

DOCKETED

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Description:	2018 Annual Compliance Report for the Pastoria Energy Facility.
Filer:	Mary Dyas
Organization:	Calpine Corporation
Submitter Role:	Applicant
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CALPINE CORPORATION

PASTORIA ENERGY FACILITY, L.L.C.

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July 31, 2019

VIA - Email

Ms. Mary Dyas
Compliance Project Manager
California Energy Commission
STEP Division
1516 Ninth Street, MS-2000
Sacramento, CA 95814

**RE: CALPINE CORPORATION PASTORIA ENERGY FACILITY, L.L.C.
2018 - ANNUAL COMPLIANCE REPORT (99 AFC-7A)**

Dear Ms. Dyas:

Pursuant to Compliance Certification requirements, one electronic copy of the 2018 Annual Compliance Report for Pastoria Energy Facility is provided for your review and files.

Should you have any questions regarding this transmittal, please contact me at (661) 282-4405, or at fullerg@calpine.com.

Respectfully Submitted,

Gary Fuller
EHS Specialist

Attachments: 2018 Annual Compliance Report

CC: David Williams - Calpine Corp.



**2018 Annual Compliance Report
For
California Energy Commission
January 1 through December 31, 2018**

This Report will serve to satisfy the California Energy Commission Final Decision 99-AFC-7(C) for the Pastoria Energy Facility (PEF) 2018 Annual Report for compliance with Annual Conditions of Certification. Included, herein, will be information and/or documentation to demonstrate compliance and information if there may have been instances of non-compliance, if applicable, with the following Annual Compliance Conditions of Certification:

TLSN-2 The project owner shall make every reasonable effort to identify and correct, on a case-specific basis, all complaints of interference with radio or television signals from operation of the line and related facilities.

In addition to any transmission repairs, the relevant corrective actions should include, but shall not be limited to, adjusting or modifying receivers, adjusting or repairing, replacing or adding antennas, antenna signal amplifiers, filters, or lead-in cables.

The project owner shall maintain written records for a period of 5 years of all complaints of radio or television interference attributable to operation together with the corrective action taken in response to each complaint. All complaints shall be recorded to include notations on the corrective action taken. Complaints not leading to a specific action or for which there was no resolution should be noted and explained. The record shall be signed by the project owner and also the complainant, if possible, to indicate concurrence with the corrective action or agreement with the justification for a lack of action.

Verification: All reports of line-related complaints shall be summarized and included in the Annual Compliance Report to the CPM.

- PEF remained in compliance with this condition. There were no complaints of interference with radio or television signals from operation of the line and related facilities in 2018.

TLSN-4 The project owner shall ensure that the transmission line right-of way is kept free of combustible material as required under the provisions of Public Resources Code Section 4292; Title 14 of the California Code of Regulations, Section 1250 et seq.; and GO-95.

Verification: The project owner shall provide a summary of inspection results and any fire prevention activities along the right-of-way in the annual compliance report.

- PEF remained in compliance with this condition. An inspection of the transmission right of way was performed on June 05, 2018. The transmission line was found to be free of

any combustible materials or excess plant growth. Therefore, no further fire prevention activities were required.

HAZ-1 The project owner shall not use any hazardous material in reportable quantities, as specified in Title 40, C. F.R. Part 355, Subpart J, section 355.50, not listed in Appendix B, below, or in greater quantities than those identified by chemical name in Appendix B, below, unless approved in advance by the CPM.

Verification: The project owner shall provide to the CPM, in the Annual Compliance Report, a list of hazardous materials contained at the facility in reportable quantities.

- PEF remained in compliance with this condition. A list of hazardous materials contained at the facility in reportable quantities in 2018 is provided in Appendix 1.

WASTE-3 Prior to the start of both construction and operation, the project owner shall prepare and submit to the CPM, for review and comment, a waste management plan for all wastes generated during construction and operation of the facility, respectively. The plans shall contain, at a minimum, the following:

- A description of all expected waste streams, including projections of frequency and hazard classifications; and
- Methods of managing each waste, including treatment methods and companies contracted with for treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/reduction plans.

Verification: No less than 60 days prior to the start of rough grading, the project owner shall submit the construction waste management plan to the CPM for review. The operation waste management plan shall be submitted no less than 60 days prior to the start of project operation. The project owner shall submit any required revisions within 30 days of notification by the CPM (or mutually agreed upon date). In the Annual Compliance Reports, the project owner shall document the actual waste management methods used during the year compared to planned management methods.

- PEF remained in compliance with this condition. The Waste Management Table 2018, provided in Appendix 2, describes and documents the actual waste management methods used in 2018 compared to these planned waste management methods.

WASTE-6: Prior to removing any accumulated sludge from the cooling tower, the project owner shall test the sludge to determine the levels of metals and salts. The

sludge shall be managed appropriately as a hazardous, designated, or nonhazardous waste according to the test results.

Verification: The project owner shall notify the CPM via the annual compliance report of the sludge test results, as well as the method of disposal.

- PEF remained in compliance with this condition. There was no sediment removed from the east or west cooling towers in 2018.

BIO-2 The CPM-approved Designated Biologist shall perform the following during project construction and operation:

1. Advise the project owner s Construction Manager on the implementation of the Biological Resource Conditions of Certification;
2. Supervise or conduct mitigation, monitoring and other biological resources compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as, wetlands and special status species; and
3. Notify the project owner and the CPM of non-compliance with any Biological Resources Condition of Certification.

Verification: During project construction, the Designated Biologist shall maintain written records of the tasks described above, and summaries of these records shall be submitted along with the Monthly Compliance Reports to the CPM. During project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report.

- PEF remained in compliance with this condition. There were no ground disturbances or construction activities at the PEF, which required monitoring or other biological resources compliance efforts by our Designated Biologist in 2018. In 2018 there were no reported avian collision/electrocution incidents related to PEF's transmission lines.
- Annual Worker Environmental Awareness (WEAP) training was conducted for all Pastoria employees and contractors working on-site in 2018 regarding environmental issues relative to PEF, including an explanation of endangered species and measures taken for the protection of these species and their habitats. Copies of the list of personnel (contractors & Calpine facility employees), along with signatures, who received WEAP training in 2018 is provided in Appendix 3. No endangered species or associated habitats were found by, or reported to PEF personnel in 2018.

SOIL & WATER 5: Water used for project operation shall be SWP water as obtained from the WRMWSD excess water sold through the district's pool or banked water from KWB that is directly delivered or exchanged for SWP surface water. If no

such water is available, the PEF will not operate until such time as the Energy Commission has approved an amendment allowing for the use of an alternative supply or cooling technology.

Verification: The project owner, in the annual compliance report, shall provide a water accounting summary that states the source and quantity of water used at PEF on a monthly basis. The report shall indicate whether the water is obtained through the WRMWSD's district pool, direct pumping of KWB banked water for delivery to PEF or the result of surface water exchanges."

- PEF remained in compliance with this condition. All of the water obtained in 2018 was from WRMWSD's district pool water for delivery to PEF. The quantity of water used at PEF on a monthly basis in 2018 is provided in Appendix 4.

SOIL&WATER 6: Following the commencement of project operation, the project owner shall submit a final description and schematic of the zero liquid discharge system and results of the Waste Extraction Test of the residual cake solid waste from the system.

Verification: Within 60 days following the commencement of project operations, the project owner shall submit to the CPM the results of the Waste Extraction Test of the residual cake solid waste from the zero liquid discharge system. A status report on the construction and operation of the zero liquid discharge system, including the volumes of residual cake solids generated and the landfills used for disposal, shall also be included in the annual compliance report submitted to the CPM.

- The zero liquid discharge processes all project wastewater streams except for sanitation and storm water streams. The zero liquid discharge concentrates the dissolved and suspended constituents in the wastewater through a combination of evaporation and crystallization, which results in non-hazardous salt cake that is then removed from the site. The Brine Crystallizer evaporates water off of the wastewater and feeds to a filter press where the salt cake is made.

Aquatech Inc. designed the zero liquid discharge system, and the construction and commissioning of these systems were completed in November of 2005. PEF is continuously looking to improve upon the efficiency of the zero liquid discharge system. Operating experience of the zero liquid discharge system indicates the crystallization process of the zero liquid discharge system is undersized. PEF, working with Aquatech Inc., is proposing changes to the crystallization process by adding an additional (duplicate) crystallizer, thus improving the efficiency of the zero liquid discharge system.

An application was submitted in August 2013 to the CEC for approval to install a second brine crystallizer to PEF's zero liquid discharge system. On December 30, 2013 CEC staff approved the petition to add a second crystallizer. All material for second brine crystallizer was delivered and installation of the equipment was started in 2014.

Installation of this second crystallizer was estimated to be complete and operational in the third quarter of 2015, but was not completed until April 2016. In 2018 the second crystallizer has been operating as expected, showing improvement in the efficiency of the zero liquid discharge system.

A total of approximately 3,866 tons of non-hazardous residual cake solids were generated from the zero liquid discharge system and was disposed of at the McKittrick landfill (McKittrick, CA) in 2018.

VIS-1 Prior to first turbine roll, the project owner shall treat the project structures, buildings, and tanks in an earthen hue or hues that minimize visual intrusion and contrast by blending with the surrounding landscape, and shall treat those items and the switchyard structures and electric transmission towers in a non-reflective finish with a low gloss.

Protocol: The project owner shall submit a treatment plan for the project to the California Energy Commission Compliance Project Manager (CPM) for review and approval. The treatment plan shall include:

1. specification, and 11 x 17 color simulations, of the treatment proposed for use on project structures, including structures treated during manufacture;
2. a list of each major project structure, building, and tank, specifying the color(s) proposed for each item;
3. documentation that a non-reflective finish will be used on all project elements visible to the public;
4. a detailed schedule for completion of the treatment; and,
5. a procedure to ensure proper treatment maintenance for the life of the project.

If the CPM notifies the project owner that revisions of the plan are needed before the CPM will approve the plan, the project owner shall submit a revised plan to the CPM.

After approval of the plan by the CPM, the project owner shall implement the plan according to the schedule and shall ensure that the treatment is properly maintained for the life of the project.

For any structures that are treated during manufacture, the project owner shall not specify the treatment of such structures to the vendors until the project owner receives notification of approval of the treatment plan by the CPM.

The project owner shall not perform the final treatment on any structures until the project owner receives notification of approval of the treatment plan from the CPM. The project owner shall notify the CPM within one week after all precolored

structures have been erected and all structures to be treated in the field have been treated and the structures are ready for inspection.

Verification: At least 60 days prior to ordering the first structures that are color treated during manufacture, the project owner shall submit its proposed plan to the CPM for review and approval.

If the CPM notifies the project owner that any revisions of the plan are needed before the CPM will approve the plan, within 30 days of receiving that notification, the project owner shall submit to the CPM a revised plan.

Not less than 30 days prior to the start of commercial operation, the project owner shall notify the CPM that all structures treated during manufacture and all structures treated in the field are ready for inspection. The project owner shall provide a status report regarding treatment maintenance in the Annual Compliance Report.

- PEF remained in compliance with this condition. There were no changes to, or replacement of any pre-colored structures, or any structures treated in the field in 2018.

Included in Appendix 5, is a current compliance matrix indicating the status of the Conditions of Certification. Omitted from the list are Conditions determined to have been completed by the CEC Compliance Project Manager (CPM).

Appendix 1

Hazardous Materials List 2018

ChemicalName	CommonName
Microbiocide	BIOCIDE - BIOSPERSE 244
	CORROSION INHIBITOR - MILSPERSE 956
	ANTI SCALANT - DREW 11-644
Ammonium Hydroxide	CAUSTIC SOLUTION - AMERCOR KB CORROSION INHIBITOR
	GLYCOL SOLUTION - ANTIFOAM - DREWPLUS ED 795
Microbiocide	BIOCIDE - BIOSPERSE 250
Alkaline	CAUSTIC SOLUTION - DREWPHOS PT 67484
Sodium Bisulfite	DECHLORINATING AGENT - DREW 6134
LEAD ACID BATTERIES	BATTERIES
CONNTECT 6000	CONNTECT 6000 GAS TURBINE COMPRESSOR CLEANER
AMERFLOC 10 POLYMER	AMERFLOC 10 - ACID SOLUTION - POLYMER
Sodium Carbonte	SODA ASH
Anhydrous Ammonia	AMMONIA ANHYDROUS
Calcium chloride (CaCl2)	LIQUID CALCIUM CHLORIDE
	CAUSTIC SOLUTION - RO CLEANER - V-SEP NLR 505
	ACID SOLUTION - RO CLEANER - V-SEP NLR 757
	ACID SOLUTION - RO CLEANER - V-SEP NLR 404
	POLYMER - AMERFLOC 482
	ANTISCALANT - AMEROYAL 710
USED OIL	USED OIL
	AEROSOL CANS (EMPTY)
Drained Used Oil Filters	USED OIL FILTERS
	OILY RAGS & ABSORBANT MATERIAL
	FM-200 (FIXED FIRE SUPPRESSION SYSTEMS)
	DRY CHEMICAL EXTINGUISHING AGENT
Diesel Fuel No. 2	DIESEL FUEL, LOW SULFUR
Chlorodifluoromethane	FREON 22
Phenol, dimethyl-, 1,1',1''-phosph	FYRQUEL EHC FLUID (Fire Resistant hydraulic fluid)
Aluminiumhydroxidechloride	Chargepac 55 COAGULANT
	BRINE WATER, SODIUM CHLORIDE SATURATED SOLUTION
	CALIBRATION GASES - NITROGEN, CARBON MONOXIDE, & OXYGEN (MIX)
	LUBE OIL, TERSETIC 32
Gasoline	GASOLINE
Hydrogen	HYDROGEN
Carbon Dioxide-nitrous Oxide Mi	CARBON DIOXIDE
Propane	PROPANE
WEMCO	WEMCO C (TRANSFORMER OIL)
Ethyl Sulfuric Acid	SULFURIC ACID
Sodium Hydroxide	SODIUM HYDROXIDE
Mobil DTE Oil	Mobil DTE Oil; Extra Heavy, Heavy Medium
Mobil DTE Oil Light	Mobil DTE Oil Light
	Amersperse TK 6442 (Anti-Scalant)
Drewfloc 2270 polymer	Drewfloc 2270 polymer
AMINE Solution	Corrosion Inhibitor (Solenis Product DPL-674)
Sodium Hydroxide	Deposit Inhibitor (Drewphos PT)
Nitrogen	Nitrogen
Argon Compressed	Argon Compressed
Sodium Hypochlorite	SODIUM HYPOCHLORITE
Acetylene	ACETYLENE

ChemicalName	CommonName
Gypsum (Ca(SO4).2H2O)	GYPSUM
Aluminum Chlorohydrate Solution	Chemsol 6049
Sodium Chlorate	Pureate (Nalco)
Ferric Sulfate Solution	Amersep 5320 - Neutralizing Agent
	Deposit & Corrosion Inhibitors (Solenis DPB-629)
Hydrogen Peroxide 50% Solution	Hydrogen Peroxide 30-50%
Purate - Biocide Precursor	Sodium Chlorate
Chlorine Dioxide Dissolved in water	Chlorine Dioxide <1% Solution
Nytro 11GBX-US	Transformer Insulating Oil
Permaclean PC-11	Polyethylene Glycol
Biosperse BP8310 Biopenetrant	Sulfonic Acid Alkyl Derivative
AQUCAR DB20	Microbiocide

Appendix 2

Waste Management Table 2018

**Pastoria Energy Facility
WASTE MANAGEMENT TABLE 2018**

Waste Stream	Planned Waste Management Method		Actual 2018 Waste Management Method	
	On- Site	Off-Site	On- Site	Off-Site
Used Hydraulic Fluid Oils and Grease, and Oily Filters	Store for < 90 days	Recycle	Store for < 90 days	Recycle
Used Air Filters	None	Recycle	None	Dispose to nonhazardous waste disposal facility
Spent batteries	Store for < 90 days	Recycle	Store for < 90 days	Recycle
Spent SCR and CO Catalyst	None	Recycle	None	No Action, original SCR in operation
Colling Tower Basin Sludge	None	Recycle to Compost or Dispose to nonhazardous waste disposal facility	None	(None in 2018) Dispose to nonhazardous waste facility
Oily Rags	Store for < 90 days	Laundry at authorized facility	Store for < 90 days	Laundry at authorized facility
Oily Absorbent	Store for < 90 days	Dispose to authorized waste disposal facility	Store for < 90 days	Dispose to authorized waste disposal facility
Sanitary Wastewater	Liquids disposed to on-site leaching field	Sludge disposed to sanitary waste disposal facility	Liquids disposed to on-site leaching field	Sludge disposed to sanitary waste disposal facility
Make-up water solids (filter cake)	Media Filters	Recycle to Compost or Dispose to nonhazardous waste disposal facility	Filter Press	Dispose to nonhazardous waste disposal facility
Salt Cake Zero Discharge	None	Commercial sale or Dispose to nonhazardous waste disposal facility	Belt Press	Dispose to nonhazardous waste disposal facility
Expired Construction Materials	None	None	Expired Const. Mtrls (Epoxy Resins, caulking & insulation)	Dispose to authorized waste disposal facility

Appendix 3

WEAP Training List & Signatures 2018

2018 Calpine Facility Employees & Contractor List with Signatures
Provided as Separate Electronic Attachment in Email to CPM

Appendix 4

Water Accounting Summary 2018

Wheeler Ridge-Maricopa Water Storage District Summary of Industrial Usage

From 01/01/2018 - 12/31/2018

NUMBER	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total (ac-ft)
PASTORIA/CALPINE													
14G33A	87.54	69.49	58.59	28.73	41.47	62.63	120.15	102.44	119.55	103.35	73.79	81.54	949.27
14G33B	91.00	73.56	62.75	40.36	48.94	36.65	124.44	108.21	122.31	108.64	80.29	93.92	991.07
14G33C	81.05	71.02	60.79	38.78	49.32	70.16	131.87	113.30	127.32	110.09	79.30	92.03	1,025.03
	259.59	214.07	182.13	107.87	139.73	169.44	376.46	323.95	369.18	322.08	233.38	267.49	2,965.37
TOTAL	259.59	214.07	182.13	107.87	139.73	169.44	376.46	323.95	369.18	322.08	233.38	267.49	2,965.37

Appendix 5
Compliance Matrix 2018

1) Pastoria Energy Facility CEC Compliance Matrix

Cond. #	Requirements & Task Summary	Action required	Lead Resp.	Agency	Submittal Date	Approval date	Status	Comments
AIR QUALITY								
AQ-1	No air contaminant shall be released into the atmosphere that causes a public nuisances	Make site available for inspection by representatives of the District, CARB and CEC.	Owner	District, CARB, CPM	Upon request		On-Going	No reporting necessary for condition
AQ-5	CTG shall be equipped with continuously recording fuel gas flow meter.	Information associated with task shall be included in quarterly reports from AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-6	CTG exhaust shall be equipped with CEM for NOx, CO, O2. Additional NOx analyzer necessary if there is no SCR. CEMs shall meet requirements of 40 CFR Part 60 and Part 75.	Make site available for inspection by representatives of the District, CARB and CEC.	Owner	District, CARB, CPM	Upon request		On-Going	
AQ-7	Ammonia injection grid shall be equipped with operational ammonia flow meter and injection pressure indicator	Make site available for inspection by representatives of the District, CARB and CEC.	Owner	District, CARB, CPM	Upon request		On-Going	
AQ-8	Exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods	Make site available for inspection by representatives of the District, CARB and CEC.	Owner	District, CARB, CPM	Upon request		On-Going	
AQ-9	HRS design shall provide space for additional selective catalytic reduction catalyst and oxidation catalyst if required to meet NOx and CO emission limits	Make site available for inspection by representatives of the District, CARB and CEC.	Owner	District, CARB, CPM	Upon request		On-Going	
AQ-10	Project owner shall monitor and record exhaust gas temperature at selective catalytic reduction and oxidation catalyst inlets.	Project shall record exhaust gas and selective catalytic reduction temperatures in the daily logs	Owner	NA	No Submittal		On-Going	
AQ-11	CTG shall be fired exclusively on natural gas, consisting primarily of methane and ethane, with a sulfur content no greater than 0.75 grains of sulfur compound per 100 dry scf of natural gas.	Project shall provide records of compliances as part of quarterly reports of AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-12	Start up is defined as period of time beginning with turbine initial firing until the unit meets lb/hr and ppmw emissions limits. Shutdown is defined as period beginning with initiation of turbine shutdown sequence and ending with cessation of firing of gas turbine engine. Startups and shutdowns shall not exceed three hours and one hour, respectively, per occurrence	Project shall provide records of compliances as part of quarterly reports of AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	

1) Pastoria Energy Facility CEC Compliance Matrix

Cond. #	Requirements & Task Summary	Action required	Lead Resp.	Agency	Submittal Date	Approval date	Status	Comments
AQ-13	Only one of the CTGs S-3636-1, 2 or 3 shall be in start up at any one time.	Project owner shall keep records of turbine start-up sequence and make the site available for inspection by representatives of the District, CARB and Commission	Owner	CPM	Upon request		On-Going	
AQ-14	Ammonia shall be injected when the SCR system catalyst temperature exceeds 500 degrees F. Project owner shall monitor and record catalyst temperature during periods of start up	Project shall provide records of compliances as part of quarterly reports of AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-15	During startup or shutdown CTG exhaust emissions shall not exceed lb/hr limits	Project shall provide records of compliances as part of quarterly reports of AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-16 thru AQ-23	Conditions deal with operating within permit limits.	Project shall provide records of compliances as part of quarterly reports of AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-28	Compliance with ammonia slip limit shall be demonstrated by using calculation in District Rule 4102.	Project shall provide records of compliances as part of quarterly reports of AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-29	Compliance with short term emission limits (lb/hr and ppmv) shall be demonstrated by annual in-situ sampling of exhaust gases by qualified independent source test firm at full load conditions.	Project shall provide records of compliance as part of AQ-33	Owner	CPM	60 days following Source Test Completion		On-Going	
AQ-30	Compliance with startup NOx, CO and VOC mass emissions shall be demonstrated on one of the CTGs upon initial operation and at least every seven years thereafter by qualified independent source test firm.	Project shall provide records of compliance as part of AQ-33	Owner	CPM	60 days following Source Test Completion		On-Going	
AQ-31	Project owner shall correlate the total HAPS emissions rate and single highest HAP emission rate to VOC mass emissions during the speciated HAPS source test determined during annual compliance source testing.	Project owner shall provide source test plant to CPM and District for approval at least 15 days prior to testing. Results and field data during source test shall be submitted to CPM and District within 60 days of testing	Owner	CPM, District	15 days prior to testing and 60 days following testing		On-Going	
AQ-32	Compliance with natural gas sulfur content limit shall be demonstrated periodically as required by 40 CFR 60 Subpart GG and 40 CFR 75.	Project shall provide records of compliance as part of quarterly reports of AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-33	District must be notified 30 days prior to any compliance source test.	Project shall notify CPM and District 30 days prior to any compliance source test	Owner	CPM	30 days prior to testing		On-Going	

1) Pastoria Energy Facility CEC Compliance Matrix

Cond. #	Requirements & Task Summary	Action required	Lead Resp.	Agency	Submittal Date	Approval date	Status	Comments
AQ-33	Source test plan must be submitted for approval at least 15 days prior to testing	Project owner shall provide a source test plan to the CPM and District for the CPM and District approval 15 days prior to testing	Owner	CPM	15 days prior to testing		On-Going	
AQ-33	Source test results must be submitted to district within 60 days of testing	Source test results must be submitted to district within 60 days of testing	Owner	CPM	60 days following testing		On-Going	
AQ-34	District must be notified 30 days prior to seven year VOC/CO surrogate relationship source test.	Project shall notify CPM and District 30 days prior to any compliance source test	Owner	CPM	30 days prior to testing		On-Going	
AQ-34	Source test plan for seven year VOC/CO surrogate relationship source test must be submitted for approval at least 15 days prior to testing	Project owner shall provide a source test plan to the CPM and District for the CPM and District approval 15 days prior to testing	Owner	CPM	15 days prior to testing		On-Going	
AQ-34	Seven year VOC/CO surrogate relationship source test results must be submitted to district within 60 days of testing	Source test results must be submitted to district within 60 days of testing	Owner	CPM	60 days following testing		On-Going	
AQ-35	Source testing shall be performed following approved testing methods for all source testing required by permit.	Project owner shall provide records of compliance as part of AQ-33	Owner	CPM	NA		On-Going	
AQ-37	Project shall maintain hourly records of NOx, CO and ammonia emission concentration, and hourly, daily, and twelve month rolling average records of NOx and CO emissions. Compliance with hourly, daily and twelve month rolling average VOC emission limits shall be demonstrated by the CO CEM data and the VOC/CO relationship.	Project owner shall provide records of compliance as part of quarterly reports of AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-38	Project owner shall maintain records of SOx lb/hr, lb/day and lb/twelve month rolling average emission. SOx emission shall be based on fuel use records, natural gas sulfur content and mass balance equations.	Project owner shall provide records of compliance as part of the quarterly reports of AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-39	Project shall maintain the following records for the CTG: occurrence, duration, and type of any startup, shutdown or malfunction; performance testing, emission measurements; total daily and annual hours of operation; hourly quantity of fuel used and three hour average operating load.	Project owner shall compile required data and submit the information to the CPM in quarterly reports submitted no later than 30 days after the end of each calendar quarter	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-40	Project shall maintain records for CEMs	Project owner shall provide records of compliance as part of the quarterly reports of AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-41	Project shall provide notification and record keeping as required under 40 CFR, Part 60, Subpart A, 60.7	Project owner shall make records available for inspection by representatives of the District, CARB and CEC upon request	Owner	CPM, CARB, CEC	Upon request		On-Going	

1) Pastoria Energy Facility CEC Compliance Matrix

Cond. #	Requirements & Task Summary	Action required	Lead Resp.	Agency	Submittal Date	Approval date	Status	Comments
AQ-42	All records required to be maintained by this permit shall be maintained for a period of five years and made readily available for District inspection upon request.	Project owner shall make records available for inspection by representatives of the District, CARB and CEC upon request	Owner	CPM, CARB, CEC	Upon request		On-Going	
AQ-43	Results of CEMs shall be reduced according to the procedure established in 40 CFR, Part 51 appendix P paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with District, ARB and EPA	Project owner shall compile the required data in the formats discussed above and submit the results to the CPM quarterly as it is reported in AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-44	Project owner shall notify district of any breakdown condition as soon as reasonably possible but no later than one hour after its detection unless the owner or operator demonstrates that a longer reporting period was necessary.	Project owner shall comply with notification requirements of the District and submit written copies of these notification reports to the CPM as part of quarterly reports of AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-45	District shall be notified in writing within 10 days following correction of any breakdown condition	Project owner shall comply with notification requirements of the District and submit written copies of these notification reports to the CPM as part of quarterly reports of AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-46	Audits of CEMs shall be conducted quarterly except in quarters in which RATAs are performed. District shall be notified prior to completion of audits	Project owner shall submit the CEM audit results with quarterly reports of AQ-48	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-47	Project owner shall comply with applicable requirements for QA testing and maintenance of the CEMs equipment in accordance to 40 CF Part 60 App F	Project owner shall submit the CEMs results with quarterly reports of AQ-48	Owner	CPM	Quarterly Compliance Report		On-Going	
AQ-48	Project owner shall submit written report to the APCO for each calendar quarter due within 30days of the end of the quarter	Project owner shall compile required data and submit to CPM and APCO within 30 days of the end of the quarter	Owner	CPM, District	Quarterly Compliance Report		On-Going	
AQ-50, 59	No air contaminant shall be released into the atmosphere that causes a public nuisances	Project owner shall make the site available for inspection by representatives of the District, CARB and the Commission	Owner	District, CARB, CPM	Upon request		On-Going	
AQ-53, 62	No hexavalent chromium containing compounds shall be added to the cooling tower circulating water	Project owner shall make the site available for inspection by representatives of the District, CARB and the Commission	Owner	District, CARB, CPM	Upon request		On-Going	
AQ-55, 64	Project owner shall not exceed daily PM10 emission rate.	Verification covered under AQ 56	Owner	CPM	Upon request		On-Going	
AQ-56, 65	Compliance with PM10 daily emission limit shall demonstrate using district equation.	Project owner shall compile the required PM10 emissions data and maintain the data for a period of five years. Project shall make site available for inspection by District, CARB, CEC.	Owner	District, CARB, CPM	Upon request		On-Going	
AQ-57, 66	Compliance with PM10 emission limit shall be determined by weekly blow down water sample analysis by an independent lab.	Project owner shall compile the required PM10 emissions data and maintain the data for a period of five years. Project shall make site available for inspection by District, CARB, CEC.	Owner	District, CARB, CPM	Upon request		On-Going	

1) Pastoria Energy Facility CEC Compliance Matrix

Cond. #	Requirements & Task Summary	Action required	Lead Resp.	Agency	Submittal Date	Approval date	Status	Comments
AQ-68, 78	No air contaminant shall be released into the atmosphere that causes a public nuisances (Diesel Emergency IC Engine and Emergency Electrical Generator)	Project owner shall make the site available for inspection by representatives of the District, CARB and the Commission	Owner	District, CARB, CPM	Upon request		On-Going	
AQ-69, 79	No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as or darker than, Ringelmann 1 or 30% opacity. (Emergency Diesel IC Engine and Electrical Generator)	Project owner shall make the site available for inspection by representatives of the District, CARB and the Commission	Owner	District, CARB, CPM	Upon request		On-Going	
AQ-70	Emergency Diesel IC Engine shall be equipped with a turbocharger and intercooler/aftercooler	Project owner shall make the site available for inspection by representatives of the District, CARB and the Commission	Owner	District, CARB, CPM	Upon request		On-Going	
AQ-71, 81	Emergency Diesel IC Engine and Emergency Electrical Generator shall be equipped with an operational non-resettable hour meter	Project owner shall make the site available for inspection by representatives of the District, CARB and the Commission	Owner	District, CARB, CPM	Upon request		On-Going	
AQ-72, 82	Emergency Diesel IC Engine and Emergency Electrical Generator shall be equipped with a positive crankcase ventilation system or crankcase emission control device of at least 90% control efficiency unless UL certification would be voided	Project owner shall make the site available for inspection by representatives of the District, CARB and the Commission	Owner	District, CARB, CPM	Upon request		On-Going	
AQ-73	NOx emissions shall not exceed 7.2 g/hp-hr	Project owner shall make the site available for inspection by representatives of the District, CARB and the Commission. Project owner shall submit copy of compliance source test results within 60 days of source test if district requires a test.	Owner	District, CARB, CPM	Upon request		On-Going	
AQ-74	Sulfur content of diesel fuel shall not exceed 0.05% by weight.	Refer to verification of AQ-77	Owner	NA	Upon request		On-Going	
AQ-75, 84	Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration (Emergency Diesel IC Engine and Electrical Generator)	Project owner shall make the site available for inspection by representatives of the District, CARB and the Commission. Project owner shall submit copy of compliance source test results within 60 days of source test if district requires a test.	Owner	District, CARB, CPM	Upon request		On-Going	
AQ-76, 84	Equipment shall be operated only for maintenance, testing, and required regulatory purposes and during emergency situations. Operation of engine for maintenance, testing and required regulatory purposes shall not exceed 200 hours per year (Emergency Diesel IC Engine and Electrical Generator)	Project owner shall compile records of hours of operation of any of the IC engines and include those records as part of quarterly reports in AQ-39	Owner	CPM	Quarterly Compliance Report		On-Going	

1) Pastoria Energy Facility CEC Compliance Matrix

Cond. #	Requirements & Task Summary	Action required	Lead Resp.	Agency	Submittal Date	Approval date	Status	Comments
Waste-3	Project owner shall prepare and submit to CPM, a waste management plan for all wastes generated during operation of facility.	Project owner shall document actual waste management methods used during the year compared with actual waste management methods in the annual compliance report	Owner	CPM	Annual Compliance Report		On-Going	
Waste-6	Prior to removing any accumulated sludge from the cooling tower, the project owner shall test the sludge to determine the levels of metals and salts. Sludge shall be managed appropriately according to the test results	Project owner shall notify the CPM via annual compliance report of the sludge test results, as well as the method of disposal	Owner	CPM	Annual Compliance Report		On-Going	
Biological Resources								
Bio-1	CPM has approved Designated biologist for site activities	If a designated biologist is replaced, the information of the proposed replacement, as specified in the condition must be submitted in writing at least 10 working days prior to termination or release of preceding Designated biologist	Owner	CPM	As needed, At least 10 days prior to designated biologist		On-Going	
Bio-2	CPM-approved Designated Biologist shall perform the duties listed in the condition during project construction and operation.	During project operation, Designated Biologist shall submit record summaries in the annual compliance report	Owner	CPM	Annual Compliance Report		On-Going	
Bio-4	Project shall develop and implement CPM-approved WEAP for all employees and contractor employees and subcontractors who work on the project/related facilities during operation.	Maintain signed statement for active project operation personnel on file for duration of their employment and 6 months following employment termination	Owner	CPM	No Submittal		On-Going	
Bio-13	Project owner shall incorporate into the planned permanent or unexpected permanent closure plan measure that address the local biological resources. See condition for full protocol	At least 12 months (or mutually agreed upon time) prior to the commencement of closure activities, the project owner shall address all biological -related issues associate with facility closure. See condition for full protocol and verification	Owner	CPM	12 months prior to closure		On-Going	
Soil and Water Resources								
Soil&Water 5	Water used for project shall be SWP water as obtained from WRMWSD excess water sold through the districts pool or Westsides groundwater KWB that is directly delivered or exchanged from SWP surface water. If no such water is available, the PEF will not operate until such time as Commission has approved an amendment allowing for use of an alternative supply or cooling technology.	Project owner shall provide a water accounting summary (on monthly basis) in the annual compliance report	Owner	CPM	Annual Compliance Report		On-Going	
Soil&Water 6	Following commencement of project operation, project owner shall submit a final description and schematic of ZLD and results of residual cake solid waste	Project owner shall include a status report on construction and operation of the ZLD, including volumes of cake solids generated and landfills used for disposal in annual compliance report	Owner	CPM	Annual Compliance Report		On-Going	
Visual Resources								

1) Pastoria Energy Facility CEC Compliance Matrix

Cond. #	Requirements & Task Summary	Action required	Lead Resp.	Agency	Submittal Date	Approval date	Status	Comments
Vis-1	Project owner shall treat project structures, building and tanks in earthen hue or hues to minimize visual instruction.	Project owner shall provide a status report regarding treatment maintenance in the annual compliance report	Owner	CPM	Annual Compliance Report		On-Going	
Noise								
Noise -2	Project shall document, investigate, evaluate and attempt to resolve all project-related noise complaints	Project owner shall file a copy of the Noise Complaint Resolution Form to Kern County Environmental Health Services Department and CPM within 30 days of receiving complaint.	Owner	CPM	An needed, within 30 days of receiving complaint		On-Going	
Transmission Line Safety & Nuisance								
TLSN-2	Identify and correct all complaints of interference w/ radio and TV signals from oper. of line and facilities. Maintain written records of complaints and corrective actions for 5 yrs.	Summarize complaints and corrective actions in Annual Compliance Report to CPM.	Owner	CPM	Annual Compliance Report		On-Going	
TLSN-4	Ensure transmission line ROW is kept free of combustible materials as per Section 4292 of Public Resources Code and Section 1250 of Calif. Code of Regs.	Provide summary of inspection results and any fire prevention activities along the ROW in Annual Compliance Report.	Owner	CPM	Annual Compliance Report		On-Going	



McCORMICK
BIOLOGICAL, INC.

Biological Sciences – Inventory, Permitting, and Planning

June 25, 2018

Mr. Gary M. Fuller
Pastoria Energy Facility, LLC
39789 Edmonston Pumping Plant Road
PO Box 866
Lebec, CA 93243-0866

Subject: 2018 Annual San Joaquin Kit Fox Monitoring Survey for On-going Operations –
Pastoria Energy Facility, Kern County, California.

Dear Mr. Fuller:

At your request, McCormick Biological, Inc. (MBI) completed an annual survey assessing site use by San Joaquin kit fox (*Vulpes macrotis mutica*, SJKF) to comply with the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) and the California Environmental Quality Act documentation adopted for the Pastoria Energy Facility (PEF)/Calpine in southern Kern County, California. This letter is intended to meet these documentation requirements.

Because SJKF are mentioned as a species that could potentially visit the PEF, MBI placed remote monitoring cameras along the fence where evidence of animal passing underneath was observed or in areas with a large gaps in the fence that would allow wildlife site access. The purpose of the monitoring effort was to detect evidence indicating possible SJKF use or site occupation.

The following paragraphs provide the results of the June SJKF monitoring efforts for the 2018 monitoring year.

Fence-opening Evaluation

Remote-sensing cameras to evaluate wildlife use at fence openings along the PEF perimeter. Fence openings and wildlife pass through areas were conducted for five consecutive nights during June 2018. All wildlife observed on cameras was documented and identified to the extent possible.

Figure 2 illustrates the remote camera stations for the June SJKF Monitoring session. There were numerous locations where evidence of animals passing below the fence was observed. Because of this, cameras were placed in areas that had recent evidence of use. Photoplates 1 and 2 depict “typical” site conditions observed during the field survey. Cameras were run from June 19-25, 2018. Table 1 provides the results of this monitoring period. In summary, Bobcat (*Lynx rufus*), California ground squirrel (*Otospermophilus beecheyi*), coyote (*Canis latrans*), gophersnake (*Pituophis catenifer*), house sparrow (*Passer domesticus*), raccoon (*Procyon lotor*), and side-blotched lizard (*Uta stansburiana*). Photoplates 3-5 provide a representative sample of the frequently photographed wildlife taken during the monitoring session.

In summary, no San Joaquin kit fox were photographed during the 2018 remote camera monitoring session; however, the habitat surrounding PEF could support this species.

Thank you for the opportunity to provide biological consulting services. Please feel free to call should you need further assistance regarding this project.

Sincerely,



Waring E. Laurendine
Senior Biologist

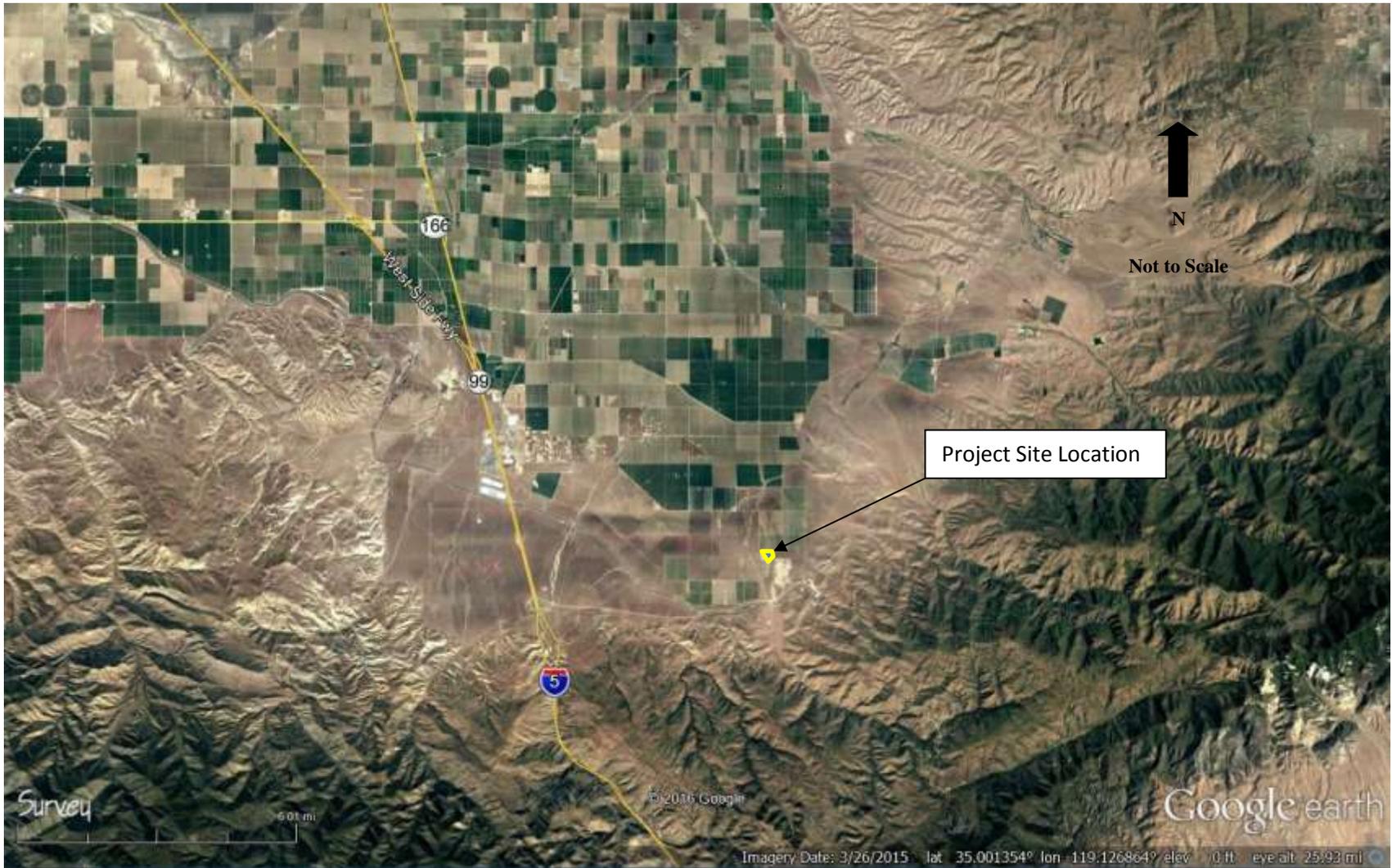


Figure 1. Vicinity Map.



Figure 2. 2018 San Joaquin Kit Fox Remote Camera station locations.

Representative Site Conditions Observed

Photoplate 1

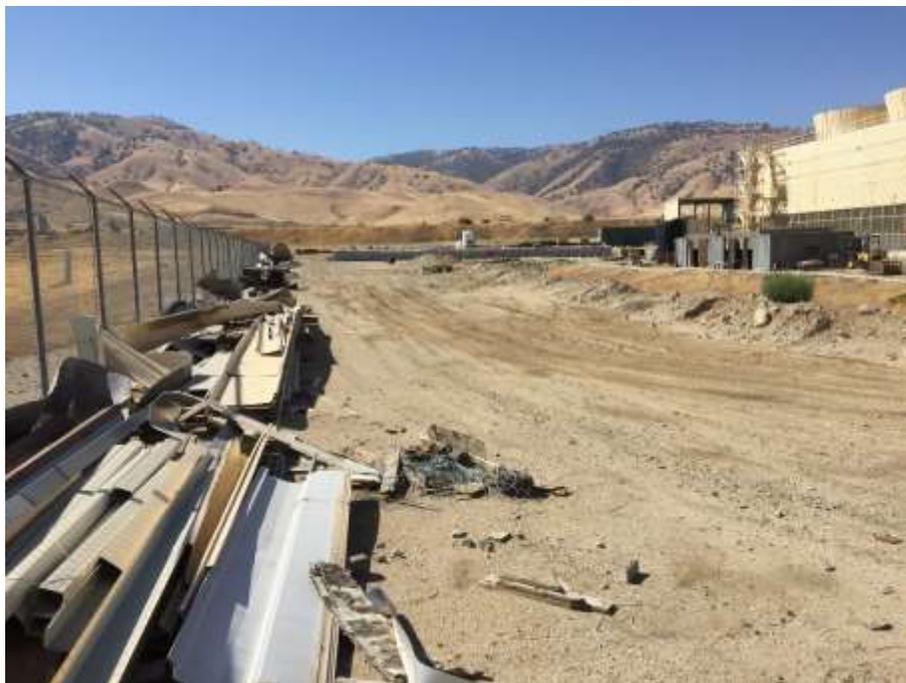


Looking eastward at current site conditions observed during the 2018 survey.



Looking eastward from the western fence near the northwest corner.

Photoplate 2



Looking southwest from the eastern corner at WP 213.



Looking westward from the eastern fence corner at WP213. Non-native grassland surround the PEF property.

Table 1. Pastoria Energy Facility
Remote Camera Monitoring

Survey Period – June
June 19-25, 2018

<u>Camera Station Waypoint No.</u>	<u>Species Photographed</u>
203	California ground squirrel, coyote
204	No wildlife photographed
205	House sparrow, California ground squirrel
206	California ground squirrel, bobcat
207	California ground squirrel
208	Bobcat, raccoon, side-blotched lizard
209	Bobcat
210	California ground squirrel, bobcat, raccoon, gopher snake
211	California ground squirrel, raccoon
212	California ground squirrel, raccoon
213	California ground squirrel, bobcat
214	No wildlife photographed

Photoplate 3



Bobcats, likely mother with child, photographed at camera station waypoint 210. Bobcat were photographed other stations and were active throughout the day and evening.



On the right side of the photograph a bobcat with prey, believed to be gophersnake.

Photoplate 4



Bobcat with prey, a California ground squirrel. Bobcat were photographed on several different occasions with ground squirrels.



Raccoon were photographed at several locations.

Photoplate 5



The only image of a canid, coyote, taken during the monitoring session.



Numerous images of California ground squirrels were taken at various photostations.

Dyas, Mary@Energy

From: Gary Fuller <gary.fuller@calpine.com>
Sent: Friday, August 02, 2019 9:37 AM
To: Dyas, Mary@Energy
Cc: Michael Rinehart; David Williams
Subject: Pasoria 2018 Annual Kit Fox Monitoring Survey
Attachments: 2018 Annual San Joaquin Kit Fox Monitoring Survey Report Pastoria Energy Facility.pdf

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Mary,

Attached is the 2018 Biological Report we just talked about for the annual report.

Thanks, Gary

Gary M. Fuller
EHS Specialist
Calpine Corp.
King City Energy Center
Pastoria Energy Facility
(661) 282-4405 – Office
(661) 332-2046 – Cell
fullerg@calpine.com

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ChemicalName	CommonName	AverageDailyAmount	MaximumDailyAmount	Units	DaysOnSite
Microbiocide	BIOCIDE - BIOSPERSE 244	55	110	a	365
	CORROSION INHIBITOR - MILSPERSE 956	1500	3000	a	365
	ANTI SCALANT - DREW 11-644	400	400	a	365
Ammonium Hydroxide	CAUSTIC SOLUTION - AMERCOR KB CORROSION INHIBITOR	500	1000	a	365
	GLYCOL SOLUTION - ANTIFOAM - DREWPLUS ED 795	500	750	a	365
Microbiocide	BIOCIDE - BIOSPERSE 250	55	110	a	365
Alkaline	CAUSTIC SOLUTION - DREWPHOS PT 67484	700	1000	a	365
Sodium Bisulfite	DECHLORINATING AGENT - DREW 6134	750	1000	a	365
LEAD ACID BATTERIES	BATTERIES	1920	1920	a	365
CONNTECT 6000	CONNTECT 6000 GAS TURBINE COMPRESSOR CLEANER	600	800	a	365
AMERFLOC 10 POLYMER	AMERFLOC 10 - ACID SOLUTION - POLYMER	500	1000	a	365
Sodium Carbonte	SODA ASH	250	500	c	365
Anhydrous Ammonia	AMMONIA ANHYDROUS	150000	264000	c	365
Calcium chloride (CaCl2)	LIQUID CALCIUM CHLORIDE	3000	6000	a	365
	CAUSTIC SOLUTION - RO CLEANER - V-SEP NLR 505	250	500	a	365
	ACID SOLUTION - RO CLEANER - V-SEP NLR 757	100	165	a	365
	ACID SOLUTION - RO CLEANER - V-SEP NLR 404	250	750	a	365
	POLYMER - AMERFLOC 482	400	400	a	365
	ANTISCALANT - AMEROYAL 710	400	1000	a	365
USED OIL	USED OIL	200	300	a	365
	AEROSOL CANS (EMPTY)	5	20	c	365
Drained Used Oil Filters	USED OIL FILTERS	50	500	c	365
	OILY RAGS & ABSORBANT MATERIAL	50	500	c	365
	FM-200 (FIXED FIRE SUPRESSION SYSTEMS)	600	600	b	365
	DRY CHEMICAL EXTINGUISHING AGENT	800	800	c	365
Diesel Fuel No. 2	DIESEL FUEL, LOW SULFUR	2500	5500	a	365
Chlorodifluoromethane	FREON 22	20	68.9	c	365
Phenol, dimethyl-, 1,1',1"-phosp	FYRQUEL EHC FLUID (Fire Resistant hydraulic fluid)	550	1100	a	365
Aluminiumhydroxidechloride	Chargepac 55 COAGULANT	4000	8000	a	365
	BRINE WATER, SODIUM CHLORIDE SATURATED SOLUTION	8000	15000	a	365
	CALIBRATION GASES - NITROGEN, CARBON MONOXIDE, & OXYGEN (MIX)	6000	7000	b	365
	LUBE OIL, TERESATIC 32	20000	20000	a	365
Gasoline	GASOLINE	125	250	a	365
Hydrogen	HYDROGEN	279	558	c	365
Carbon Dioxide-nitrous Oxide Mi	CARBON DIOXIDE	1500	1500	a	365
Propane	PROPANE	25	50	a	365
WEMCO	WEMCO C (TRANSFORMER OIL)	110000	110000	a	365
Ethyl Sulfuric Acid	SULFURIC ACID	10950	21900	a	365
Sodium Hydroxide	SODIUM HYDROXIDE	3200	6400	a	365
Mobil DTE Oil	Mobil DTE Oil; Extra Heavy, Heavy Medium	440	440	a	365
Mobil DTE Oil Light	Mobil DTE Oil Light	220	220	a	365
	Amersperse TK 6442 (Anti-Scalant)	1500	3000	a	365
Drewfloc 2270 polymer	Drewfloc 2270 polymer	500	1000	a	365
AMINE Solution	Corrosion Inhibitor (Solenis Product DPL-674)	330	660	a	365
Sodium Hydroxide	Deposit Inhibitor (Drewphos PT)	330	660	a	365

ChemicalName	CommonName	AverageDailyAmount	MaximumDailyAmount	Units	DaysOnSite
Nitrogen	Nitrogen	750	1250	b	365
Argon Compressed	Argon Compressed	750	1250	b	365
Sodium Hypochlorite	SODIUM HYPOCHLORITE	112500	225000	a	365
Acetylene	ACETYLENE	750	1250	b	365
Gypsum (Ca(SO4).2H2O)	GYPSUM	750	1500	c	365
Aluminum Chlorohydrate Solution	Chemsol 6049	4000	6500	a	365
Sodium Chlorate	Pureate (Nalco)	5000	9000	a	365
Ferric Sulfate Solution	Amersep 5320 - Neutralizing Agent	30	55	a	365
	Deposit & Corrosion Inhibitors (Solenis DPB-629)	300	500	a	365
Hydrogen Peroxide 50% Solution	Hydrogen Peroxide 30-50%	330	660	a	15
Purate - Biocide Precursor	Sodium Chlorate	500	1000	a	365
Chlorine Dioxide Dissolved in water	Chlorine Dioxide <1% Solution	75	100	a	365
Nytro 11GBX-US	Transformer Insulating Oil	55	110	a	365
Permaclean PC-11	Polyethylene Glycol	100	110	a	365
Biosperse BP8310 Biopenetrant	Sulfonic Acid Alkyl Derivative	100	110	a	15
AQUCAR DB20	Microbiocide	100	110	a	365



PASTORIA

ENERGY FACILITY

SITE - SPECIFIC & CEC SPECIAL ORIENTATION

ATTENDANCE ROSTER

TRAINING TYPE: RESOURCES TRAINING/BIOLOGICAL TRAINING/SITE - SPECIFIC ORIENTATION

INSTRUCTOR:

DATE:

COMPANY:

JOB TITLE/CRAFT:

TIM CARR

7/3/18

CPN

OP. Tech II

NAME:

SIGNATURE

EMPLOYER

JOB TITLE/CRAFT

(FIRST-MI-LAST)

Estevan Garcia

T&T

DRIVER

Jorge Vega Lopez

chemical
TRANSFER

DRIVER

pt
7-12



PASTORIA

ENERGY FACILITY

SITE - SPECIFIC & CEC SPECIAL ORIENTATION

ATTENDANCE ROSTER

TRAINING TYPE: RESOURCES TRAINING/BIOLOGICAL TRAINING/SITE - SPECIFIC ORIENTATION

INSTRUCTOR: NAME: (FIRST-MI-LAST)	DATE: SIGNATURE	COMPANY: EMPLOYER	JOB TITLE/CRAFT: JOB TITLE/CRAFT
KING	4/2/18	CPN	CRO
JOHN P. MARTELL JR	<i>[Signature]</i>	B&W	BOILERMAKER
Daniel Gradstein	<i>[Signature]</i>	BEW	Boilermaker
PAT VAWER	<i>[Signature]</i>	B & W	Boilermaker
FRANK TRUFFILO	<i>[Signature]</i>	MAXIM CRANE	CRANE OP.
Raymond Miranda	<i>[Signature]</i>	TWI	Craftsmen
Arturo Merckez	<i>[Signature]</i>	PCI	INSULATOR
Benjamin Overbo	<i>[Signature]</i>	B&W	Boilermaker
Delvin Boyd	<i>[Signature]</i>	PCI	ELECTRICAL
Brett Lambert	<i>[Signature]</i>	maxim crane	crane op
DAVID MAESTAS	<i>[Signature]</i>	TWI	craftsman/boiler
Joyce Grover	<i>[Signature]</i>	B&W	Boiler maker
Richard Cruz	<i>[Signature]</i>	TWT	Craftsman
Richard Miranda	<i>[Signature]</i>	TWT	Craftsman
Randall Seibert	<i>[Signature]</i>	TWT	craftsman
Santiago Ramirez	<i>[Signature]</i>	B&w	Boilermaker
Marshall Frey	<i>[Signature]</i>	Primoris	Electrical
John E Burns	<i>[Signature]</i>	B&w	Boiler maker
Juan Jose Cruz	<i>[Signature]</i>	B&W	Boiler maker
JOHN MARTELL SR	<i>[Signature]</i>	B&W	QC Supt.
KENNETH TANKS	<i>[Signature]</i>	Schneider	DRIVER
Jason Blon	<i>[Signature]</i>	TWI	CRAFTSMAN



PASTORIA

ENERGY FACILITY

SITE - SPECIFIC & CEC SPECIAL ORIENTATION

ATTENDANCE ROSTER

TRAINING TYPE: RESOURCES TRAINING/BIOLOGICAL TRAINING/SITE - SPECIFIC ORIENTATION

<u>INSTRUCTOR:</u>	<u>DATE:</u>	<u>COMPANY:</u>	<u>JOB TITLE/CRAFT:</u>
NAME: (FIRST-MI-LAST)	SIGNATURE	EMPLOYER	JOB TITLE/CRAFT
KING	3/5/18	CPN	CRO
James Hirakawa		CAITROL	Field Service Tech
MATT NIXON		CAITROL	TECHNICIAN
JAMES BROWN		CAITROL	INSTR. TECH
Armando Garcia		ARB	Boiler MAKER
JAKE SANDERS		CAITROL	INSTR TECH
Ignacio Leyva		ARB	HELPER
ABEL R PENA	3-5-18	PEI	ELECTRICIAN
Rudy Barron		PEI	Electrician
Ervin Tapia		PEI	Electrician
William Cleveland		PEF	Electrician
CHARLIE HOLT		PMI	Boiler maker
Jesús Bernardino		ARB	Ry wldr
Sirto Rodriguez		ARB	MECHANIC
Jhove S. Bravo		ARB	Apprentice
Eleuterio Hernández		A.R.B	Boiler Maker
Paul Lane		Ethos Energy	Millwright
LUIS TOWERA		ETHOS ENERGY	millwright
DUSTIN ILURACK		ATS	INSPECTOR
Emmanuel Gonzalez		ATS	inspector
Guillermo Bonales		ATS	Inspection
Dominic Tisdale		NASS	Xfmr Testing
Roman Calhoun		NASS	Xfmr Testing

Calpine Training Sign-In Sheet

Subject: Training - Worker Environmental Awareness Program
Course Description: Review of sensitive biological resources associated with the Pastoria area, related California Energy Commission, CA Dept of Fish and Wildlife, US Fish and Wildlife Service regulations and requirements

Date: July 26, 2018 **Course Duration:** 1.5 Hours
Location: Pastoria Control Room
Session Leader: Gary Fuller - 05912 *Gary Fuller*

By Signing this training sheet you declare that you understand and shall abide by the guidelines set forth in the program materials.

Employee Name	EE ID#	Home Location	Employee Signature
Darin Bice	10277	Pastoria	<i>Darin Bice</i>
Russ Tracy	05526	"	<i>Russ Tracy</i>
Matt Montee	11255	"	<i>Matt Montee</i>
KEA INGRAM	02848	PASTORIA	<i>KEA Ingram</i>
STAVE WHITE	10034	PASTORIA	<i>Stave White</i>
Bob Treman	05922	"	<i>Bob Treman</i>
KELLY NADEN	09724	"	<i>Kelly Naden</i>
Ed Hammond	03869	"	<i>Ed Hammond</i>
Sam Newy	07266	Pastoria	<i>Sam Newy</i>
KAREN Baker	07607	PASTORIA	<i>Karen Baker</i>
Shawn Packer	07039	PASTORIA	<i>Shawn Packer</i>
M Pinchard	05885	"	<i>M Pinchard</i>
Stephen Gibson	01600	PASTORIA	<i>Stephen Gibson</i>
MARK BENSEN	07565	PASTORIA	<i>Mark Bensen</i>
TIM AM	06729	PEF	<i>Tim Am</i>
Jim Deal	07409	PEF	<i>Jim Deal</i>
Alex Stewart	13546	PEF	<i>Alex Stewart</i>
RIK MARSHAN	00234	PEF	<i>Rik Marshan</i>
JUHU KING	05921	PEF	<i>Juhu King</i>

(Use additional sheets as necessary)

