DOCKETED	
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Project Title:	Pastoria Energy Facility Compliance
TN #:	259540
Document Title:	2023 Annual Compliance Report for Pastoria Energy Facility
Description:	2023 Annual Compliance Report for Pastoria Energy Facility
Filer:	Ashley Gutierrez
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	10/15/2024 2:06:55 PM
Docketed Date:	10/15/2024

39789 Edmonston Pumping Plant Road P.O. Box 866 Lebec, CA 93243-0866

July 30, 2024

VIA - Email

Ms. Ashley Gutierrez 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. 2023 - ANNUAL COMPLIANCE REPORT (99 AFC-7A)

Dear Ms. Gutierrez:

Pursuant to Compliance Certification requirements, one electronic copy of the 2023 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:

2023 Annual Compliance Report

 α :

Christopher Cullison - Calpine Corp.



2023 Annual Compliance Report For California Energy Commission

January 1 through December 31, 2023

This Report will serve to satisfy the California Energy Commission Final Decision 99-AFC-7(C) for the Pastoria Energy Facility (PEF) 2023 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: <u>All reports of line-related complaints shall be summarized and included in the Annual Compliance Report to the CPM.</u>

- 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 2023.
- **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 seg.; 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 August 17, 2023. A summary of inspection results is provided

in Appendix 1. 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, along with Facility Map location in 2023 is provided in Appendix 2.
- **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 2023, provided in Appendix 3, describes and documents the actual waste management methods used in 2023 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 east or west cooling towers in 2023.

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. <u>During project operation</u>, 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 2023. In 2023 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 2023 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 2022 is also provided in Appendix 4.

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 2023 was from WRMWSD's district pool water for delivery to PEF. The quantity of water used at PEF on a monthly basis in 2023 is provided in Appendix 5.

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 2023 the second crystallizer has been operating as expected, showing continued improvement in the efficiency of the zero liquid discharge system.

A total of approximately 2,831 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 2023.

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 major changes to, or any significant replacements of any pre-colored structures, or any structures treated in the field in 2023.

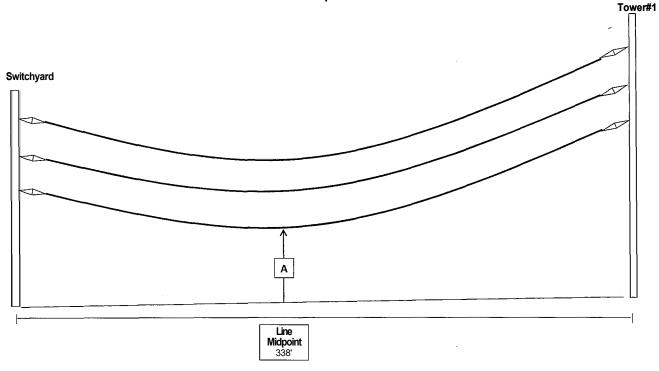
Included in Appendix 6, is a current compliance matrix indicating the status of the Conditions of Certification. Omitted from the list are Conditions determined to have been completed by the CEC Compliance Project Manager (CPM).

CPUC California Public Utilities Commission (CPUC) Update

The Pastoria Energy Facility was not audited by the CPUC in 2023.

Appendix 1

Transmission Line Right-of-Way Combustible Materials Inspection Forms 2023



Visually Inspect Line - If minimum distance from vegitaion is > 25 Feet= Pass , If< 25 Feet= Fail

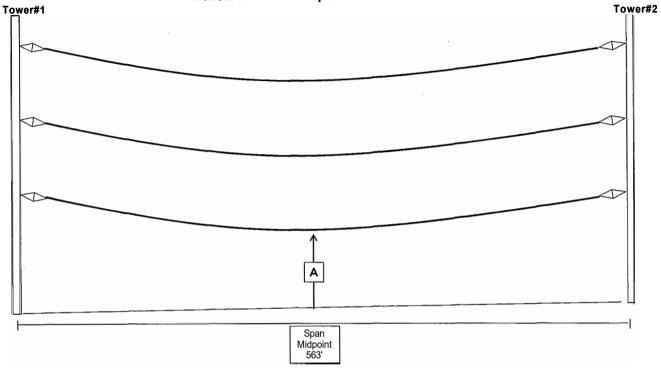
Measurement	Expected	PASS	FAIL
A	>25'	X	

Visually Inspect Tower Insulators and Conductor Connections. P = Pass, F = Fail

Tower	<u> </u>
N	ras.
S	Pass
	- 1 ~ ~ ~ ~

Notes: No 155UES

Date: 8/17/23



Visually Inspect Line - If minimum distance from vegitaion is > 25 Feet= Pass , If< 25 Feet= Fail

Measurement	Expected	PASS	FAIL
Α	>25'	×	
		_	

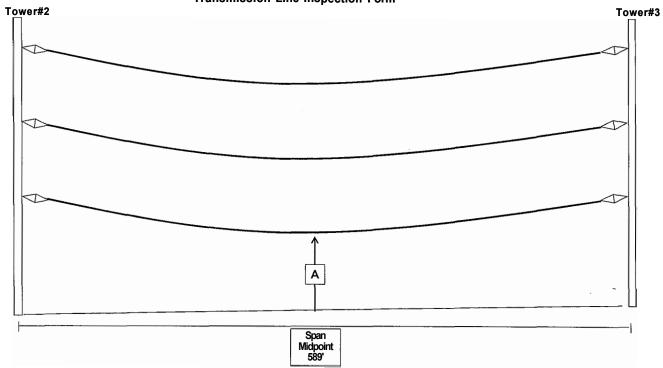
Notes:	IJa	[S,:JLJ-IS	

Visually Inspect Tower Insulators and Conductor Connections. P = Pass, F = Fail

N ASS

Inspected By: Milmart

Date: 8/17/23



Visually Inspect Line - If minimum distance from vegitaion is> 25 Feet= Pass , If< 25 Feet= Fail

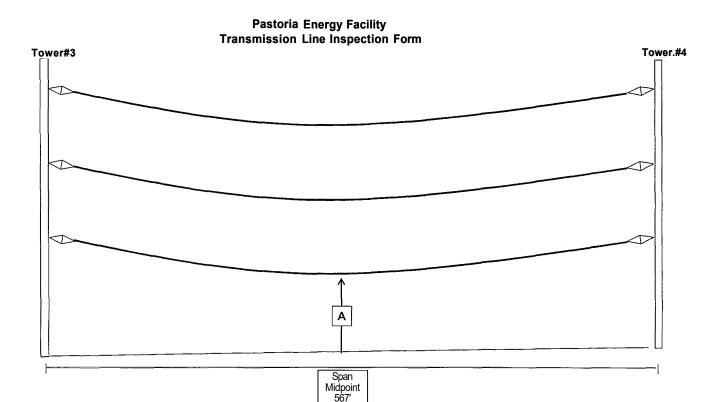
A >25' X	Measurement	Expected	P ASS	FAIL
	Α	>25'	X/	

Notes:
No ts.sves

Visually Inspect Tower Insulators and Conductor Connections. P = Pass, F = Fail

Tower 2 N Fac S Fac

Inspected By: <u>VM2,yU, rl-</u> Date: <u>8/17/23</u>



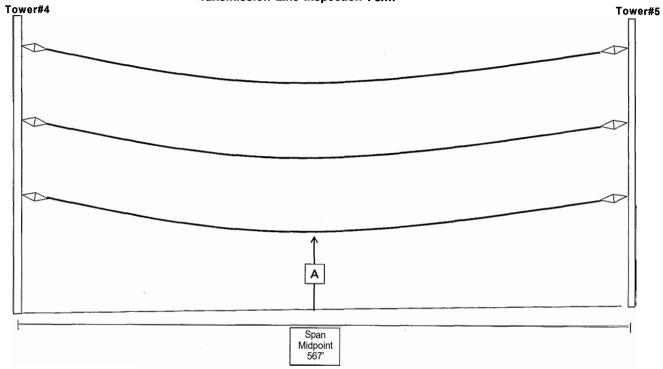
Visually Inspect Line - If minimum distance from vegitaion is > 25 Feet= Pass , If< 25 Feet= Fail

1	Measurement	Expected	fIASS	FAIL
	Α	>25'	X	

Visually Inspect Tower Insulators and Conductor Connections. P = Pass, F = Fail

Tower

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Visually Inspect Line - If minimum distance from vegitaion is > 25 Feet= Pass , If < 25 Feet= Fail

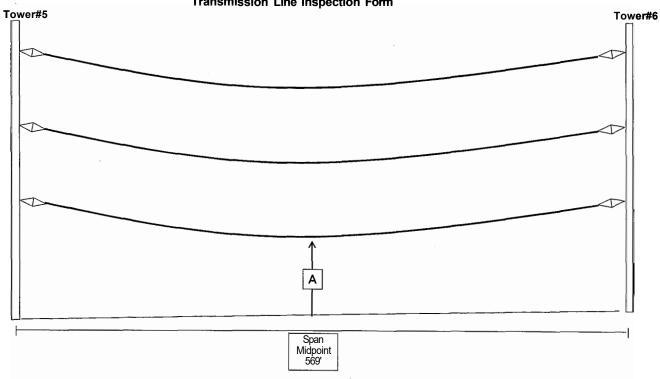
Meas ement	Ex ; ed	P1	FAIL

Notes:	1950es	

Visually Inspect Tower Insulators and Conductor Connections. P = Pass, F = Fail

Tower N Pass S Pass

By: M ((,,K,ta, Date: 8/17/23



Visually Inspect Line - If minimum distance from vegitaion is > 25 Feet = Pass , If < 25 Feet = Fail

Measurement	Expected	PASS	FAIL
_ A	>25'	X	

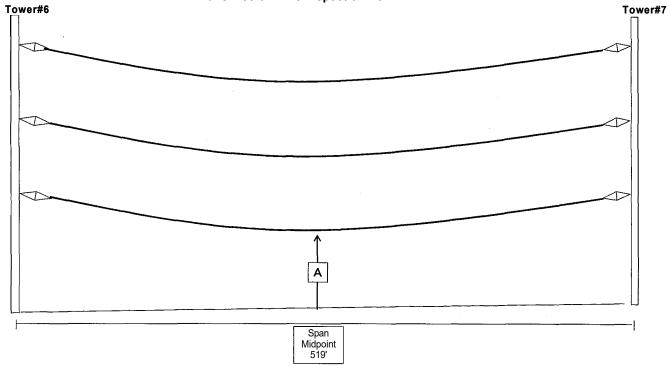
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Visually Inspect Tower Insulators and Conductor Connections. P = Pass, F = Fail

Tower 5 N Pass u" Pass

Inspected By: $\underline{(Y)(Juwk\pm \underline{})}$ Date: \underline{SJJJJZ}





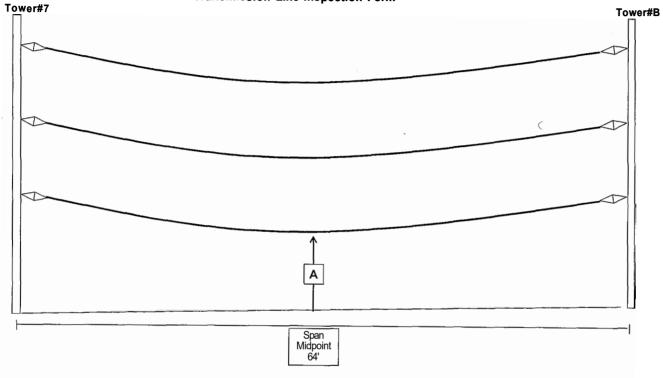
Visually Inspect Line - If minimum distance from vegitaion is > 25 Feet= Pass , If < 25 Feet= Fail

Measurement	Expected	PAŞS	FAIL
Α	>25'	X	

Visually Inspect Tower Insulators and Conductor Connections. P = Pass, F = Fail

Tower

No issues



Visually Inspect Line - If minimum distance from vegitaion is> 25 Feet= Pass , If< 25 Feet= Fail

Measurement	Expected	PASS	FAIL
Α	>25'	7	

No USSUES

Visually Inspect Tower Insulators and Conductor Connections. P = Pass, F = Fail

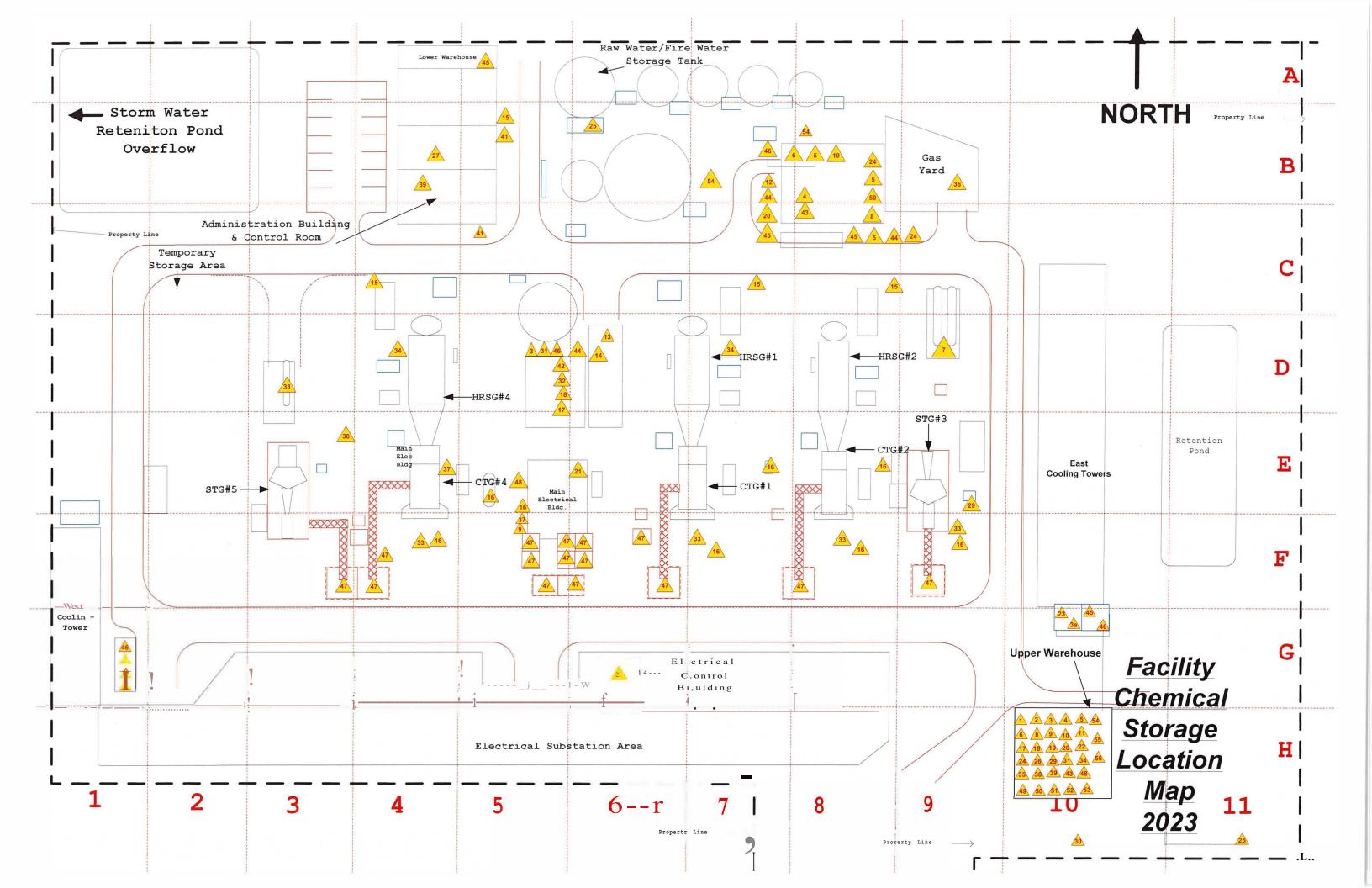
N PASS

Inspected By: M Line

Date: 8 m

Appendix 2

Hazardous Materials List & Location Map 2023





CERSID	Pastoria E	Number	GrldNumber	ChemicalName	Common Name
10235821	Upper Warehouse	Strg Map		Mlcroblocide	BIOCIDE •BIOSPERSE 244
10235821	East and West Cooling Tower Chemical Storage Area	5trgMap	GI,GIO		CORROSION INHIBITOR: MILSPER5E 956
10235821	Upper Warehouse	Strg Map	HIO		ANTI SCALANT • DREW 11-644
10235821	ZLD Bldg & Upper Warehouse	Strg Map	D5,HI0	Ammonium Hydroxide	CAUSTIC SOLUTION: AMERCOR KB CORROSION INHIBITOR
10235821	At ZLD Process near crystalizer and upper Warehouse	Strg Map	D5, HIO		GLYCOL SOLUTION -ANTI FOAM- DREWPLUS ED 795
10235821	Upper Warehouse	Strg Map	HIO	Microbiocide	BIOCIDE •BIOSPERSE 250
10235821	ZLD Bldg & Upper Warehouse	Strg Maj)	D5, HIO	Alkaline	CAUSTIC SOLUTION • DREWPHOS PT 67484
10235821	Water Plant Bldg and Upper Warehouse	Strg Map	88, HIO	Sodium Bisulfite	DECHLORINATING AGENT: DREW 6134
10235821	Switchyard Bldg, Main Electrical Bldg and Turbine PECs	Strg Map	GE, 6G & 86	LEAD 11,0D BATTERIES	BATTERIES
10235821	Upper Warehouse	Strg Map	H10	CONNTECT 6000	CONNTECT 6000 GAS TURBINE COMPRESSOR CLEANER
10235821	Water Plant Bldg, Upper Warehouse	Strg Map	BB, H10	AMERFLOC 10 POLYMER	AMERFLOC 10 ◆ACID SOLUTION · POLYMER
10235821	East and West Cooling Tower Chemical Storage Area	Strg Map	HI, HIO	Sodium Carbonte	SODA ASH
10235821	Storage Tanks near North end of East Cooling Towers	Strg Map	D9	Anhydrous Ammonia	AMMONIA ANHYDROUS
10235821	Brine Crystallizer Tanks	Strg Map		Calcium chloride (CaCl2)	LIQUID CALCIUM CHLORIDE
10235821	Water Plant Bldg and Upper Warehouse	Strg Map			CAUSTIC SOLUTION •RO CLEANER· V-SEP NLR 505
10235821	Water Plant Bldg and Upper Warehouse	Strg Map	B8, H10		ACID SOLUTION: RO CLEANER: V-SEP NLR 757
10235821	Water Trmt Bldg & Upper Warehouse	Strg Map			ACID SOLUTION •RO CLEANER· V-SEP NLR 404
10235821	Water Plant and Upper Warehouse	Strg Map	BB, H10	-	POLYMER: AMERFLOC 482
10235821	Water Treatment Bldg & Upper Warehouse	Strg Map	BB, HIO		ANTISCALANT • AMEROYAL 710
10235821	upper Warehouse	Strg Map	HIO	USED OIL	USED OIL
10235821	Upper Waret\ouse	Strg Map			AEROSOL CANS (EMPTY)
10235821	Upper Warehouse	Strg Map		Drained Used Oil Filters	USED OIL FILTERS
10235821	Upper Warehouse	Strg Map			OILY RAGS & ABSORBANT MATERIAL
10235821	Room next to Control Room	Strg Map			FM-200 (FIXED FIRE SUPRESSION SYSTEMS)
10235821	Fixed Containers at 5ite;THROUGHOUT PLAN				DRY CHEMICAL EXTINGUISHING AGENT
10235821	By Front Gate and Emergency Fire Pump Bldg	Strg Map	B6. HIO	Diesel Fuel No. 2	DIESEL FUEL, LOW SULFUR
10235821	Fixed Containers at Site;AIR CONDITIONER			Chlorodifluoromethane	FREON 22
10235821	Turbines and Upper Warehouse	Strg Map	E3, E9, HIO	Phenol, dimethyl-, 1,1',I"•phosphate	FYRQUEL EHC FLUID (Fire Resistant hydraulic fluid)
10235821	Water Plant and Upper Warehouse	Strg Map		AlumIniumhydroxidechlorlde	ChargepacSS COAGULANT
10235821	Next to Water Treatment Bldg Entrance	Strg Map			BRINE WATER, SODIUM CHLORIDE SATURATED SOLUTION
10235821	Near and Around the Turbines		as, C4, C7, CB		CALIBRATION GASES: NITROGEN, CARBON MONOXIDE, & OXYG
10235821	Turbines and Upper Warehouse		D4, D7,H10		LUBE OIL, TERESETIC 32
10235821	By Front Gate and Emergency Fire Pump Bldg	Strg Map		Gasoline	GASOLINE
10235821	Near and Around the Turbines		D3, F4, F7, F8,	Hydrogen	HYDROGEN
10235821	Various Area in Facility by Turbines		ES, E7, ES, F4,	Carbon Dioxide-nitrous Oxide Mixture	CARBON DIOXIDE
10235821	Lower Warehouse & Forklift(s)	Strg Map		Propane	PROPANE
10235821	Fixed Containers at Site; GRID /IS F3, F4, F5, F6, F8, F9			WEMCO	WEMCO C (TRANSFORM ER 01 L)
10235821	Water Plant, E & W Cooling tower Chem Strg Bldgs & Upper Whse	StrgMap	GI, GIO, 87, DS	Ethyl Sulfuric Acid	SULFURIC ACID
10235821	Next to Water Treatment Bldg and ZLD Bldg	Strg Map		Sodium Hydroxide	SODIUM HYDROXIDE
10235821	Turbines and Upper Warehouse	5trg Map		Mobil DTE Oil	Mobil DTE Oil; Extra Heavy, Heavy Medium
10235821	Turbines and Upper Warehouse	Strg Map		Mobil DTE Oil Light	Mobil DTE Oil Light
10235821	Water Plant Bldg, Upper Warehouse & Cooling Twr Chem 5trg		GI, G10, D5, HI	Moon one on Elgin	Amersperse T K 6442 (Anti-Sealant)
10235821	Water Trimt Bldg & Upper Warehouse	Strg Map		Drewfloc 2270 polymer	Drewfloc 2270 polymer
10235821	ZLD Bldg & Upper Warehouse	em Map		AMINE Solution	Corrosion Inhibitor (Solenis Product DPL-674)
10235821	ZLD Bldg & Upper Warehouse	em Map		Sodium Hydroxide	Deposit Inhibitor (Drewphos PT)
10235821	Fixed tank Near Wtr Treatment Bldg & Upper Warehouse	5trg Map		Aluminum Chlorohydrate Solution	Chemsol 6049
10235821	Near Wtr Treatment Bldg & Upper Warehouse	Strg Map		Sodium Chlorate	Pureate (Nalco)
10235821	Near Filter Press	Strg Map		Ferric Sulfate Solution	Amersep 5320 • Neutralizing Agent
10235821	ZLD Bldg & Upper Warehouse	Strg Map		Terric Surface Solution	
	Upper Warehouse and By Cooling Towers if needed for cleaning	Jug Ividp	03,1110	Hydrogen Peroxide 50% Solution	Deposit & Corrosion Inhibitors (Solenls DPB-629 Hydrogen Peroxide 30-50%

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CERSID	Chemicallocation	,Number	GrldNumber	Chemical Name	Common Name
10235821	Upper Warehouse			Purate - Bioclde Precursor	Sodium Chlorate
10235821	Upper Warehouse and Water Plant			Permaclean PC-11	Polyethylene Glycol
10235821	Water Trmt Bldg & Upper Warehouse			Biosperse BP8310 Biopenetrant	Sulfonic Acid Alkyl Derivative
10235821	Upper Warehouse and Water Plant		b7 & HIO	CAT-FLOC 8103 Plus	Nalco Water Treatment Floculent
10235821	Upper Warehouse		HI0	Ferric Chloride Solution	Ferric Chloride 40%
10235821	By Turbines and Upper Warehouse	Strg Map	E4, FS, HIO	Nitrogen	Nitrogen
10235821	Upper Warehouse			Nytro 11GBX-US	Transformer Insulating Oli
10235821	By Turbines and Upper Warehouse		F5, HIO	Argon Compressed	Argon Compressed
10235821	500 feet of 2" ID PVC Tubing from Water Plant to East Cooling Tower			Chlorine Dioxide Dissolved in water, 4000	Chlorine Dioxide <1% Solution
10235821	Water Plant Bldg, Upper Warehouse & Cooling Twr Chem Strg	Strg Map	GI, GIO, AS, C7	Sodium Hypochlorite	SODIUM HYPOCHLORITE
10235821	Upper Warehouse	Strg Map	HIO	Acetylene	ACETYLENE
10235821	wtr Treatment Bldg & Upper Warehouse			AQUCAR DB20	Microbiocide
10235821	Upper Warehouse	trg Map	IIH10	Gypsum (Ca(SO4).2H2O)	GYPSUM
10235821	Upper Warehouse			Justeq07	Microbiocide

Appendix 3

Waste Management Table 2023

Pastoria Energy Facility WASTE MANAGEMENT TABLE 2023

Waste Stream	Planned Waste Ma	nagement Method	Actual 2022 Waste M	anagement Method
	On- Site	Off-Site	On- Site	Off-Site
Used Hydraulic Fulid Oils and Grease, and Oily Filters		Recycle	Store for < 90 days	Recycle
Used Air Filters	None	Recycle	None	Dispose to nonhazardous waste disposal facility
Spent bateries	Store for < 90 days	Recycle	Store for < 90 days	Recycle
Spent SCR and CO Catalyst	None	Recycle	None	No Action, original SCR in operation on all 3 units
Colling Tower Basin Sludge	None	Recycle to Compost or Dispose to nonhazardous waste disposal facility	None	Dispose to nonhazardous waste
Oily Rags	Store for < 90 days	Laundry at authorized facillity	Store for < 90 days	Laundry at authorized facillity
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) (none 2022	Dispose to authorized waste disposal facility

Appendix 4

WEAP Training
2023 Calpine Facility Employees & Contractor List with Signatures
(Provided Under Separate e-Submittal)

Appendix 5

Water Accounting Summary 2023

Pastoria Energy Facility, LLC

Wheeler Ridge-Maricopa Water Storage District Summary of Industrial Usage (ac-ft) From 01/01/2023 - 12/31/2022

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
225.65	46.27	61.2	35.2	42.62	207.27	364.04	421.34	298.98	263.06	184.69	255.24	2405.56

Appendix 6

Compliance Matrix 2023

	1) Pastoria Energy Facility CEC Compliance Matrix											
Cond. #	Requirements & Task Summary	Action required	Lead Resp.	Agency	Submittal Date	Approval date	Status	Comments				
AIR QUA	LITY		1	1								
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	СРМ	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	HRSG 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	СРМ	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	СРМ	Quarterly Compliance Report		On-Going					
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	СРМ	Upon request		On-Going					

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Cond. #	Requirements & Task Summary	Action required	Lead Resp.	Agency	Submittal Date	Approval date	Status	Comments
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	СРМ	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	СРМ	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	СРМ	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	СРМ	Quarterly Compliance Report		On-Going	
AQ-29	Compliance with short term emission limits (lb/hr and ppmv) shall be demonstrated by annual insitu 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	СРМ	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	СРМ	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	СРМ	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	СРМ	30 days prior to testing		On-Going	
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	СРМ	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	СРМ	60 days following testing		On-Going	

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	1) Pastoria Energy Facility CEC Compliance Matrix											
Cond. #	Requirements & Task Summary	Action required	Lead Resp.	Agency	Submittal Date	Approval date	Status	Comments				
AQ-34	District must be notified 30 days prior to seven year VOC/CO surrogate relationship source test. Source test plan for seven year VOC/CO	Project shall notify CPM and District 30 days prior to any compliance source test Project owner shall provide a source test	Owner	СРМ	30 days prior to testing		On-Going					
AQ-34	surrogate relationship source test must be submitted for approval at least 15 days prior to testing	plan to the CPM and District for the CPM and District approval 15 days prior to testing	Owner	СРМ	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	СРМ	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	СРМ	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	СРМ	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	СРМ	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	СРМ	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	СРМ	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					
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	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	СРМ	Quarterly Compliance Report		On-Going					
AQ-44	agreement with District, ARB and EPA 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	СРМ	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	СРМ	Quarterly Compliance Report		On-Going					

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		1) Pastoria Energy Fa	cility	CEC Co	mpliance	Matrix		
Cond. #	Requirements & Task Summary	Action required	Lead Resp.	Agency	Submittal Date	Approval date	Status	Comments
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	СРМ	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	СРМ	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	СРМ	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	
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	

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		1) Pastoria Energy Fa	oility	CEC Ca	mpliance	Matrix		
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Cond. #	Requirements & Task Summary	Action required	Lead Resp.	Agency	Submittal Date	Approval date	Status	Comments
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	СРМ	Quarterly Compliance Report		On-Going	
AQ-77, 86	Project owner shall maintain records of hours of non emergency operation and sulfur content of the diesel fuel and natural gas. (Emergency Diesel IC Engine and Electrical Generator)	Project owner shall compile records of hours engine used and diesel fuel purchased for a period of 5 years and make the site available for inspection by District, CARB and CEC	Owner	District, CARB, CPM	Upon request		On-Going	
На	zardous Material Management			1		, ,		,
HAZ-1	Project owner shall not use any hazardous materials in reportable quantities as specified in Title 40 CFR Part 355 Subpart J, Section 355.50, not listed in Appendix B, below, or in greater quantities than those identified by chemical name	Project owner shall provide a list of hazardous materials contained at the facility in reportable quantities in the annual compliance report.	Owner	СРМ	Annual Compliance Report		On-Going	
	Waste Management					,		
Waste-1	Project owner shall obtain a hazardous waste generator identification number from DTSC prior to generating any hazardous waste	Project owner shall keep its copy of the ID number on file at the project site.	Owner	СРМ	NA		On-Going	
Waste-2	Notify CPM of any waste-management related enforcement action taken by any local, state or federal authority against any waste hauler, disposal facility, or treatment operator that the project contracts with.	Project owner shall notify the CPM in writing within 10 days of becoming away of impending enforcement action	Owner	СРМ	With 10 days of becoming aware		On-Going	

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	1) Pastoria Energy Facility CEC Compliance Matrix											
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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	СРМ	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	СРМ	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	СРМ	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	СРМ	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	СРМ	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	СРМ	12 months prior to closure		On-Going					
	Soil and Water Resources		1		1			,				
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	СРМ	Annual Compliance Report		On-Going					
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	СРМ	Annual Compliance Report		On-Going					
	Visual Resources											

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	1) Pastoria Energy Facility CEC Compliance Matrix										
Cond. #	Requirements & Task Summary	Action required	Lead Resp.	Agency	Submittal Date	Approval date	Status	Comments			
	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	СРМ	Annual Compliance Report		On-Going				
	Noise										
	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	СРМ	An needed, within 30 days of receiving complaint		On-Going				
Trans	smission 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	СРМ	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	СРМ	Annual Compliance Report		On-Going				

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