

DOCKETED

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Document Title:	2018 Annual Compliance Report for the Sonoma Power Plant (Unit 3, SMUD GEO 1)
Description:	2018 Annual Compliance Report for the Sonoma Power Plant (Unit 3, SMUD GEO 1) 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-19-061

December 26, 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: **80-AFC-1C** 2018 Annual Compliance Report Geysers Unit 3 (Sonoma) 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 3 (Sonoma, aka SMUD GEO#1).

The California Energy Commission (CEC) established a monitoring program with all compliance verifications initially maintained by the United States Geological Survey (USGS). A Letter of Understanding (LOU) between CEC and USGS with respect to post-licensing duties and responsibilities was established in 1981. On May 24, 2010, USGS requested that the LOU be terminated, effective June 1, 2010. On August 25, 2010, CEC Commission adopted staff's recommendation and approved the USGS request to terminate the LOU.

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

Sincerely,

Bill King
Project Manager, EHS
Calpine Corporation

cc:
Ms. Amanda James
Bureau of Land Management
2550 N. State Street
Ukiah, California 95482

80-AFC-1C

CALIFORNIA ENERGY COMMISSION

FINAL DECISION

CONDITIONS FOR CERTIFICATION

SONOMA POWER PLANT

(Licensed as SMUD GEO 1)

2018 ANNUAL COMPLIANCE REPORT

2018 Annual Report to the California Energy Commission
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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 February 19, 1980, the Sacramento Municipal Utility District filed an Application for Certification (AFC) for SMUDGE0 #1. In order for the AFC to be granted the CEC issued the "Final Decision Document for SMUDGE0 NO. 1" (aka, Sonoma Power Plant). Since July 17, 1998 when SMUD sold this Power Plant, transfer of ownership requires Geysers Power Company LLC (GPC) to be responsible for administering and monitoring various Conditions for Certification as contained in the Final Commission Decision. One of the requirements contained in the CEC's Final Commission Decision for Sonoma Power Plant requires GPC to submit an Annual Report that summarizes compliance tasks conducted during the previous year.

During the purchase of the Sonoma Power Plant, in 1998, GPC's counsel received a letter from Ms. Jeri Zene Scott, CEC Compliance Project Manager, which included a list of "on-going" and "as needed" conditions. GPC has addressed the remaining conditions, based on the "Compliance Plan for the SMUDGE0 No. 1 Geothermal Project."

Only the on-going areas of 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: Four on-going compliance tasks

Public Health: Two on-going compliance tasks

Biological Resources: One on-going compliance tasks

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

Civil Engineering: One on-going task

Solid Waste Management: Three on-going compliance tasks

Transmission Line Engineering, Safety and Nuisance: Three on-going compliance tasks

Noise: One on-going compliance task

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

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SECTION 1 AIR QUALITY

Compliance Plan Condition	Agency	Compliance Task	Status	Task implementation
Condition: 1-1	NSCAPCD CEC CARB	GPCLLC shall summarize in a 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 (GPCLLC) interactions with the NSCAPCD occur during the course of the year as routine submittals and non-routine petitions.

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 Reports 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 2017 to NSCAPCD, 2/27/2018, ref. GPC18-016
- 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).
- 2017 annual request for a statement of compliance verification, 6/5/2018, ref. GPC19-033.

Non-routine Submittals

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

Significant Interactions with the NSCAPCD:

- NSCAPCD conducted a compliance inspection of the facility on 5/1/2018
- NSCAPCD issued a statement of compliance verification for 2017, 1/30/2019.
- No Appeals filed;
- No Variances filed;
- No Notices of Violations were issued

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SECTION 1: AIR QUALITY (continued)

Compliance Plan Condition	Agency	Compliance Task	Status	Task implementation
Condition: 1-2	NSCAPCD CEC	GPC shall provide the CEC with Copies of all reports submitted to the NSCAPCD and Copies of all notices received from NSCAPCD.	On-going	The Annual Compliance Report provides references to reports submitted to NSCAPCD in 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	GPC shall file a copy of the written approval from the NSCAPCD with the CEC prior to beginning construction of any alternative H ₂ S emissions abatement system	As needed	No alternative H ₂ S emissions abatement systems have been proposed.
Condition: 1-8	NSCAPCD CEC	The NSCAPCD shall notify the CEC and CARB if the Log of all Power Plant outages and abatement equipment malfunctions is not properly maintained or access to the log is not provided. NSCAPCD shall also recommend any action which the District has or will take to correct the problem.	On-going	The Quarterly Reports referenced in the Annual compliance report contain a listing of all Power Plant outages and abatement equipment malfunctions. These records are made available to the Districts at all times.

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 all below 0.50 pCi/l.
Condition: 2-8	CEC	GPC shall send the new well steam analysis to CEC within 30 days after sampling.	On-going	No new steam wells have been drilled in 2018.

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SECTION 5: BIOLOGICAL RESOURCES

Compliance Plan Condition	Agency	Compliance Task	Status	Task implementation
Condition: 5-5	BLM	GPC will prepare a decommissioning plan which includes a biological resource element for the power plant a year in advance of decommissioning. GPC will implement the decommissioning plan. A year before the power plant is due to be deactivated; GPC shall submit eight copies of the decommissioning plan to CEC for approval.	On-going	GPC will submit a decommissioning plan one year in advance of decommissioning.

SECTION 6: WATER QUALITY, HYDROLOGY AND WATER RESOURCES

Compliance Plan Condition	Agency	Compliance Task	Status	Task implementation
Condition: 6-2	NCRWQCB	To ensure the integrity of the spill containment and storm water drainage systems, GPC shall maintain those systems and repair them as needed. Annually (July 1) GPC shall file with the CEC, NCRWQCB and BLM a summary of repair or alterations made to the spill containment or storm water drainage systems.	On-going	In 2018 the spill containment berms were checked, yard sumps were cleaned out and pumps were tested and in good working condition.
Condition: 6-5		The CEC added new revision to Condition 6-5 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.	On-going	No Santa Rosa Waste water was used in the cooling towers at the Sonoma Power Plant in 2018. A copy of GPC's letter GWQ-19-020 dated July 23, 2019 is provided for CPM review. Total water injected within the Sonoma Plant area in 2018: 682,640,112 gallons. This value includes recycled Lake County (SEGEP) and Santa Rosa Wastewater (SRGRP) as well as reinjected condensate.

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SECTION 9: CIVIL ENGINEERING

Compliance Plan Condition	Agency	Compliance Task	Status	Task implementation
Condition: 9-4	CAL/OSHA	GPC will prepare and submit for acceptance, a reclamation plan, to the BLM to restore the site to the original condition as nearly as practicable at least six months prior to decommissioning of the facility. Within 60 days after receipt, the BLM shall notify GPC on the acceptability of the reclamation plan	On-going	GPC will submit a reclamation plan at least six months prior to decommissioning of the facility

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SECTION 11: SOLID WASTE MANAGEMENT

Compliance Plan Condition	Agency	Compliance Task	Status	Task implementation
Condition: 11-2	DTSC	<p>The only Stretford process waste is sulfur cake with some entrained process chemicals. GPC shall ensure that the sulfur cake is properly stored in an appropriate container and removed periodically to be sold or disposed at a site approved for such wastes.</p> <p>If a secondary treatment system is used to abate H₂S emissions, the plant may produce additional hazardous wastes. Any sludge which accumulates in the cooling tower will be removed as needed and hauled by a registered hazardous waste hauler to an approved disposal site.</p> <p>GPC shall submit final design plans and "as-built" drawings to the Sonoma County CBO incorporating these design features. In addition GPC shall each month, if waste shipments are made, submit completed hazardous waste manifests to California Department of Toxic Substances Control (DTSC) in compliance with Section 66475 of Title 22, CAC.</p> <p>If a separate solids removal system is added to the condensate or circulating water system, GPC shall submit design plans to CEC and Sonoma County CBO 60 days before start of construction and "as-built" drawings 30 days after completion of construction. Solids removed are subject to the same hazardous waste provisions as Stretford waste and cooling tower sludge.</p>	On-going	<p>Sulfur waste and cooling tower sludge is properly stored and disposed.</p> <p>GPC submits hazardous waste manifests to DTSC on a monthly basis.</p>

**2018 Annual Report to the California Energy Commission
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SECTION 11: SOLID WASTE MANAGEMENT (continued)

Compliance Plan Condition	Agency	Compliance Task	Status	Task implementation
Condition: 11-3	DTSC	GPC shall ensure that any hazardous waste hauler employed has a certificate of registration from DTSC, Hazardous Waste Management Branch. GPC shall require that hazardous wastes are taken to a facility permitted by DTSC to accept such wastes. GPC shall keep a letter on file verifying that hazardous waste haulers have CDHS certificates of registration. In addition GPC shall each month, if waste shipments are made, submit completed hazardous waste manifests to DTSC in compliance with section 66475 and Title 22, CAC.	On-going	GPC only uses DTSC registered waste haulers which is a contract requirement. GPC has certificates of registration on file for 2018. The certificates of registration expire at different times during the year. GPC requests updated copies as required. GPC submits hazardous waste manifests to DTSC on a monthly basis.
Condition: 11-4	DTSC	If hazardous wastes, including Stretford sulfur effluent, are stored on site for more than 60 days, GPC shall obtain a determination from the DTSC that the requirements of a Hazardous Waste Facility Permit have been satisfied. GPC shall notify the CEC if it files an in-lieu application with DTSC for the operation of a hazardous waste facility	On-going	GPC operates under the State and Federal Regulations as a hazardous waste generator. It has not filed, and does not intend to file, an application with DTSC for the operation of a hazardous waste facility.

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SECTION 13: TRANSMISSION LINE ENGINEERING--SAFETY AND NUISANCE

Compliance Plan Condition	Agency	Compliance Task	Status	Task implementation
Condition: 13-2	CEC	<p>SMUD/GPC shall construct, operate, and maintain the transmission lines in accordance with Title 14, California Administrative Code, Sections 1254-1256, and Public Resources Code Sections 4292-4296. Within 30 days after completion of construction, SMUD shall submit a statement from a responsible civil engineer to the California Department of Forestry (CDF), the USGS, and the CEC indicating that the transmission line has been constructed in accordance with applicable requirements.</p> <p>GPC shall also inspect the transmission line annually to ensure that the line maintains required clearances, especially during the fire season. In the event that noncompliance is determined by the CDF, the CDF shall require GPC to take measures necessary to correct the noncompliance. If GPC's corrective measures are unsatisfactory in the opinion of the CDF, the CDF shall inform the CEC and shall recommend a course of action.</p>	On-going	<p>An aerial inspection was completed on April 23, 2018 under contract by Pacific Gas and Electric Transmission Department; and the 2Q and 4Q (Spring and Fall) vegetation inspections were completed on April 11, 2018 by CN Utility Consulting. Vegetation maintenance, as required, is performed in conformance with Public Resource Code 4292 and 4293 and per GPC's FAC-003-4 Vegetation Management Plan. The transmission line inspection report is available for review upon request.</p>
Condition: 13-4	CEC	<p>In the event of complaints regarding induced currents from vehicles, portable objects, large metallic roofs, fences, gutters, or other objects, GPC shall investigate and take all reasonable measures at its own expense to correct the problem for valid complaints provided that the nuisance is being caused by GPC's transmission facility and that (a) the object is located outside the right-of-way, or (b) the object is within the right-of-way and existed prior to right-of-way acquisition. For objects constructed, installed, or otherwise placed within the right-of-way after right-of-way acquisition, GPC shall notify the owner of the object that it should be grounded. In this case, grounding is the responsibility of the property owner. GPC shall advise the property owner of this responsibility in writing prior to signing the right-of way agreement.</p> <p>GPC shall maintain a record of activities related to this paragraph. These records shall be made available to authorized CEC staff upon request.</p>	On-going	<p>GPC has never received any complaints for issues related to this Compliance Condition; and no complaints were received in 2018.</p>

**2018 Annual Report to the California Energy Commission
80-AFC-01C Geysers Sonoma Power Plant**

SECTION 13: TRANSMISSION LINE ENGINEERING--SAFETY AND NUISANCE (continued)

Compliance Plan Condition	Agency	Compliance Task	Status	Task implementation
Condition: 13-7	CEC	GPC shall make every reasonable effort to locate and correct, on a case-by-case basis, all causes of radio and television interference attributed to the transmission line facilities including, if necessary, modifying receivers and furnishing and installing antennas. In addition, GPC shall take reasonable care to prevent the conductors from being scratched or abraded. GPC shall maintain records of complaints and corrective action and shall make these records available to authorized CEC staff upon request.		There were no known complaints of radio or television interference in 2018

SECTION 16: NOISE

Compliance Plan Condition	Agency	Compliance Task	Status	Task implementation
Condition: 16-3	CAL/OSHA	Within 180 days after the start of commercial operation, SMUD shall prepare a noise survey report for the noise-hazardous areas in the facility. The survey results will be used to determine the magnitude of employee exposure. If employee complaints of excessive noise arise during the life of the project, CAL/OSHA, Department of Industrial Relations shall make a compliance determination. SMUD shall notify CAL/OSHA, USGS and the CEC of the availability of the report.	On-going	There were no known employee complaints concerning excessive noise in 2018

LIST OF ACRONYMS

AFC	Application for Certification
ARB	Air Resources Board
BLM	Bureau of Land Management
CAL/OSHA	California Occupational Safety and Health Administration
CEC	California Energy Commission
CDF&G	California Department of Fish and Game
CDF	California Department of Forestry
CDHS/RHB	California Department of Health Services Radiological Health Branch
CPM	Compliance Program Manager
DTSC	California Department of Toxic Substances Control
GAMP	Geysers Air Monitoring Program
GPC	Geysers Power Company LLC
LCAQMD	Lake County Air Quality Management District
LCBO	Lake County Building Official
NCRWQCB	North Coast Regional Water Quality Control Board
NSCAPCD	Northern Sonoma County Air Pollution Control District
SCBO	Sonoma County Building Official
SEGEP	Southeast Geysers Effluent Pipeline Project
SRGRP	Santa Rosa Geysers Recharge Project
SMUD	Sacramento Municipal Utility District
PG&E	Pacific Gas and Electric Company
UBC	Uniform Building Code
USGS	United States Geological Survey

ATTACHMENT 1

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

Sonoma

- The dams have some material collecting in them and many are not draining. (Note, that if solids are ever removed from the dams the amount must be quantified)



ATTACHMENT 2



GEYSERS POWER COMPANY, LLC

10350 Socrates Mine Road
Middleton, 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,


Bill King
Calpine-Geysers EHS