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Project Title:	Compliance - Application for Certification of DWR Bottlerock Geothermal Project
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Document Title:	DATA REQUESTS – SET No 5 – SOIL & WATER RESOURCES
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Filer:	Anwar Ali
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CALIFORNIA ENERGY COMMISSION

CALIFORNIA NATURAL RESOURCES AGENCY

December 12, 2025

Brady Olson
Chief Executive Officer
Open Mountain Energy
3451 N Triumph Blvd STE 201
Lehi, Utah 84043

Data Requests Set No. 5 - Bottle Rock Geothermal Power Plant (79-AFC-04C)

Dear Brady Olson:

The California Energy Commission (CEC) staff is asking for the information specified in the enclosed Data Requests which is necessary for the staff analysis of the Bottle Rock Geothermal Power Plant petition to amend (PTA) (TN # 262318). The Mayacma Geothermal, LLC, proposes to construct and operate a 7.5-megawatt (MW) Binary Geothermal Power Plant within the Bottle Rock Power Plant (BRPP) site.

These Data Requests seek further information in the areas of Project Description and the operational profiles for both the proposed 7.5 MW Binary project as well as the CEC-licensed 55 MW BRPP, based on the information provided in the PTA.

To assist CEC staff in timely completing its environmental review and to meet the requirements of CEQA (see Cal. Code Regs., tit. 14, §§ 15108, 15109), the CEC staff is requesting responses to the data requests within 30 days. If you are unable to provide the information requested or need to revise the timeline, please let me know within 10 days of receipt of this letter.

DATA REQUESTS – SET NO. 5 – SOIL AND WATER RESOURCES
BOTTLE ROCK GEOTHERMAL POWER PLANT (79-AFC-04C)

If you have any questions, please email me at anwar.ali@energy.ca.gov.

Anwar Ali, Ph.D.
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Enclosure: Data Requests - Soil and Water Resource

DATA REQUESTS – SET NO. 5 – SOIL AND WATER RESOURCES
BOTTLE ROCK GEOTHERMAL POWER PLANT (79-AFC-04C)

SOIL and WATER RESOURCES

Author: James Ackerman

Background

In Section 2.3 of the Petition to Amend (PTA) for the Bottle Rock Geothermal Project (BRGP), soil disturbance is quantified as a volume of 500 cubic yards. However, the soil disturbance surface area needs to be estimated to assess impacts to water quality degradation from stormwater runoff, which was not provided in the PTA. Based on PTA figure 2.2-3 and Google Earth, CEC staff estimates that approximately 24,000 square feet of soil will be disturbed.

Data Request

1. Please provide an estimate of anticipated soil disturbance during construction, broken down by amendment component.

Background

Section 2.4 of the PTA states that 67,000 gallons of solution from the Stretford H_2S Abatement System would become wastewater when replaced every 2 years. However, the PTA does not explain how this wastewater stream will be treated or disposed.

Data Request

2. Please explain how the 67,000 gallons of spent Stretford solution produced every two years will be handled.

Background

Section 2.7 of the PTA lists APM Water-1 as a mitigation measure to implement a groundwater monitoring program to continuously measure groundwater elevations in the water supply wells. The monitoring program should also incorporate periodic sampling to assess if groundwater extraction is adversely affecting water chemistry. In addition, no monitoring program was included in the original COCs for the project.

Data Requests

3. Please revise APM Water-1 to include a groundwater sampling plan or discuss why you don't think there is a need for collecting and analyzing groundwater samples to monitor possible changes in water chemistry due to groundwater extraction.

4. Unless you agree that APM Water -1 should be added as a new COC, please explain the reason for your objection.

Background

Two existing onsite water supply wells with a combined yield of 135 GPM would supply water for project operations. Based on aquifer testing described in Appendix F of the PTA, combined yield could be increased to 192 GPM if the pump depth for Well 1 was lowered to 70 feet. However, even with adjusting the Well 1 pump depth, the combined well yield would not be able to provide the operations water demand of 620 acre-feet per year (AFY), and up to four additional are proposed if necessary. CEC staff identified a domestic well (WCR 2001-009509) at 7645 High Valley Road within 0.3 to 0.8 miles of the existing and proposed Bottle rock water supply wells. Additional water supply, domestic and residential spring wells are noted on Figure 5 of the water supply assessment included as Appendix F of the PTA. The impact of the project change to other users relying on the local groundwater resources should be assessed.

Data Requests

5. Please describe any precautions or monitoring measures, in addition to APM Water-1, the project owner would employ to identify adverse effects to local domestic water supply wells and the groundwater resource.

Background

Section 3.11.1, Groundwater Elevation, states that the BRGP lies within the Clear Lake Volcanics Groundwater Sources Area (CLVGWSA). However, according to Figure 2-6 of the Lake County Groundwater Management Plan, the BRGP is located outside of the CLVGWSA and within ultra-mafic and meta-graywacke rocks of the Franciscan Complex (CDMG 1982, DWR 2006).

Data Requests

6. Please correct any references or conclusions within Section 3.11 and Appendix F of the PTA that are based on the location of the BRGP within the CLVGWSA.

Background

Appendix F, WSA, Section 4.1.5, Groundwater Availability, states "*Because fractured aquifer systems are often isolated and have limited lateral connectivity, the risk of groundwater overdraft from the Plant affecting surrounding areas is low*". This statement does not consider that due to the isolated and limited lateral connectivity of fractured rock aquifers, a large user of the groundwater resource

may have a greater impact on other local users competing for the same resource. According to a 2009 PTA, the original operational BRGP water demand was estimated at 180,000 gallons per year, or 0.55 AFY (BRP 2009). The current proposed operational water demand of 620 AFY is over a 1,000-fold increase of the original use of groundwater.

Data Requests

7. Please explain how the local fractured rock aquifer conditions would affect the impact of proposed operational water demand on other local groundwater users.

References

BRP 2009 – Bottle Rock Power, LLC (BRP). Petition to Amend the California Energy Commission Final Decision on Bottle Rock Power Plant (79-AFC-4C). September 30, 2009.

CDMG 1982 – California Division of Mines and Geology (CDMG). Geologic Map of the Santa Rosa Quadrangle, California, 1:250,000. Published 1982. Available online at: https://www.conservation.ca.gov/cgs/Documents/Publications/Regional-Geologic-Maps/RGM_002A/RGM_002A_SantaRosa_1982_Sheet1of5.pdf

DWR 2006 – California Department of Water Resources, Northern District (DWR). Lake County Watershed Protection District, Final Lake County Groundwater Management Plan. Prepared by Camp, Dresser & McGee (CDM), March 31, 2006. Available online at: https://www.lakecountyca.gov/DocumentCenter/View/4503/2006-Lake-County-Groundwater-Management-Plan-PDF