

| 1. **Business Name** (Show d.b.a. name, show name exactly as it will appear on registration; same name or trademark is required on all vehicles): | 2. **Transporter Registration Number** |
|---|---|
| Environmental Logistics, Inc. | 5 5 0 8 |

| 3. **Business Address** Number/Street | City | County/Province | State/Country | Zip/Postal Code |
|---|---|---|---|---|
| 140 W. Monte Avenue | Bloomington | San Bernardino | CA | 92316 |
| 4. **Mailing Address** (If different) P.O. Box/Street | City | County/Province | State/Country | Zip/Postal Code |
| -SAME- | | | | |

| 5a. **Telephone Number** (Ext. Number) | 6. **Identification Numbers.** If your company transports hazardous wastes, operates the designated facility, and intends to submit only the facility copy of the consolidated manifests pursuant to Health and Safety Code Section 25160(b)(5)(A), you must provide all the transporter and facility identification numbers (12 characters) used by your company on these manifests. If necessary, list additional identification numbers on a separate sheet. | |
|---|---|---|
| (909) 546-1354 | | |
| 5b. **Fax Number** (909) 546-1546 | CAR000172460 | CAR000217513 |
| 5c. **E-mail Address** wade_riddering@environmentallogistics.org | | |

7. **I intend to transport the following hazardous wastestream under the consolidated manifesting procedure, as described in Health and Safety Code, Section 25160.2. [Check all applicable box(es)]:**

- X A. Used oil
- X B. Contents of an oil/water separator
- X C. Solids contaminated with used oil
- X D. Brake fluid
- X E. Antifreeze
- X F. Antifreeze sludge
- X G. Parts cleaning solvents, including aqueous cleaning solvents
- X H. Hydroxide sludge contaminated solely with metals from a wastewater treatment process
- X I. "Paint-related" wastes, including paints, thinners, filters, and sludges
- X J. Spent photographic solutions
- X K. Dry cleaning solvents (including perchloroethylene, naphtha, and silicone based solvents)
- X L. Filters, lint, and sludges contaminated with dry cleaning solvent
- X M. Asbestos and asbestos-containing materials
- X N. Inks from the printing industry
- X O. Chemicals and laboratory packs collected from K-12 schools
- X P. Absorbents contaminated with other wastes listed in Health and Safety Code Section 25160.2(c)
- X Q. Filters from dispensing pumps for diesel and gasoline fuels

8. **Name and Title of Authorized Representative** (print or type): Wade Riddering

Wade Riddering 10/26/2018

Signature of Authorized Representative — Use blue or other non-black ink — Date

**Note: Keep this Consolidated Transporter Notification, signed by DTSC, with the valid Transporter Registration Certificate in the vehicle at all times during the transportation of hazardous waste. Transportation of wastestream(s) listed above, under the consolidated manifesting procedure, without notifying DTSC is a violation of Health and Safety Code (HSC) Section 25165(a), and may be subject to significant penalties. Consolidated transporters are also required to submit quarterly reports pursuant to HSC Section 25160.2(d).**

DO NOT WRITE BELOW THIS LINE (FOR DTSC USE ONLY)

Elizabeth Lopez Rogers — Transportation Unit Representative

11/19/18 — Received date

Elizabeth Lopez Rogers — (Print or type name)

12/31/2019 — Expiration date

12/6/2018 — DTSC acknowledgement date

DTSC 1299 (7/09)

Department of Toxic Substances Control

*Matthew Rodriquez*
Secretary for
Environmental Protection

Barbara A. Lee, Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

*Edmund G. Brown Jr.*
Governor

***HAZARDOUS WASTE TRANSPORTER REGISTRATION***
WITH CONSOLIDATED TRANSPORTER NOTIFICATION

NAME AND ADDRESS OF REGISTERED TRANSPORTER:

ENVIRONMENTAL LOGISTICS INC
140 W MONTE AVE
BLOOMINGTON, CA 92316

TRANSPORTER REGISTRATION NO: 5508

EXPIRATION DATE: DECEMBER 31, 2019

THIS IS TO CERTIFY THAT THE FIRM NAMED ABOVE IS DULY REGISTERED TO TRANSPORT HAZARDOUS WASTE IN THE STATE OF CALIFORNIA IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 6.5, DIVISION 20 OF THE HEALTH AND SAFETY CODE AND TITLE 22 OF THE CALIFORNIA CODE OF REGULATIONS, DIVISION 4.5.

THIS REGISTRATION CERTIFICATE MUST BE CARRIED WITH EACH SHIPMENT OF HAZARDOUS WASTE.

FOR REGISTRATION INFORMATION, PLEASE CALL (916) 440-7145.

(AUTHORIZED SIGNATURE)

DECEMBER 12, 2018
(DATE)

STATE OF CALIFORNIA
DEPARTMENT OF CALIFORNIA HIGHWAY PATROL

# HAZARDOUS MATERIALS TRANSPORTATION LICENSE

CHP 360H (REV. 1/00) OPI 062

| CONTROL NUMBER | LICENSE NUMBER | ISSUE DATE | EFFECTIVE DATE | EXPIRATION DATE |
|---|---|---|---|---|
| 233372 | 137235 | 12/17/2018 | 1/1/2019 | 12/31/2019 |

| CHP CARRIER NUMBER | LOCATION | | |
|---|---|---|---|
| CA 3408 14 | 860 | ☐ Duplicate | ☐ Replacement |
| | | ☐ Initial | ☑ Renewal |

**LICENSEE NAME AND PHYSICAL STATION ADDRESS (If different than below)**

**ENVIRONMENTAL LOGISTICS INC**
**140 W MONTE AVE**
**BLOOMINGTON CA, US 92316**

**LICENSEE NAME AND MAILING ADDRESS**

**ENVIRONMENTAL LOGISTICS INC**
**140 W MONTE AVE**
**BLOOMINGTON CA, US 92316**

**PROPERTY OF THE CALIFORNIA HIGHWAY PATROL (CHP)**

The original valid license must be kept at the licensee's place of business as indicated on the license and a legible copy must be carried in any vehicle or combination transporting hazardous materials and must be presented to any CHP officer upon request. This license is NON-TRANSFERABLE and must be surrendered to the CHP upon demand or as required by law. A majority change in ownership or control of the licensed activity shall require a new license. This license may be renewed by submitting an application and appropriate fee to the CHP. Persons whose licenses have expired or are otherwise no longer valid must immediately cease the activity requiring a license. THERE IS NO GRACE PERIOD. For licensing information contact CHP, Commercial Vehicle Section at (916) 843-3400.

This carrier is on the special routing/safe stopping place mailing lists as indicated below:

☐ **(HMX) Explosives subject to Division 14, California Vehicle Code (CVC).**

☐ **(HMPH) Poison Inhalation Hazard materials in bulk packages subject to Division 14.3, CVC.**

☐ **(HMRCQ) Highway Route Controlled Quantity radioactive materials subject to Division 14.5, CVC.**

Any person who dumps, spills, or causes the release of hazardous materials or hazardous waste upon any highway shall immediately notify the CHP or the agency having jurisdiction for that highway. The minimum fine for failure to make the appropriate notification is $2,000.00. (CVC Section 23112.5)

**UNITED STATES OF AMERICA**
**DEPARTMENT OF TRANSPORTATION**
**PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION**

# HAZARDOUS MATERIALS CERTIFICATE OF REGISTRATION FOR REGISTRATION YEAR(S) 2016-2019

**Registrant:** ENVIRONMENTAL LOGISTICS INC
Attn: WADE RIDDERING
140 W MONTE AVENUE
BLOOMINGTON, CA 92316

This certifies that the registrant is registered with the U.S. Department of Transportation as required by 49 CFR Part 107, Subpart G.

This certificate is issued under the authority of 49 U.S.C. 5108. It is unlawful to alter or falsify this document.

**Reg. No: 052016 001 002YA Effective: 7/1/2016 Expires: 06/30/2019**

**HM Company ID: 094991**

**Record Keeping Requirements for the Registration Program**

The following must be maintained at the principal place of business for a period of three years from the date of issuance of this Certificate of Registration:

(1) A copy of the registration statement filed with PHMSA; and
(2) This Certificate of Registration

Each person subject to the registration requirement must furnish that person's Certificate of Registration (or a copy) and all other records and information pertaining to the information contained in the registration statement to an authorized representative or special agent of the U. S. Department of Transportation upon request.

Each motor carrier (private or for-hire) and each vessel operator subject to the registration requirement must keep a copy of the current Certificate of Registration or another document bearing the registration number identified as the "U.S. DOT Hazmat Reg. No." in each truck and truck tractor or vessel (trailers and semi-trailers not included) used to transport hazardous materials subject to the registration requirement. The Certificate of Registration or document bearing the registration number must be made available, upon request, to enforcement personnel.

For information, contact the Hazardous Materials Registration Manager, PHH-52, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 1200 New Jersey Avenue, SE, Washington, DC 20590, telephone (202) 366-4109.

STATE OF CALIFORNIA BUSINESS, TRANSPORTATION AND HOUSING AGENCY

**DEPARTMENT OF MOTOR VEHICLES**
MOTOR CARRIER SERVICES BRANCH MS G875
P.O. BOX 932370 Sacramento, CA. 94232-3700
(916) 657-8153

10/08/2008

ENVIRONMENTAL LOGISTICS INC
140 W MONTE AVE
BLOOMINGTON, CA 92316

A Public Service Agency

# NON-EXPIRING MOTOR CARRIER PERMIT
## Combined Carrier

| | | | |
|---|---|---|---|
| **DEPARTMENT OF MOTOR VEHICLES**<br>Motor Carrier Services Branch<br>P.O. BOX 932370 Sacramento, CA. 94232-3700 | **Valid From:** | 12/01/2008 | **Valid Through:** **Non-Expiring** |
| | **CA#:** | **0340844** | |

ENVIRONMENTAL LOGISTICS INC
140 W MONTE AVE
BLOOMINGTON, CA 92316

**The carrier named on this permit is subject to the Unified Carrier Registration Act (UCRA) of 2005, and is granted a non-expiring permit of the following classification:**

**Corporation**

**Not Valid for Intrastate Only Operations**

| | | | |
|---|---|---|---|
| Pmt Date: | N/A | Office #: | 154 |
| Account #: | 470132 | Tech ID: | ## |
| Sequence #: | #NNN | Amt Paid: | No Fee |

**!!!IMPORTANT REMINDERS!!!**

1. This non-expiring Motor Carrier Permit (MCP) will remain valid as long as you continue to conduct interstate operations. The Unified Carrier Registration Act (UCRA) of 2005 exempts combined carriers (carriers who operate both intra and interstate) from MCP requirements.
2. Federal Motor Carrier Safety Administration insurance requirements must be maintained.
3. If you commence intrastate only operations, you must renew your MCP.

California Relay Telephone Service for the deaf or hearing impaired from TDD Phones: 1-800-735-2929; from Voice Phones: 1-800-735-2922

**UNITED STATES OF AMERICA**
**DEPARTMENT OF TRANSPORTATION**
**PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION**

# HAZARDOUS MATERIALS CERTIFICATE OF REGISTRATION FOR REGISTRATION YEAR(S) 2017-2018

**Registrant:** CHEMTREAT INC
Attn: TIM REID
5640 COX ROAD
GLEN ALLEN, VA 23060

This certifies that the registrant is registered with the U.S. Department of Transportation as required by 49 CFR Part 107, Subpart G.

This certificate is issued under the authority of 49 U.S.C. 5108. It is unlawful to alter or falsify this document.

**Reg. No: 062817 552 061Z** **Effective: 07/01/2017** **Expires: 06/30/2018**

**HM Company ID: 067026**

**Record Keeping Requirements for the Registration Program**

The following must be maintained at the principal place of business for a period of three years from the date of issuance of this Certificate of Registration:

(1) A copy of the registration statement filed with PHMSA; and
(2) This Certificate of Registration

Each person subject to the registration requirement must furnish that person's Certificate of Registration (or a copy) and all other records and information pertaining to the information contained in the registration statement to an authorized representative or special agent of the U. S. Department of Transportation upon request.

Each motor carrier (private or for-hire) and each vessel operator subject to the registration requirement must keep a copy of the current Certificate of Registration or another document bearing the registration number identified as the "U.S. DOT Hazmat Reg. No." in each truck and truck tractor or vessel (trailers and semi-trailers not included) used to transport hazardous materials subject to the registration requirement. The Certificate of Registration or document bearing the registration number must be made available, upon request, to enforcement personnel.

For information, contact the Hazardous Materials Registration Manager, PHH-52, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 1200 New Jersey Avenue, SE, Washington, DC 20590, telephone (202) 366-4109.