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Project Title:	Compliance - Application for Certification of PG&E Geysers Unit 18
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Document Title:	2018 Annual Compliance Report for the Socrates Power Plant (Unit 18)
Description:	2018 Annual Compliance Report for the Socrates Power Plant (Unit 18) at the Geysers
Filer:	William King
Organization:	Geysers Power Company, LLC
Submitter Role:	Applicant
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GEYSERS POWER COMPANY, LLC

10350 Socrates Mine Road
Middletown, CA 95461

GWQ-19-059

December 23, 2019

Eric Veerkamp, Compliance Project Manager
Energy Facilities Siting and Environmental Protection Division
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, California 95814-5512

Subject: **79-AFC-3C** 2018 Annual Compliance Report Geysers U18 (Socrates) Power Plant

Mr. Veerkamp:

In fulfillment of the Compliance Plan's annual reporting requirement, Geysers Power Company, LLC hereby submits the following report for Unit 18 (Socrates).

If you have any comments or questions, please contact me at (707) 431-6097.

Sincerely,

Bill King
Project Manager, EHS
Calpine Corporation

79-AFC-3C

CALIFORNIA ENERGY COMMISSION

FINAL DECISION

CONDITIONS FOR CERTIFICATION

GEYSERS POWER PLANT

UNIT 18

2018 ANNUAL COMPLIANCE REPORT

**2018 Annual Compliance Report to the California Energy Commission
79-AFC-3C Geysers Unit 18 Power Plant**

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EXECUTIVE SUMMARY

Section 25532 of the Public Resources Code provides that the California Energy Commission (CEC) shall establish a monitoring system to assure that any facility certified by the CEC is constructed and operated in compliance with air, water quality, public health, safety, and other applicable regulations, guidelines, and conditions adopted or established by the CEC.

On April 5, 1979, PG&E filed an Application for Certification (AFC) for Geysers Power Plant Unit 18. In order for the AFC to be granted the CEC issued the "Final Commission Decision Document for Geysers Power Plant Unit 18". In November, 1999, the CEC license was transferred from PG&E to GPC. The license requires Geysers Power Company LL (GPC) to be responsible for administering and monitoring various Conditions for Certification as contained in the Final Commission Decision, in accordance with the Compliance Plan for Unit 18 including submitting an Annual Report that summarizes compliance tasks conducted during the previous year.

According to the guidance provided to PG&E by CEC staff on July 12, 1995, only the on-going compliance tasks will be addressed in this and future Annual Reports.

The status of the compliance tasks in each of the following areas are summarized below:

Air Quality: Three on-going compliance tasks

Public Health: Six on-going compliance tasks

Cultural Resources: One on-going compliance task

Biological Resources: One on-going compliance tasks

Water Quality, Hydrology and Water Resources: Three on-going compliance tasks

Solid Waste Management: Three on-going compliance tasks

Safety: Three on-going compliance tasks.

Transmission Line Engineering -- Safety and Nuisance: GPC does not own the transmission facilities so cannot comply with this compliance task.

This Annual Report meets the aforementioned requirements found in the CEC's Final Decision for Geysers Power Plant Unit 18.

**2018 Annual Compliance Report to the California Energy Commission
79-AFC-3C Geysers Unit 18 Power Plant**

SECTION 1: AIR QUALITY

COMPLIANCE PLAN CONDITION	AGENCY	COMPLIANCE TASK	STATUS	TASK IMPLEMENTATION
Condition: 1-1	NSCAPCD CEC CARB	GPCLLC shall summarize in an annual compliance report any interactions with the NSCAPCD. GPCLLC shall immediately inform the CEC and CARB in writing of any formal appeals filed with the NSCAPCD.	On-going	The Annual Compliance Report is provided below.

Annual Compliance Report: Geysers Power Company LLC (GPC) interactions with the NSCAPCD occur during the course of the year as routine reports and non-routine submittals.

Quarterly Operating Report Submittals: The following Quarterly reports were submitted to the NSCAPCD and CEC CPM with the required elements addressed in the report sections entitled: Continuous Compliance Monitor Availability; Summary of H2S Abatement Incidents Requiring Corrective Action and Monitor Irregularities; Source Test Results. The required elements pertaining to this CEC licensed Power Plant was submitted to the CEC Compliance Manager as follows:

- ☒ Fourth Quarter 2017 (Oct – Dec) Submittal to NSCAPCD, 1/31/2018, ref. GPC18-002
- ☒ First Quarter 2018 (Jan – Mar) Submittal to NSCAPCD, 4/28/2018, ref. GPC18-037
- ☒ Second Quarter 2018 (Apr – June) Submittal to NSCAPCD, 7/26/2018, ref. GPC18-074
- ☒ Third Quarter 2018 (July – Sep) Submittal to NSCAPCD, 10/22/2018, ref. GPC18-086

Other Routine Report Submittals:

- ☒ Annual Title V Operating Permit Compliance Report and Certification of Compliance for the year 2017, to NSCAPCD, 6/26/2018, ref. GPC18-013
- ☒ Criteria Pollutant Report: Year 2018 to NSCAPCD, 2/14/2019, ref. GPC19-016
- ☒ Semi-annual Deviation Reports to NSCAPCD: 2nd half 2017, 2/1/2018, ref. GPC18-005 (No deviations); 1st half 2018, 7/31/2018, ref GPC-18-078 (Deviation reported: Criteria Pollutant Report due 2/14/2018).
- ☒ 2018 annual request for a statement of compliance verification, 7/1/2018, ref. GPC19-046.

Non-routine Submittals

- ☒ NESHAP Demolition – **None**
- ☒ Breakdown reports – **None**
- ☒ Applications for Authority to Construct equipment modifications or replacement: **None**

Significant interactions with the NSCAPCD:

- ☒ NSCAPCD staff conducted a compliance inspection of the facility on 4/26/2018.
- ☒ GPC LLC application for renewal of the Tile V Operating Permit, 9/20/2018, ref GPC18-053
- ☒ NSCAPCD issued a statement of compliance verification for 2012-2017 on 1/30/2019; for 2018 on 7/8/2019
- ☒ No Appeals filed;
- ☒ No Variances filed;
- ☒ No Notices of Violations were issued

**2018 Annual Compliance Report to the California Energy Commission
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SECTION 1: AIR QUALITY (continued)

COMPLIANCE PLAN CONDITION	AGENCY	COMPLIANCE TASK	STATUS	TASK IMPLEMENTATION
Condition: 1-2	NSCAPCD CEC	GPCLLC shall provide the CEC with a copy of all quarterly reports and testing / monitoring reports submitted to the NSCAPCD.	On-going	The 2018 Annual Compliance Report provides references to reports submitted to NSCAPCD in the Year 2018. The required elements pertaining to this CEC licensed Power Plant were submitted to the CEC Compliance Manager. No Notices were received from the NSCAPCD other than the annual invoice for permit renewal.
Condition: 1-3	NSCAPCD CEC	GPCLLC shall obtain NSCAPCD and CEC written approval before using any equipment other than the Hydrogen peroxide/catalyst and Stretford/ Surface Condenser systems as approved in the CEC decision to control H2S emission.	As needed	No alternative H ₂ S emissions abatement systems have been proposed.

SECTION 2: PUBLIC HEALTH

COMPLIANCE PLAN CONDITION	AGENCY	COMPLIANCE TASK	STATUS	TASK IMPLEMENTATION
Condition: 2-1	CDHS/RHB	During first year of operations, provide CDHS/RHB with quarterly sampling results of Radon-222 concentrations entering the plant.	On-going	First, second, third, and fourth quarter samples of main steam supply Radon 222 concentrations were collected in 2018. Calculated resulting concentrations of Radon 222 exiting the cooling tower stacks are below 0.90 pCi/l.
Condition: 2-2	CDHS/RHB	If Radon-222 concentration exceeds 3.0 pCi/l in the cooling tower exhaust, CDHS/RHB must be notified by written report with 30 days of detection.	On-going	Measurements of main steam Radon 222 used to calculate radon concentrations in the cooling tower exhaust are consistently below California's standard (3.0 pCi/l for indoor radon exposure).
Condition: 2-3	CDHS/RHB	GPC will notify CDHS/RHB and the CEC within 24 hours if levels of Radon-222 exceed 6.0 pCi/l in the cooling tower exhaust. A special report will follow outlining corrective actions taken.	On-going	Measurements of main steam Radon 222 used to calculate radon concentrations in the cooling tower exhaust are consistently below California's standard of 3.0 pCi/l for indoor radon exposure. Confirmation sampling and written special reports to CDHS/RHB have never been necessary.

**2018 Annual Compliance Report to the California Energy Commission
79-AFC-3C Geysers Unit 18 Power Plant**

SECTION 2: PUBLIC HEALTH (continued)

COMPLIANCE PLAN CONDITION	AGENCY	COMPLIANCE TASK	STATUS	TASK IMPLEMENTATION
Condition: 2-5	NSCAPCD CARB CEC	Submit an ambient or participate in developing and implementing a generic program for monitoring ambient baseline concentrations of mercury (vapor and particulate state), arsenic and ammonia at the populated areas of Whispering Pines and Anderson Springs.	On-going	GPC continues to fully participate in the Geysers Air Monitoring Program (GAMP.)
Condition: 2-6	NSCAPCD CEC	Perform steam analysis for ammonia, arsenic, mercury, and boron upon written request by the NSCAPCD.	As requested	GPC conducts steam sampling at the request of the NSCAPCD. NSCAPCD Permits to Operate PTO-79-25A and PTO-79-25B Condition 10 and Rule 455 c requires testing as prescribed by the Control Officer.
Condition: 2-7	NSCAPCD	GPC shall monitor or participate in operational ambient monitoring of pollutants in question in populated areas of Whispering Pines and Anderson Springs during the second year following commercial operation.	On-going	GPC continues to fully participate in the Geyser Air Monitoring Program (GAMP.)

SECTION 4: CULTURAL RESOURCES

COMPLIANCE PLAN CONDITIONS	AGENCY	COMPLIANCE TASK	STATUS	TASK IMPLEMENTATION
Condition: 4-4	CEC	Maintain the existing fence around archeological site CA-SON-793 (Birdsong Meadows).	On-going	New perimeter fencing (approximately 1,100 feet) was installed around site on 4/19/2018.

**2018 Annual Compliance Report to the California Energy Commission
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SECTION 5: BIOLOGICAL RESOURCES

COMPLIANCE PLAN CONDITIONS	AGENCY	COMPLIANCE TASK	STATUS	TASK IMPLEMENTATION
Condition: 5-2	CEC CDF&W	PG&E shall prepare a detailed field implementation and monitoring plan for mitigation measures identified in the Geysers 18 EIR, PG&E's Biology Mitigation Plan, GPC's responses to Biological Data Requests, and the AFC Decision.	Completed	Final Report issued on 4/7/87 and submitted by PG&E

SECTION 6: WATER QUALITY/HYDROLOGY AND WATER RESOURCES

COMPLIANCE PLAN CONDITIONS	AGENCY	COMPLIANCE TASK	STATUS	TASK IMPLEMENTATION
Condition: 6-2	CEC SCBO	At the end of construction activities, PG&E will submit to the CEC and the Sonoma County CBO "as-built" drawings for the spill containment basin signed by a registered civil engineer. GPC and Sonoma County will maintain "as-built" files for the life of the project and guarantee CEC access to these files.	On-going	GPC maintains these "as-built" files. These files are available upon request.
Condition: 6-3	CEC NCRWQCB	Report a spill to the NCRWQCB by telephone within 24 hours and by written report within 2 weeks of spill occurrence.	On-going	GPC's protocol with the NCRWQCB complies with this requirement. GPC notifies the board within 12 hours and follows up with written notification within 10 work days of phone verification.
Condition: 6-3 (continued)	CEC NCRWQCB	The CEC added new revision to Condition 6-3 (continued) on March 12, 2004, which provides the following: The project owner shall provide the Compliance Project Manager with copies of all local and state water quality permits related to the use and disposal of reclaimed municipal wastewater within thirty (30) days of receipt. In the annual compliance reports, the project owner shall provide the CPM with data on the annual quantity of water reinjected at the facility, and a copy of the report submitted to the California Department of Health Services on the additional uses of recycled water per Provision #2 of the December 5, 2003 California Department of Health Services approval letter.	Ongoing	No reclaimed Santa Rosa wastewater was sent to Unit 18 cooling towers during 2018. A copy of GPC's letter GWQ-19-020, dated July 23, 2019 is provided for CPM review. Total water injected within the Unit 18 area in 2018 was 598,863,804 gallons inclusive of Santa Rosa and Lake County (SEGEF) reclaimed wastewater.

**2018 Annual Compliance Report to the California Energy Commission
79-AFC-3C Geysers Unit 18 Power Plant**

SECTION 11: SOLID WASTE MANAGEMENT

COMPLIANCE PLAN CONDITIONS	AGENCY	COMPLIANCE TASK	STATUS	TASK IMPLEMENTATION
Condition: 11-1	DTSC	GPC shall each month submit completed hazardous waste manifests to DTSC in compliance with Section 66475 of Title 22, CCR.	On-going	GPC submits manifests to DTSC on a monthly basis.
Condition: 11-2	CEC DTSC SWMB	Disposal site changes require notification to the CEC, DOHS, and Solid Waste Management Board.	On-going	GPC only uses licensed and permitted disposal facilities. The CEC has acknowledged that in the information can be obtained, upon request, from the Biennial Hazardous Waste Report to the Department of Toxic Substances Control (DTSC) or US EPA. Since CEC certification, the Hazardous Waste Report being submitted to the DTSC has become required by law. Reporting to the CEC regarding selection of waste disposal sites is no longer necessary. Copies of both hazardous waste shipping manifests and reports are maintained at The Geysers, and are available for inspection.
Condition: 11-3	CEC	In the event hazardous wastes including Stretford sulfur effluent are stored on site for more than 90 days, GPC shall obtain either a hazardous waste facility permit from DTSC or a waiver of such permit.	On-going	GPC operates under state and federal regulations as a hazardous waste generator; and does not intend to operate hazardous waste facilities that require a permit.

SECTION 12: SAFETY

COMPLIANCE PLAN CONDITIONS	AGENCY	COMPLIANCE TASK	STATUS	TASK IMPLEMENTATION
Condition: 12-3	CAL\OSHA	The plant shall notify the Siting Department of CAL\OSHA inspections so that they may include this information in their period compliance reports.	On-going	CAL/OSHA conducted no inspections at Unit 18 during 2018.

**2018 Annual Compliance Report to the California Energy Commission
79-AFC-3C Geysers Unit 18 Power Plant**

SECTION 12: SAFETY (continued)

Compliance Plan Conditions	Agency	Compliance Task	Status	Task implementation
Condition: 12-4	Cal\OSHA	<p>GPC shall:</p> <p>a. Post warnings in areas where H2S concentration could possibly exceed CAL\OSHA regulations.</p> <p>b. Require employees to secure entry permits and the approval of the Operating Foreman before entering a restricted area.</p> <p>c. Set area alarms to ring when H2S levels exceed 10 ppm.</p> <p>d. Discontinue work unless approved breathing apparatus is worn.</p> <p>e. Instruct employees about hazards of H2S.</p>	On-going	GPC complies with the task by (a) placing warning signs conspicuously, (b) requiring employees to secure entry permits and the approval of the operating foreman before entering a restricted area, (c) setting alarms to ring when H2S levels equal 10 ppm, (d) including in employee's annual training the instruction to discontinue work unless breathing apparatus is worn, and (e) including in the initial orientation and as needed instruction about the hazards of H2S.
Condition: 12-8	CAL/OSHA	Personnel handling H2S abatement materials shall be provided eye protection, rubber gloves, and rubber aprons. Emergency eye wash and shower stations should be provided adjacent to chemical work stations. Warning labels shall be placed on piping and chemical storage systems.	On-going	All forms of personal protective equipment are furnished by GPC. Emergency eye wash and shower stations are placed in strategic locations. Warning labels are in conspicuous locations. CAL/OSHA Standards Board granted PG&E a permanent variance from Title 8, California Code of Regulations, Section 5162(d) of the General Industry Safety Orders on December 11, 1996 (Variance #96-V-071) regarding the supply of potable water to emergency eyewash and shower installations at the Geysers Power Plant. The variance was granted to GPC on October 21, 1999. GPC adheres to the conditions of the variance.

SECTION 13: TRANSMISSION LINE ENGINEERING--SAFETY AND NUISANCE

COMPLIANCE PLAN CONDITIONS	AGENCY	COMPLIANCE TASK	STATUS	TASK IMPLEMENTATION
Condition: 13-4	CEC Cal/OSHA	PG&E shall note any Cal/OSHA inspections involving the operation of the transmission line in its periodic compliance reports.	On-going	GPC does not own the transmission facilities so cannot comply with this compliance task.

**2018 Annual Compliance Report to the California Energy Commission
79-AFC-3C Geysers Unit 18 Power Plant**

LIST OF ACRONYMS

AFC	Application for Certification
ARB	Air Resources Board
CAL/OSHA	California Occupational Safety and Health Administration
CEC	California Energy Commission
CDF&W	California Department of Fish and Wildlife
CDF	California Department of Forestry
CDHS/RHB	California Department of Health Services Radiological Health Branch
CPM	Compliance Program Manager
CVRWQCB	Central Valley Regional Water Quality Control Board
DTSC	California Department of Toxic Substances Control
EPA	Environmental Protection Agency
GAMP	Geysers Air Monitoring Program
GPC	Geysers Power Company LLC
LCAQMD	Lake County Air Quality Management District
LCBO	Lake County Building Official
PG&E	Pacific Gas and Electric Company
NCRWQCB	North Coast Regional Water Quality Control Board
NSCAPCD	Northern Sonoma County Air Pollution Control District
SCBO	Sonoma County Building Official
UBC	Uniform Building Code

ATTACHMENT 1

CEC Guzzler Inspection Notes
Inspected March 2 and 9, 2019 by Allen Sonnevile

U18

- Fence along Birdsong meadow is OK
- Sedimentation pond on Socrates OK.



- Joe Guzzler (off Pine Flat Rd.) is still not repaired since fire destroyed in 2015. The underground water storage section is Ok, but the corrugated roofing panels used to collect rainwater needs to be rebuilt.



CEC Guzzler Inspection Notes
Inspected March 2 and 9, 2019 by Allen Sonnevile

- Newer guzzler (currently sitting at U18) still needs to be installed near DV11.
- The bridge used to access the sedimentation pond drain on Pine flat road has not been repaired since the 2015 fire.



ATTACHMENT 2



GEYSERS POWER COMPANY, LLC

10350 Socrates Mine Road
Middletown, CA 95461
707.431.6000

GWQ-19-020

July 23, 2019

Janice M. Thomas, P.E.
Drinking Water Field Operations Branch
California Department of Health Services
50 D Street, Suite 200
Santa Rosa, CA 95404

Subject: 2018 Geysers Power Plant Units Recycled Water Use Report

Dear Ms. Thomas:

Use of Santa Rosa Waste Water (SRWW) first began at Unit 17 on July 22, 2004 where it supports cooling tower basin levels by replacing blowdown water at a rate of 400-500 gpm. When tower basin water levels are sufficiently high, SRWW bypasses the tower and enters the onsite sediment pond, where it mixes with condensate then gravity fed to the Unit 11 sediment pond prior to reinjection at the OS-16 well. Tabulated below are various uses of SRWW during 2018.

2018 Total	U17 Tower	U20 Tower	Unit 7/8 Sediment Pond	Aidlin Injection and/or Burner
Million Gallons	83,550,307	122,389,385	377,179,975	112,539,666

Minor amounts of SRWW were used for incidental purposes as identified in Section 3.2 of the Engineering Report. These uses may consist of dust control, construction, fire-fighting and industrial process water. Additionally, SRWW was used for various drilling activities in Sonoma County during 2018. Appropriate signage and labeling was directed by the User Supervisor (Jaime Griep) for these activities.

If you have any questions, please contact me at (707) 431-6097.

Sincerely,

A handwritten signature in blue ink that reads 'William G. King'.

Bill King
Calpine-Geysers EHS