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2020 ANNUAL CALIFORNIA ENERGY COMMISION INTERIM CONDITIONS OF COMPLIANCE REPORT

BOTTLE ROCK POWER, LLC

GEOTHERMAL FACILITY

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LIST OF ATTACHMENTS:

1.0 Introduction

This report presents the 2020 compliance verification results for the Bottle Rock Power, LLC (BRP) geothermal facility located at 7385 High Valley Road in Cobb, California.

The Bottle Rock Power, LLC facility suspended operations on March 31, 2015. Clean Energy Partners, LLC acquired 100% of the equity ownership interest in BRP Holdco, LLC on November 20, 2015, but the actual ownership of the Facility did not change. BRP continued to own the Facility on November 20, 2015 and continues to own it today. Additionally, operational control of the Facility has not changed. BRP contracts for certain select services such as security with a third party, but Baseload Clean Energy Partners, LLC/ Bottle Rock Power, LLC remain responsible for daily compliance with the Interim Conditions of Certification for the non-operational status of the Facility.

This verification is conducted in accordance with the Interim Conditions of Certification summarized in the California Energy Commission (CEC) letter addressed to BCEP on January 28, 2016. In this letter, energy commission staff determined which of the original Conditions of Compliance (COC's) were applicable during BRP's non-operational status. For ease of reference, this Letter is attached as Appendix 1; and the below report re-states the line-item detail of the applicable COC's found in the CEC Decision on the Petition to Amend the Conditions of Certification for the Bottle Rock Geothermal Power Plant, Docket 79-AFC-04C.

2.0 Annual Verification of Interim Conditions of Compliance

COM-1 Unrestricted Access

The project owner shall ensure that Energy Commission staff, and delegated agencies or consultants have unrestricted access to the facility site and the records maintained on-site.

The Bottle Rock Power, LLC geothermal power plant has been off-line since March 2015. There are no longer any employees, and the building is no longer in active use. The facility doors, perimeter fencing, and access road gates are all locked and secured. A caretaker is contracted to periodically visit and inspect the grounds; or accompany any scheduled agency site inspections.

COM-2 Compliance Record

The project owner must maintain copies of all project files and submittals.

Bottle Rock Power, LLC maintains copies of all project files and submittals, in either hard-copy, electronic PDF, or both.

COM-3 Compliance Verification Submittals

The project owner is responsible for the content and delivery of all verification submittals to the Compliance Project Manager (CPM).

The project owner for Bottle Rock Power, LLC acknowledges that they are responsible for the content and delivery of all verification submittals to the CPM.

COM-5 Compliance Matrix

The project owner must submit a compliance matrix to the CPM with each Annual Compliance Report.

A one-year compliance matrix is included with this report in Appendix 1.

COM-6 Monthly Compliance Report/Key Event List

During project initiation, construction or closure the project owner will submit a Monthly Compliance Report.

Bottle Rock Power, LLC recognizes that in the event of re-purposing or closure of the project, Monthly Compliance Reports will be submitted to the CPM during construction or closure activities.

COM-7 Annual Compliance Report

After construction is complete the project owner must submit Annual Compliance Reports instead of Monthly Compliance Reports. Annual Compliance Reports are due for each year of commercial operation and may be required for a specified period after decommissioning to monitor closure compliance.

Bottle Rock Power, LLC recognizes that Annual Compliance Reports are due for each year of commercial operation and may be required for a specified period after decommissioning to monitor closure compliance. Although the Bottle Rock Power, LLC facility was not in commercial operation in 2020; and the intention is to repurpose and not decommission the project, this annual report for 2020 has been prepared for submittal to the CPM.

COM-9 Annual Energy Facility Compliance Fee

Pursuant to the provisions of Section 25806(b) of the Public Resources Code, the project owner is required to pay an annually adjusted compliance fee.

The Annual Energy Facility Compliance Fee of $30,073 was paid by Bottle Rock Power, LLC to the CEC on November 19th, 2020. A copy of this proof of payment is included in Appendix 1.

COM-10 Amendments, Ownership Changes, Staff-Approved Project Modifications, and Verification Changes

The project owner must petition the Energy Commission pursuant to Title 20, California Code of Regulations, section 1769, to modify the design, operation, or performance requirements of the project, or to transfer ownership or operational control of the facility.

Bottle Rock Power, LLC acknowledges this condition.

COM-11 Reporting of Complaints, Notices and Citations

The project owner shall provide posted telephone number, and if not staffed twenty-four hours per day, must include automatic answering. The project owner must respond to all recorded complaints, and notify the CPM of any complaints, official notices, warnings, citations, court orders or fines. Copies of all relevant information must be included in the Annual Compliance Report.

The Bottle Rock Power, LLC facility ceased operations including wellfield steam production in March 2015. Since this time, BRP has maintained a 24-hour accessible cell number that includes automatic answering/recording and is carried by the contracted caretaker. This number is clearly posted on access gate signage. All received calls/messages are forwarded to contracted project managers by the caretaker; and promptly addressed.

Bottle Rock Power, LLC acknowledges CPM notification of any complaints, official notices, warnings, court orders or fines. No complaints were received by BRP during the year of non-operational status in 2020, and no notification to the CPM was required.

COM-12 Emergency Response Site Contingency Plan

Prior to the start of commercial operation, the project owner must submit for CPM review and approval, an Emergency Response Site Contingency Plan.

An Emergency Response Site Contingency Plan had been previously submitted for CPM review prior to the original Bottle Rock Power, LLC start-up in 1983, and re-start-up in 2007.

COM-13 Incident Reporting Requirements

Within 12 hours the project owner must notify the CPM, by telephone and email, of any incident at the power plant that results or could result in emergency reporting to any federal, state, or local agency.

Bottle Rock Power, LLC acknowledges this condition. No incidents occurred during BRP's year of non-operational status in 2020 that required emergency reporting to any Federal, State, or local agency, or CPM notification.

COM-14 Non-Operation

If the facility ceases operation temporarily, either planned or unplanned, for longer than one week, but less than three months, the project owner must notify the CPM.

Bottle Rock Power, LLC provided notification to the CPM of their indefinite length, suspended operations, prior to the stoppage of power production and shutting-in the wellfield on March 31, 2015. Bottle Rock Power, LLC remained in non-operational status in 2020 and intent on re-purposing, not decommissioning the project.

COM-15 Closure Planning

To ensure that a facility's closure and long-term maintenance do not pose a threat to public health and safety or to environmental quality, the project owner must coordinate with the Energy Commission to plan and prepare for eventual permanent closure.

A Closure Plan generated by Dames & Moore in 1996 for Bottle Rock Power, LLC is on file with the CEC. Additionally, decommissioning tasks and cost estimates were updated and submitted for CEC review in 2013.

COM-16 Closure Financial Assurances

A. Financial Surety Mechanism: Surety Bond

The project owner must provide financial assurances to the Energy Commission, guaranteeing adequate and readily available funds to finance interim operation, and facility closure, as needed. The financial assurances shall be in the form of an irrevocable closure surety bond and standby trust fund. The standby trust fund shall have as its Beneficiary the California State Energy Resources Conservation and Development Commission. Alternatively, a trust account, letter of credit, restricted bank account or other mechanism may be used if the mechanism and its provisions, including the institution involved, are approved by the CPM as providing an equivalent level of financial assurance.

The required level of financial assurance was set at $1,341,500 by CEC staff in December 2013, to be escalated 5% over 5-Years for contingency, as follows:

2014	$1,341,500
2015	$1,408,575
2016	$1,475,650
2017	$1,542,725
2018	$1,609,800
2019–On	$1,676,875 (no further contingency escalation).

The level of financial assurance required for 2016 was held by bond but was not updated for 2020.

AQ 1-1

The project owner shall summarize in an annual compliance report any interactions with the LCAQMD. The project owner shall immediately inform the CEC CPM and APB in writing of any formal appeals filed with the LCAQMD.

BRP maintained their on-going working relationship with the LCAQMD throughout the year. BRP continued to comply with the conditions delineated on each Authority to Construct (ATC) or Permit to Operate (P/O). An Annual Throughput report was completed, and fees paid to renew the project's PTO's and ATC's for the 2020 year; and the Quarterly Air Quality Reports were submitted. Copies of the Renewed Air Permits are contained in Appendix 2.

AQ 1-6

The project owner shall furnish proof of installation and maintenance of the meteorological station and submission of the data there from in a form acceptable to the LCAQMD. The submittals shall be noted in periodic compliance reports filed with the CEC CPM.

Bottle Rock Power, LLC operated and maintained an onsite meteorological station, and data was available to LCAQMD, as requested.

AQ 1-7

The project owner shall submit in the Annual Compliance Report a statement describing project owner's participation in GAMP.

During 2020, Bottle Rock Power, LLC attended GAMP quarterly meetings via contracted representative. GAMP VI Year 17 (2020) Cost Share was invoiced for $11,628, and paid November 19th, 2020. Receipt for payment of this amount is included in Appendix 2.

AQ 1-8

The project owner shall submit in the Annual Compliance Report to the CEC CPM appropriate confirmation from the LCAQMD that all ATC's and PTO's are current and active under the Terms and Conditions of LCAQMD Rules and Regulations. The project owner shall also include in this report a statement identifying any complaints and actions of resolution for air quality for the Bottle Rock facility.

Bottle Rock Power, LLC complied with all Authority to Construct (ATC) and Permit to Operate (PTO) conditions, in accordance with LCAQMD rules and regulations. Annual throughput calculations and report were submitted to LCAQMD, and fees paid to renew the project's PTO's and ATC's for the 2020 year (Appendix 2). No nuisance odor complaints, or actions of resolution for air quality were received in 2020.

AQ AC21-5, AC22-4, AC24-6, AC25-6, AC26-6

The operator shall provide safe access for representatives of the District, ARB, or EPA to inspect, review records, or collect samples as approved by the APCO, from this facility. Should the plant be secured by locks or gates, the District shall be provided keys, combinations or other means to gain immediate access for purpose of testing or inspection.

The Bottle Rock Power, LLC geothermal power plant has been off-line since March 31, 2015. There are no longer any employees, and the building is no longer in active use. The facility doors,

perimeter fencing, and access road gates are all locked and secured. A caretaker is contracted to periodically visit and inspect the grounds; or accompany any scheduled or requested agency site inspection. The cell number to reach the contracted caretaker is clearly posted on the facility access gates. Additionally, this phone number was provided to LCAQMD to provide communication with the Caretaker for site access to maintain the District's ambient air quality monitoring stations located on the project grounds.

CR4-5

Project owner shall ensure that the existing fence on the north side of site CA-LAK-609 is maintained. A statement verifying compliance shall be provided in each Annual Compliance Report filed with the CEC CPM.

Bottle Rock Power, LLC, inspected the fence on the north side of site CA-LAK-609. Bottle Rock Power, LLC also inspected the border fencing for an archeological site located on the Binkley Leasehold. The fence in the archeological site was found in good condition, but the one in the northeast area was not in good condition in some places and will need repair. The combination of COVID Restrictions and the influx of PG&E vegetation clearing contractors on and near the area in question prevented repair work from going forward in 2020. This work will be prioritized during the period of May to June 2021.

Fence surrounding the west corner of archeological site.

Fence on the north side of site CA-LAK-609

BR 5-1f & 5-3h

Annually, the project owner shall inspect all previously disturbed areas for soil erosion impacts and shall take corrective action whenever necessary. The project owner shall submit to the CEC CPM in the Annual Compliance Report the results of the monitoring and an explanation that verifies compliance with this condition.

No earth moving activities were performed in 2020, but Bottle Rock Power, LLC recognizes that such activities are restricted to the dry months (April to October).

In 2020 BRP completed drainage inspections on the access road to the West Coleman pad. The lack of significant rainwater on the slopes and roads this season has resulted in no change in the condition of the slopes from last season. Drains along the roads are clear except for light leaf

connection. Lack of water may determine whether seeding and vegetation on slopes and near pads will survive to next fall winter.

High Valley Road Photos of roads appear as they did the prior year (2019). No additional work was performed in 2020, BRP will continue monitoring for changes.

Lower re-seeded section of High Valley Road

Middle re-seeded section of High Valley Road

Upper re-seeded section of High Valley Road

West Coleman Road: Photos of roads appear as they did the prior year (2019). Drainage ditches, energy dispersers, culverts, inlets, outlets, and diversions were inspected, and the road surface was clear. No further work was indicated or performed for 2020.

Area around West Coleman Road

The Francisco Spoils Pile and Steam field yard sedimentation areas: Photos appear as they did the prior year (2019). Inspections indicated that the hydro-seeding was successful, completely covered with new growth; basin controls (inlets, outlets, diversions, weirs, spillways) were in good working order. No additional work was performed in 2020.

Area around Francisco Spoils

Re-Injection line: Photos of roads appear as they did the prior year (2019). Additional anchoring supports installed in 2014 continued to prevent the line from expanding into the access road and stabilized the line on the roadway crossing Cow Creek. Work was performed in 2020 to stabilize the white injection line, clear the under-road culvert and add additional riprap to streambed.

Injection Line Area

BR 5-2

One year prior to power plant deactivation, the project owner shall include in the decommissioning plan a biological resources element identifying mitigation measures. The project owner shall submit the biological resources element of the decommissioning plan in consultation with CDFG of adequacy ad acceptability.

Bottle Rock Power, LLC remained in non-operational status in 2020 and intent is to re-purpose, not decommission, the project. However, BRP recognizes that one-year prior to closure of the project, BRP will include a biological resources element in the decommissioning plan.

BR 5-3a

The project owner shall include the results and a discussion of the year's required monitoring (visual inspections; soil/needle tissue boron analysis) in the Annual Compliance Report.

Bottle Rock Power, LLC continued monitoring vegetation in the project area in 2020. Needle and understory soil samples were collected and analyzed for boron concentration. Samples were collected of both canopy needles. BRP monitors the same trees each year, and locations are shown in Figure 1, Appendix 3. Analytical results are presented in Table 1, Appendix 3. Associated Laboratory reports are presented in Appendix 3.

Coleman Pad and surrounding area

There were no significant changes in tree health from 2019 to 2020, so photos of trees appear the same as they did in the prior year. Since inter-pad access roads (asphalt and dirt) are not utilized as they were during operations, there are no emissions in the area to impact the adjacent vegetation. At the Coleman Pad and surrounding area, the trees in the area were in good health with new needle growth. Smaller trees in more sun-exposed slopes still exhibit some drought stress, indicated by reduced needle length and reduced needle density. The monitored trees were healthy, with no needle browning appreciated. Normal lower canopy, shaded understory needle and branch

Tree A- 2

Tree A- 1

shedding has continued on A-1, and this medium-sized tree no longer had any accessible branches for needle collection and analysis.

West Coleman Road

There were no significant changes in tree health from 2019 to 2020, so photos of trees appear the same as they did in the prior year. Since inter-pad access roads (asphalt and dirt) are not utilized as they were during operations, there are no emissions in the area to impact the adjacent vegetation. At the West Coleman Pad and surrounding area, the trees were in good health with new needle growth. Smaller trees in more sun-exposed slopes still exhibit drought stress, as indicated by reduced needle length and reduced needle density. The monitored trees varied in drought-related health. Trees designated as B-1 and B-22 are younger trees, showing some light needle browning at the tips of their needles. The tree designated as B-3 is a mature tree with no needle browning noted.

Tree B- 1

Tree B- 2

Tree B- 3

Access Road

There were no significant changes in tree health from 2019 to 2020, so photos of trees appear the same as they did in the prior year. Since inter-pad access roads (asphalt and dirt) are not utilized as they were during operations, there are no emissions in the area to impact the adjacent vegetation. Inter-pad access road and surrounding area, these are relatively young trees. No needle browning was noted. Both trees appear to have marginal vigor. Smaller trees in more sun-exposed slopes exhibit more drought stress, as indicated by reduced needle length and reduced needle density. Normal lower canopy, shaded understory needle and branch shedding has continued.

Tree C-1

Tree C-2

North of Plant fence line

There were no significant changes in tree health from 2019 to 2020, so photos of trees appear the same as they did in the prior year. Since inter-pad access roads (asphalt and dirt) are not utilized as they were during operations, there are no emissions in the area to impact the adjacent vegetation. Near the main plant and surrounding area, the trees in the area are overall in good health. Smaller trees in more sun-exposed slopes exhibit drought stress, as indicated from reduced needle length, reduced needle density, and some needle tip burning. D-1 and D-2 on the uppermost slope with

greatest sun exposure, are fairly young trees. No needle browning was noted. The tallest tree (D-3, > 10 meters) downslope on more shaded, level ground exhibited good new needle growth. Normal lower canopy, shaded understory needle and branch shedding has continued on D-3, and this large tree did not have any accessible branches for needle collection. Photo was taken of adjacent tree to show healthy needle growth in this immediate area.

Tree D-1

Tree D-2

Tree D-3

BR 5-3b

The project owner shall include the results and a discussion of the year's required monitoring (surface water sampling and analysis) in the Annual Compliance Report.

Regional surface water quality was monitored through the quarterly sampling of the following locations: Kelsey Creek near Kelseyville (SW-6), Kelsey Creek above High Valley Road (SW-7), High Valley Creek above Kelsey Creek (SW-8), Adler Creek above Glenbrook (SW-9), and Kelsey Creek above Glenbrook (SW-10). Water monitoring locations are shown in Figure 2, Appendix 3.

Sampling procedures were consistent with EPA ground surface water sampling protocols. Data collected and analyzed include physical water quality parameters, selected major/minor element concentrations, dissolved metals concentrations and coliform bacteria. Samples were collected in reagent prepared containers provided by analytical laboratories Analytical Sciences of Petaluma and Alpha Analytical Laboratories, also of Petaluma. These included two, one-liter Nalgene for cations and anions; two, 250 ml Nalgene for total coliform and turbidity; and a 100 ml glass vial for dissolved oxygen. Date and time were recorded with each sample collection. Samples were labeled in the field and placed in an ice chest for transportation to the laboratory along with the proper chain of custody documentation.

Surface water monitoring analytical results for 2020 are summarized in Table 2 in Appendix 3. Laboratory reports are presented in Appendix 3.

BR 5-3c

The project owner shall include the results and a discussion of the year's required monitoring (groundwater sampling and analysis) in the Annual Compliance Report.

Regional groundwater quality was monitored through the quarterly sampling of the following locations: Barrett Spring (GW-1) and Francisco Well (GW-3). Figure 1 shows all groundwater and surface water sampling locations. Sampling of Union Spring (GW-2) has not been conducted in many years due to unsafe access and large amounts of poison oak in the area. Access to Coleman Well (GW-4) and Wright Spring (GW-5) was not available in 2020 due to closed and posted gate. Additionally, sites GW-2 and GW-5 are located on leases managed by the Calpine Corporation and access is restricted.

Sampling procedures were consistent with EPA ground surface water sampling protocols. Data collected and analyzed include physical water quality parameters, selected major/minor element concentrations, dissolved metals concentrations and coliform bacteria. Samples were collected in reagent prepared containers provided by analytical laboratories Analytical Sciences of Petaluma and Alpha Analytical Laboratories, also of Petaluma. These included two, one-liter Nalgene for cations and anions; and one, 250 ml Nalgene for turbidity. Date and time were recorded with each sample collection. Samples were labeled in the field and placed in an ice chest for transportation to the laboratory along with the proper chain of custody documentation.

Groundwater monitoring analytical results for 2020 are summarized in Table 2 in Appendix 3. Laboratory reports are presented in Appendix 3.

BR 5-3d

The project owner shall include the results and a discussion of the year's required monitoring (biennial wildlife) in the Annual Compliance Report.

Since 1984, Bottle Rock Power, LLC has monitored wildlife use of the guzzlers and nesting boxes installed as part of the original construction mitigation plan. After over thirty years, the disturbance incurred during original construction has long since passed, and the wildlife prefer to utilize the natural environment rather than the man-made boxes and water sources. In 2020, a more thorough evaluation was performed by Synthesis Planning, Novato, CA. This report is contained in Appendix 3.

BR 5-3i

The Annual Compliance Report will collate and summarize all monitoring results including methodologies used to satisfy conditions 5-3a – 5-3h.

Methodologies used to satisfy conditions 5-3a – 5-3d are detailed in each respective section of this Annual Report.

The monitoring results for Soil/Needle Tissue Boron analysis are shown in Table 1, Appendix 3.

The monitoring results for Surface Water analysis are shown in Table 3, Appendix 3.

The monitoring results for Groundwater analysis are shown in Table 3, Appendix 3.

BR 5-3j

The project owner in consultation with CEC CPM will take action to correct any specific mitigation measure or monitoring program is determined to be ineffective, or if the CEC CPM receives any submittal, complaints, or other information from the project owner, other agencies, or the public, that indicates one or more significant impacts are occurring on the leasehold subject to CEC jurisdiction.

Bottle Rock Power, LLC acknowledges this condition.

WR 6-1

Project owner shall, during any period of suspension, utilize no new surface water as the source for any maintenance or other necessary activity without first notifying and obtaining the required authorization from the appropriate federal, state, county or local agencies.

Bottle Rock Power, LLC acknowledges this condition.

WR 6-2

Project owner shall maintain on file the Spill Contingency and Containment Plan (SCCP) originally required by the CVRWQCB.

Bottle Rock Power, LLC maintains and updates as needed their Spill Prevention Countermeasure Control Plan. The plan was updated in 2020. A copy of this plan is available upon request.

WR 6-3

Project owner shall submit annually to the CVRWQCB and to the CEC CPM, via the Annual Compliance Report, a record of maintenance and corrective measures to the spill containment system.

There are five (5) storm water collection sumps located within the BRP facility yard. These sumps flow into the cooling tower overflow pits, and gravity drain into the Coleman Pad injection well. BRP contractors conduct inspections during and after stormwater events to ensure the system is operating correctly. All pumps were serviced in 2020, including periodic use of portable electric sump pumps and cleaning of injection well and cooling tower filter screens. In addition to the operating pumps BRPP acquired two spare pumps (new) and a stand-by generator to provide power in 2020. PG&E initiated many power outages for line repairs as well as for declared line safety events which required the need for the standby power unit. In an effort to maximize stormwater collection and retention from the main plant yard, the upper cooling tower weir was removed in 2018. This allowed the level of the cooling tower basin that could gravity drain to the injection well to be lowered an additional 3 feet, adding significant stormwater collection capacity during rainfall events.

WR 6-4

Project owner shall submit annually to the CVRWQCB and to the CEC CPM, via the Annual Compliance Report, a record of maintenance and corrective measures to the waste water disposal system.

In 2020, the Bottle Rock Power, LLC facility was not operating. Consequently, the domestic water waste disposal system did not receive much use or require any maintenance.

WR 6-5

Project owner shall maintain quarterly records of the volume of water pumped from the on-site supply well.

Bottle Rock Power, LLC maintained records in 2020 of monthly water pumpage from domestic wells #1 and #2.

WR 6-6

Project owner shall submit annually to the CEC CPM a record of maintenance and operation of the drainage sump pump discharge to the injection wells(s).

There are five (5) storm water collection sumps located within the BRP facility yard. These sumps flow into the cooling tower overflow pits, and gravity drain into the Coleman Pad injection well. BRP contractors conduct inspections during and after stormwater events to ensure the system is operating correctly. During 2019 and into 2020, BRP modified and secured the operation of the injection well at the Coleman Pad. New piping was installed, and updated controls and control panel were added, which provide remote surveillance of pump and line status. In an effort to maximize stormwater collection and retention from the main plant yard, the upper cooling tower weir was removed in 2018. This allowed the level of the cooling tower basin that could gravity drain to the injection well to be lowered an additional 3 feet, adding significant stormwater collection capacity during rainfall events.

S 8-4

At least six months prior to scheduled decommissioning, the project owner shall submit site restoration plans to the CEC CPM for review and approval.

Bottle Rock Power, LLC remained in non-operational status in 2020 and intent on re-purposing, not decommissioning the project. However, BRP recognizes that six months prior to scheduled decommissioning, BRP will submit site restoration plans to the CEC CPM.

CE 9-5

At least six months prior to scheduled decommissioning, the project owner shall submit its site reclamation plan to the CEC CPM for review and approval.

Bottle Rock Power, LLC remained in non-operational status in 2020 and intent on re-purposing, not decommissioning the project. However, BRP recognizes that six months prior to scheduled decommissioning, BRP will submit site reclamation plan to the CEC CPM.

SWM 11-7

The project owner shall notify the CEC CPM in writing within 10 days of becoming aware of an impending (waste management -related) enforcement action.

Bottle Rock Power, LLC acknowledges this condition.

SWM 11-8

The project shall include the results of sludge testing in a report provided to the CEC CPM.

In 2020, the Bottle Rock Power, LLC facility was not operating. Consequently, the cooling tower was not in use for heat rejection from power generation or condensation of produced steam. The cooling tower was cleaned in 2015, but no sludge removal and disposal were performed in 2020.

S 12-8

Project owner shall notify the CEC CPM of any changes to the approved accident prevention program and provide verification of California Occupational Safety and Health Administration (Cal/OSHA) approval of said changes.

Bottle Rock Power, LLC acknowledges this condition.

S 12-9

During any suspension, the project owner shall notify the CEC CPM in writing in the event of a violation that could involve DOSHA action, and the necessary corrective action.

Bottle Rock Power, LLC acknowledges this condition.

S 12-10

Within 90 days of suspending operations, the project owner shall submit the following to the CEC CPM: (1) a list of all hazardous chemicals and the quantities that are to remain on site during any suspension, and (2) the signature of the responsible Plant Manger certifying compliance with this condition.

In 2016 an updated Hazardous Materials Inventory list was provided to the CPM. Additionally, in 2020 the Hazardous Materials Inventory list was updated and filed with Lake County CUPA.

TS&N 13-2

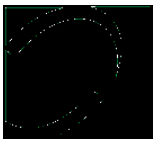
The project owner shall also inspect the transmission line annually to ensure that the line maintains required clearances especially during the fire season. In the event that noncompliance is determined by the CDF, the CDF shall require the project owner to take measures necessary to correct the noncompliance.

PG&E performed several inspections during 2020 and cleared transmission inter-connections lines utilized by Bottle Rock Power, LLC as needed. PG&E has provided vegetation clearance up to the plant fence line. BRP has maintained a clear and clean Switchyard.

N 16-1

Project owner shall comply with Lake County's noise ordinance, which is 55 dBA Ld and 45 dBA Ln at any point beyond the property line of the source.

Bottle Rock Power, LLC was not operating in 2020. No noise complaints were received in 2020.



2020 CEC ANNUAL COMPLIANCE REPORT

BOTTLE ROCK POWER

Appendix 1

Interim Conditions of Compliance

Compliance Matrix

Annual Energy Facility Compliance Fee – Proof of Payment

2016 Summary of BRP's Interim Conditions of Certification

COC #	COC Summary: Compliance	Comments
COM-1	Unrestricted Site Access	Staff has reviewed all BRP Compliance COCs and recommends that these COCs are required during BRP's non-operational status.
COM-2	Ongoing Compliance Records	
COM-3	Compliance Verification Submittals	
COM-5	Compliance Matrix	
COM-6	Monthly Compliance Reporting and Key Event List	
COM-7	Annual Compliance Reporting	
COM-9	Annual Energy Compliance Fee	
COM-10	Amendments, Ownership Changes, Staff Approved Project Modifications and Verification Changes	COM-10 notification requirements are also required and remain applicable during BRP's non-operational status.
COM-11	Compliant, Notice and Citation Reporting	Staff has reviewed all BRP Compliance COCs and recommends that these COCs are required during BRP's non-operational status.
COM-12	Emergency Response Site Contingency Plan	
COM-13	Incident Reporting Requirements	
COM-14	Non-Operation Requirements	COM-14 Executive Director oversight for suspension/closure determinations are required during BRP's non-operational status.
COM-15	Closure Planning Requirements	Staff has reviewed all BRP Compliance COCs and recommends that these COCs are required during BRP's non-operational status.
COM-16	Closure Financial Assurances	
COC #	**COC Summary: Air Quality (AQ)**	**Comments**
AQ 1-1	The Lake County Air Quality Management District (LCAQMD) shall perform all duties and functions normally conducted by the APCD District and shall have authority to issue a Permit to Operate…	Maintenance activities are required and permitted equipment (such as the emergency engine) may operate during the interim period, therefore staff recommends retaining these COCs to ensure current or future plant activity during non-operation is properly regulated. With compliance of these AQ COCs the project remains in compliance with all
AQ 1-6	Operate/maintain on-site meteorological station	
AQ 1-7	Geysers' Air Monitoring Program (GAMP) participation	
AQ 1-8	Maintain all Authorities to Construct (ATCs) and Permits to Operate	

	(PTOs)	applicable laws, ordinances, regulations, and standards (LORS) and ensures no significant direct or cumulative impact to the environment will occur.
AC21-5 AC22-4 AC24-6 AC25-6 AC26-6	Maintain immediate and safe facility access for regulatory agency inspection, record review, sampling and testing.	Staff has reviewed all BRP AQ COCs and recommends that these COCs are required during BRP's non-operational status.
COC #	**COC Summary: Cultural Resources**	**Comments**
4-5	Existing fence maintenance	Staff has reviewed all BRP Cultural Resource COCs and recommends that this COC is required during BRP's non-operational status.
COC #	**COC Summary: Biological Resources**	**Comments**
5-1f	Annual Erosion Control Report	Staff has reviewed all BRP Biological Resource COCs and recommends that these COCs are required during BRP's non-operational status.
5-2	Decommissioning Plan	
5-3a	Boron Drift/Leaf Tissue Monitoring	
5-3b	Surface Water Sampling	
5-3c	Groundwater Sampling	
5-3d	Nest box and Wildlife Water Basin Maintenance	
5-3h	Erosion Monitoring	
5-3i	Biological Resources Mitigation and Monitoring Status Report	
5-3j	Ineffective Mitigation Determination and Response	

COC #	COC Summary: Water Resources	Comments
6-1	Notification of New Surface Water Utilization	Staff has reviewed all BRP Water Resource COCs and recommends that these COCs are required during BRP's non-operational status.
6-2	Spill Contingency and Containment Plan	
6-3	Impermeable spill collection-containment system	
6-4	Domestic Waste Water and Control Systems Maintenance	
6-5	Quarterly recordation of onsite well water pumping volume	
6-6	Storm water discharge	
COC #	**COC Summary: Soils**	**Comments**
8-4	Decommissioning Site Restoration Plan	Staff has reviewed all BRP Soil COCs and recommends that this COC is required during BRP's non-operational status.
COC #	**COC Summary: Civil Engineering**	**Comments**
9-5	Site Reclamation Plan	Staff has reviewed all BRP Civil Engineering COCs and recommends that this COC is required during BRP's non-operational status.
COC #	**COC Summary: Solid Waste Management**	**Comments**
11-7	Impending Waste Management-related Enforcement Action Notification	Staff has reviewed all BRP Solid Waste Management COCs and approves Calpine's recommendation that these COCs are required during BRP's non-operational status.
11-8	Cooling Tower Sludge Testing and Reporting	

COC #	**COC Summary: Safety**	**Comments**
12-8	Accident Prevention Program Compliance	Staff has reviewed all BRP Safety COCs and approves Calpine's recommendation that these COCs are required during BRP's non-operational status.
12-9	California Department of Occupational Safety and health Administration (Cal/DOSHA) on-site safety inspections	
12-10	Non-essential chemicals, solvents and lubricant removal	
COC #	**COC Summary: Transmission Line Safety & Nuisance (TLSN)**	**Comments**
13-2	Transmission line code maintenance	Staff has reviewed all BRP TLSN COCs and recommends that this COC is required during BRP's non-operational status.
COC #	**COC Summary: Noise**	**Comments**
16-1	Compliance with Lake County's noise ordinance compliance and complaint investigation	Staff has reviewed all BRP Noise COCs and recommends that this COC is required during BRP's non-operational status.

BRP 2020 Compliance Snapshot

	Due Date											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Lake County Air Quality Management District												
Annual Throughput Report										31		
ATC & PTO Renewal										31		
Quarterly Power Plant Report		15				30			30		30	
Serpentine Dust Control Plan Update											30	
GAMP Meeting			X			X			X			X
California Air Resources Board (CARB)												
Greenhouse Gas Emissions Report (GHGRP)				10								
DOORS Report (Diesel Fleet Emissions - ROAR)			1									
SF6 Facility Report			30									
California Geologic Energy Management Division (CalGEM)- ex CDGGR												
Production Report	31	28	31	30	31	30	31	31	30	31	30	31
Injection Well MIT (2-Year)(2020)											*15*	
Annual Well Assessment			31					15				
Central Valley Regional Water Quality Control Board												
Semi-Annual Injectate Report	X						X					
Annual Injectate Sampling												X
Lake County Community Development												
Emergency Response Contingency Plan Update **(Internal Doc)**	15						15					
Lake County Environmental Health												
Site Inspection (3-Year)(2020)						X						
AB2185 Hazardous Materials Business Plan - Chemical Inventory Update						30						31
CAL FIRE Hazardous Materials Storage Update & Permit Renewal						30						
Lake County Unified Hazardous Materials/Waste Permit Renewal	31											
CA BOE Hazardous Waste Generation Annual Final-Fee		28										
CA BOE Occupational Lead Poisoning Prevention Fee		28										
CA BOE Waste Manifest Verification & Annual Pre-Payment								31				
Hazardous Waste Management Plan (4-Y)												
California Energy Commission												
Annual Compliance Report				X								
Energy Facility Compliance Annual Fee						30						
1304 Generation & Sales Report	31			30			31			31		
Vegetational Sampling				X								
Soil Sampling											X	
Erosion Control Inspection				X						X		
Avian & Biological Survey (2-Year)(2020)				X	X	X	X	X	X			
Cooling Tower Bacteria Sampling (Legionella - When Operating)						*X*						*X*
SW & GW Sampling	X			X			X			X		
Department of Energy												
EIA 860 Report		28										
EIA 906 Report	NA											
EIA 923 Report			25									
DOSH												
Pressure Vessel & Propane Tank Permit Renewal (2021)											*26*	
Elevator Inspection & Permit Renewal (Taken out of Service 2017)										*19*		
FCC												
Radio License Renewal (10-Year)(2026)			*14*									
OSHA												
300 Recordable Incident Log (When Operating)	*31*											
Bridge Crane Load Test (Before Use)										*30*		
CAISO												
Generator Model Data (if applicable)				29								
CALFIRE												
Wildland Fire Operating Plan (reviewed annually or as needed)				30								

Print

Check Number	48528131	**Amount**	USD 30,073.00
Cleared Date	12/08/20	**Pay To**	California Energy Commission

Bills Paid With This Check

Invoice #	Due Date	Amount	Payment Amount
2983	06/09/20	USD 30,073.00	USD 30,073.00

Page 1

Remittance Info: Inv #2983

Bottle Rock Power LLC
4010 Stone Way N
Suite 400
Seattle, WA 98103
2062850883

41483

JPMorgan Chase Bank, N.A.
Verify 888-237-9615
90-7162/3222

0048528131

11/19/2020

PAY TO THE ORDER OF CALIFORNIA ENERGY COMMISSION

$ 30073 00

Thirty Thousand Soventy-Three and 00/100 DOLLARS

0023325 01 AB 0 416 **AUTO T1 2 5232 95814-551216 -C11-P23348-I

VOID AFTER 90 DAYS

CALIFORNIA ENERGY COMMISSION
CALIFORNIA ENERGY COMMISSION
ACCOUNTING OFFICE
1516 NINTH STREET, MS 2
SACRAMENTO, CA 95814-5512

MP

⑈0048528131⑈ ⑆322271627⑆ 215376176⑈

Page 2

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U.S. Bank

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MP

THE SECURITY FEATURES ON THIS DOCUMENT INCLUDE A MICRO PRINT SIGNATURE LINE AND SECURITY SCREEN. ALTERATION FEATURES MAY INDICATE ALTERATION

Appendix 2

Current Year LCAQMD Authorities to Construct and Permits to Operate

GAMP Participation – Proof of Payment

PERMIT TO OPERATE

Permit # P/O 2010-09

Lake County Air Quality Management District

2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas G. Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* VIb

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact: Ms. Alice Bray
Owner: Bottle Rock Power, LLC
Mailing Address: 4010 Stone Way N, Suite 400
Seattle, WA 98103

Facility: Bottle Rock Power Plant
Location: 7557 High Valley Rd., Cobb, CA.
Sec 5, T11N, R8W, MDB&M Lake County
Francisco/Coleman Leasehold

Name and Equipment Description: **Bottle Rock Power Plant**

One (1) fifty-five (55) megawatt geothermal power plant with abatement equipment installed and operated as described in conditions attached to the Modified Determination of Compliance dated February 22, 1982. Two (2) mechanical vacuum pumps of 50% capacity to the surface condenser non-condensable gas removal systems. Equipment piping and valves on AECS for Stretford Delay Tank skimmer pipe and Oxidizer Tank air spargers. Up to two (2) mercury scrubbing/absorption columns vessels with activated carbon media, associated piping and valves. Condensate H2S abatement system (pumps, piping, & valving) including condensate line reroute valving and piping to cooling tower basin; a condensate sparging system in the cooling tower basin; position and/or orientation changes of the distribution header to increase contact time and efficiency, and use of Iron Chelate (Fe•HEDTA) catalyst. Distributed Control System, incorporating a central control system for the steamfield, power plant, and abatement systems with an Allen Bradley Control Logix automated processor.

Permit Conditions

Condition 1: Emissions
A. The emissions limitations contained below shall apply during normal power plant operation, outages, and/or curtailments. All equipment shall be regularly maintained in good working order and operated in a manner to prevent or minimize air emissions.
B. Hydrogen sulfide (H2S) emissions from the Bottle Rock Power Plant shall be limited to a maximum of five (5) pounds per hour during power plant generation and all outages. All untreated steam or condensate shall be returned to a treatment or re-injection point to ensure this level of emissions is maintained.
C. The H2S content in the sweet gas from the Stretford shall not exceed 10ppmv, prior to dilution in the cooling tower.
D. The H2S concentration from the gland Steam Seal System vent shall not exceed 250 ppmw, and the H2S emission rate shall not exceed 0.1 lbs/hr.
E. Upon failure of the AECS, Bottle Rock Power, LLC (BRP) shall curtail operations to a level necessary to comply with the five (5) lbs/hr H2S emissions limitation.
F. In the event of generalized atmospheric conditions or localized dangerous contamination of such a nature as to constitute an emergency creating a danger to the health and welfare of the citizens of Lake County, the Air Pollution Control Officer (APCO) will take immediate action by requiring BRP to reduce H2S or other emissions, or to discontinue emissions entirely.
G. The off-gas vent to the atmosphere shall not be utilized at any time. The turbine by-pass, mechanical vacuum pumps, or other Lake County Air Quality Management District (LCAQMD) approved method shall be used to avoid direct venting into the atmosphere of undiluted non-condensables. The LCAQMD shall be notified when cold start-ups in excess of five (5) lbs H2S/hr are to occur and may cancel such activity if deemed necessary.
H. The access road from Bottle Rock Road to the power plant shall be paved to ensure that the generation of fugitive particulate matter is minimized. This shall apply to the primary access roads, should the primary access routes change.
I. The permit holder shall properly install and maintain a properly sized, winterized condensate (cooling tower working water, condensate reroute valving and piping) H2S abatement system modification incorporating the availability of an iron chelate (Fe•HEDTA) catalyst, hydrogen peroxide, and other additives as approved by the APCO, to achieve an overall emissions rate specified in this permit.

Condition 2: Administrative
A. Bottle Rock Power (BRP) shall maintain and operate the power plant, Air Emissions Control System (AECS), and associated ancillary equipment as described in submitted specifications and drawings and subsequent permit modifications in accordance with good operating practices and procedures to meet the emissions limit in Condition 1. The power plant and abatement system components shall be adequately maintained and winterized.
B. The AECS system shall consist of: A) A surface condenser to facilitate the partitioning of H2S into the non condensable gas phase; B) A Stretford Abatement System (SAS) as modified to include a 10 inch diameter skimming pipe on the delay tank and two oxidizer tank air spargers and with the ability to return the H2S gas treatment components of the AECS operation to the pre-modification operation.; C) Secondary condensate treatment which includes iron chelate and/or other approved secondary abatement chemical, and reaction time to ensure the power plant will comply with the emission limitation specified in Condition #1; D) A turbine by-pass system sufficiently sized to accept 100% of full steam flow during generating outages so that the power plant AECS can be utilized to treat steam normally stacked during the outage; E) If a solids removal system is necessary as a result of solids formation in the condensate, such facility shall be incorporated into the system; F) In the event of generation loss, an alternate source of power to enable continued use of the AECS specified above shall be available; and G) A properly permitted, compliant stand by generator or alternate power supply capable of sustaining station power and the Emergency Stacking System shall be available for use in case of concurrent transmission line and generator failure.
C. The major components of the AECS, Stretford, Turbine by-pass, and condensate abatement system shall have a 99% operating availability excluding scheduled maintenance on these individual major components.
D. BRP shall maintain alarms and switches on the following units to ensure immediate corrective action is initiated to prevent outages and potential stacking: **Turbine Generator Unit** – 1) Excessive vibration switch, alarm and trip; 2) Lateral motion switch on the turbine shaft, alarm and trip; 3) High lube oil temperature switch, alarm and trip; 4) Low lube oil pressure switch with indicating light in control room; Main **Lube Oil Reservoir low level, alarm** – 1) Over-speed switch, alarm and trip; 2) High hydrogen gas temperature and low purity hydrogen alarm and trip; 3) Seal oil level switch and alarm; 4) Differential pressure switch to prevent low differential pressure between the seal oil and hydrogen pressure, alarm and trip; 5) Generator moisture detector and alarm; 6) Vacuum switch to prevent low vacuum in the seal oil detaining tank, alarm and trip; 7) Turbine bearing metal temperature alarm and trip; **Condensers** – 1) Pressure switch to prevent condenser pressures from exceeding design levels, alarm and trip; 2) Condensate level switches to start and stop pump, prevent excessively high condensate levels in hot well; 3) High or low condensate levels alarms; **Cooling Towers** – 1) Float indicators to indicate levels and associated low, low-low, high, and high-high alarms; 2) Vibration switches and alarms on each cooling tower fan. **Electrical System** – 1) Generator differential current trip and alarm; 2) Generator over-current trip and alarm; 3) Generator ground fault trip and alarm; 4) Generator anti-motoring trip and alarm; 5) Generator field ground trip and alarm; 6) Generator stator over temperature alarm and trip; 7) Loss of excitation trip and alarm; 8) System negative phase sequence trip and alarm; 9) Transformer differential current trip and alarm; 10) Transformer over-current trip and alarm; 11) Transformer ground fault trip

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

This permit does not authorize the emission of air contaminants in excess of those allowed by the California Health and Safety Code or the Regulations of the Lake County Air Quality Management District. This permit cannot be considered permission to violate existing laws, ordinances, regulations, or statutes of other government agencies. The provisions of this Permit are severable. If any provision of this Permit is held invalid, the remainder of this Permit shall not be affected thereby.

AUTHORITY TO CONSTRUCT

Permit # A/C 2006-11

Lake County Air Quality Management District
2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	Coleman Padsite
Location:	600m N of S, 320m E of W, Section 5, T11N, R8W, MDB&M, Lake County Coleman Pad, Bottle Rock / Francisco Leasehold, Cobb Valley, CA

Name and Equipment Description: **Coleman 1A-5 Re-Drill**

Geothermal drilling rig and accessories (NCPA Rig #1), Four electrical generators (CAT D-398TA 750 HP diesel engines PERP Registered), three air compressors (Cummins QSK19-C700 700 HP turbocharged diesel powered air compressors), one down hole misting pump; hydrogen sulfide abatement system utilizing high pressure injection of NaOH and H2O2; and particulate control equipment consisting of misting down hole, constricting and non constricting venturi contactors, low pressure water spray, expanding blooie line, properly sized, smoothed, tangential wet cyclone, properly designed drop or hopper, water treatment and management systems, necessary metering and measuring devices and associated equipment.

Permit Conditions

Condition 1: Emissions
A. Bottle Rock Power, LLC (BRP) shall limit hydrogen sulfide (H2S) emissions during drilling, clean out, and testing to no more than five (5) pounds of H2S per hour and no more than twenty-four (24) pounds per day during all other phases of this project. During verifiable breakdown and for any hot-liner runs, Rule 510 and procedures shall apply. In the event of atmospheric conditions (e.g., drainage, limited mixing, fumigation, downwash, etc.) that result in complaints and concern in receptor areas from high levels of H2S, BRP agrees to reduce the H2S emission limit to two (2) pounds of H2S using abatement plan at the request of the Air Pollution Control Officer (APCO). Certain exceptions to the H2S emission limitations may be allowed by the APCO, in writing, for resource testing if such tests are 12 hours or less in duration and coincide with acceptable meteorological conditions verified by the APCO to ensure good dispersion.
B. If excessively high H2S levels are encountered during drilling, BRP will either: 1) Place into operation additional H2S abatement capacity, or 2) Cease operation and close in the well according to appropriate standards of operation. For the purposes of this permit, excessively high levels of H2S means abated emissions greater than five (5) pounds of H2S per hour or abated emission levels in excess of 500 ppmv.
C. Visible emissions shall not exceed the values listed below for more than three (3) minutes in any one (1) hour: • Ringelmann 0.5 (10% opacity) for detached plume at the cyclone; • Ringelmann 0.5 (10% opacity) for combustion emissions of engine exhaust; and • Ringelmann 1 (20% opacity) for road and pad dust emissions.
D. On commencement of air drilling in significant serpentine, the well logger shall obtain bulk samples that shall be analyzed for asbestos content using TEM, SEM or PLM (California Air Resources Board [ARB] Method 435 Procedures). For the purpose of defining a significant serpentine deposit during geothermal air drilling: "Significant Serpentine" shall mean; drill cutting samples from two consecutive ten-foot interval-drilling sections identified as having 10% or greater serpentine or other asbestos containing ore. The Lake County Air Quality Management District (LCAQMD) shall be promptly notified by phone at 263-7000, provided samples of the drilled material, and unless otherwise agreed upon in writing, notified of the bulk asbestos analysis results within ten working days of sampling.
E. During drilling in significant serpentine visible emissions shall not exceed Ringelmann 0.25 (5% opacity) for detached plume at the cyclone. BRP shall: 1) Increase down hole misting; 2) Increase water loading at the venturi; 3) Reducing the drilling rate; 4) Use wetting agents; and/or 5) Implement additional solids filtration of working water. Such additional effort shall continue until drilling is clear of significant serpentine/asbestos.

Condition 2: Administrative
A. This permit has been issued as a modification to include cleanout, forking or deepening of the well as described in the application and permit review. This permit does not establish a precedent for the issuance of additional permits.
B. The submitted BRP (Tecton) H2S abatement plan approved by the APCO shall be implemented and followed, and is incorporated herein by reference. Logbook entries shall be made a minimum of four (4) times daily while drilling on air or in steam.
C. Diesel fuel utilized shall be California Low Sulfur Diesel containing less than 15ppmw sulfur.
D. If a vapor dominated resource is encountered and it is determined that emissions cannot be maintained pursuant to Parts A & B of LCAQMD Rule 421; or the APCO determines that the well on stand-by (bleed) status will violate the intent of LCAQMD Rule 602 or the associated steamfield permit, then BRP shall with approval of the APCO, install and utilize additional abatement equipment as necessary to bring emissions into compliance. This may include, but is not limited to, immediate conversion to an injector, gas capping, down-hole plugging, and/or the complete closing in of any well in violation of LCAQMD Rules and Regulations.
E. BRP shall utilize the same particulate abatement system described in the permitting review(s) and includes the following configuration: 1) A non-constricting venturi in the smallest diameter portion of the blooie line (non-constricting venturi 12"-15") for use when flow of at least 20,000 lbs/hr air/steam and a converging venturi scrubber when drilling in less than 20,000 lbs/hr of steam, or when the pressure drop exceeds 4 PSI across the

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 2006-05

Lake County Air Quality Management District
2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date: 10/31/2020* *Valid through: 10/31/2021* *Category: IV*

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	Coleman Padsite
Location:	600m N of S, 320m E of W, Section 5, T11N, R8W, MDB&M, Lake County Coleman Pad, Bottle Rock / Francisco Leasehold, Cobb Valley, CA

Name and Equipment Description: **Coleman 3-5 Re-Drill**

Geothermal drilling rig and accessories (NCPA Rig #1), Four electrical generators (CAT D-398TA 750 HP diesel engines PERP Registered), three air compressors (Cummins QSK19-C700 700 HP turbocharged diesel powered air compressors), one down hole misting pump; hydrogen sulfide abatement system utilizing high pressure injection of NaOH and H2O2; and particulate control equipment consisting of misting down hole, constricting and non constricting venturi contactors, low pressure water spray, expanding blooie line, properly sized, smoothed, tangential wet cyclone, properly designed drop or hopper, water treatment and management systems, necessary metering and measuring devices and associated equipment.

Permit Conditions

Condition 1: Emissions

A. Bottle Rock Power, LLC (BRP) shall limit hydrogen sulfide (H2S) emissions during drilling, clean out, and testing to no more than five (5) pounds of H2S per hour and no more than twenty-four (24) pounds per day during all other phases of this project. During verifiable breakdown and for any hot-liner runs, Rule 510 and procedures shall apply. In the event of atmospheric conditions (e.g., drainage, limited mixing, fumigation, downwash, etc.) that result in complaints and concern in receptor areas from high levels of H2S, BRP agrees to reduce the H2S emission limit to two (2) pounds of H2S using abatement plan at the request of the Air Pollution Control Officer (APCO). Certain exceptions to the H2S emission limitations may be allowed by the APCO, in writing, for resource testing if such tests are 12 hours or less in duration and coincide with acceptable meteorological conditions verified by the APCO to ensure good dispersion.

B. If excessively high H2S levels are encountered during drilling, BRP will either: 1) Place into operation additional H2S abatement capacity, or 2) Cease operation and close in the well according to appropriate standards of operation. For the purposes of this permit, excessively high levels of H2S means abated emissions greater than five (5) pounds of H2S per hour or abated emission levels in excess of 500 ppmv.

C. Visible emissions shall not exceed the values listed below for more than three (3) minutes in any one (1) hour: • Ringelmann 0.5 (10% opacity) for detached plume at the cyclone; • Ringelmann 0.5 (10% opacity) for combustion emissions of engine exhaust; and • Ringelmann 1 (20% opacity) for road and pad dust emissions.

D. On commencement of air drilling in significant serpentine, the well logger shall obtain bulk samples that shall be analyzed for asbestos content using TEM, SEM or PLM (California Air Resources Board [ARB] Method 435 Procedures). For the purpose of defining a significant serpentine deposit during geothermal air drilling: "Significant Serpentine" shall mean; drill cutting samples from two consecutive ten-foot interval-drilling sections identified as having 10% or greater serpentine or other asbestos containing ore. The Lake County Air Quality Management District (LCAQMD) shall be promptly notified by phone at 263-7000, provided samples of the drilled material, and unless otherwise agreed upon in writing, notified of the bulk asbestos analysis results within ten working days of sampling.

E. During drilling in significant serpentine visible emissions shall not exceed Ringelmann 0.25 (5% opacity) for detached plume at the cyclone. BRP shall: 1) Increase down hole misting; 2) Increase water loading at the venturi; 3) Reducing the drilling rate; 4) Use wetting agents; and/or 5) Implement additional solids filtration of working water. Such additional effort shall continue until drilling is clear of significant serpentine/asbestos.

Condition 2: Administrative

A. This permit has been issued as a modification to include cleanout, forking or deepening of the well as described in the application and permit review. This permit does not establish a precedent for the issuance of additional permits.

B. The submitted BRP (Tecton) H2S abatement plan approved by the APCO shall be implemented and followed, and is incorporated herein by reference. Logbook entries shall be made a minimum of four (4) times daily while drilling on air or in steam.

C. Diesel fuel utilized shall be California Low Sulfur Diesel containing less than 15ppmw sulfur.

D. If a vapor dominated resource is encountered and it is determined that emissions cannot be maintained pursuant to Parts A & B of LCAQMD Rule 421; or the APCO determines that the well on stand-by (bleed) status will violate the intent of LCAQMD Rule 602 or the associated steamfield permit, then BRP shall with approval of the APCO, install and utilize additional abatement equipment as necessary to bring emissions into compliance. This may include, but is not limited to, immediate conversion to an injector, gas capping, down-hole plugging, and/or the complete closing in of any well in violation of LCAQMD Rules and Regulations.

E. BRP shall utilize the same particulate abatement system described in the permitting review(s) and includes the following configuration: 1) A non-constricting venturi in the smallest diameter portion of the blooie line (non-constricting venturi 12"-15") for use when flow of at least 20,000 lbs/hr air/steam and a converging venturi scrubber when drilling in less than 20,000 lbs/hr of steam, or when the pressure drop exceeds 4 PSI across the

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

PERMIT TO OPERATE

Permit # P/O 85-034A

Lake County Air Quality Management District

2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas G. Gearhart

Douglas G. Gearhart, APCO

Type of Issuance: Renewal | *Issuance Date: 10/31/2020* | *Valid through: 10/31/2021* | *Category: IV*

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	Coleman Padsite
Location:	600m N of S, 320m E of W, Section 5, T11N, R8W, MDB&M, Lake County Coleman Pad, Bottle Rock / Francisco Leasehold, Cobb Valley, CA

Name and Equipment Description: **Coleman 4-5**

One (1) geothermal production well, associated valving, condensate and rock removal (catcher), and bleed muffler servicing the Bottle Rock Geothermal Power Plant.

Permit Conditions

Condition 1 The herein permitted well shall be operated in compliance and consistent with the steam transmission and power plant Authority to Construct (A/C) and Permit to Operate (P/O) conditions where applicable. The herein permitted well shall be operated in compliance with all Lake County Air Quality Management District (LCAQMD), State, and Federal laws and regulations.

Condition 2 Bottle Rock Power, LLC (BRP) shall notify the LCAQMD at least twenty-four (24) hours prior to initiating the planned venting of any well or group of wells in the LCAQMD owned or operated by BRP in an amount in excess of either 3,000 lbs of steam per hour per well or 20,000 lbs of steam per hour total. Testing to characterize emissions may be required by the Air Pollution Control Officer (APCO) for significant well bleeds or vents. In the event source testing of any geothermal well is deemed necessary by the APCO, BRP will provide safe access and sampling ports.

Condition 3 BRP shall submit to the LCAQMD an application for, and receive, an A/C or modify permit prior to constructing, erecting, altering or replacing any equipment which may cause, potentially cause, reduce, control or eliminate the issuance of air contaminants. This does not include normal and routine maintenance nor well clean out and repairs. It does include deepening, altering or increasing the well bore size in a manner to constitute a modification of the source. BRP shall notify the LCAQMD in advance of, and receive approval for, any planned reworking/maintenance of any of the herein permitted production wells. Conditions for approval of such maintenance work will consider the level and duration of emissions, and the conditions incorporated in current BRP A/C permits and performance plans. BRP shall within thirty (30) days after the completion of re-drilling, re-working or flow testing submit to the LCAQMD the results of any routine or required chemical analysis and/or testing accomplished for the herein listed geothermal development wells that indicate emissions or potential emissions into the air.

(Conditions 4 through 12 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 2006-06

Lake County Air Quality Management District
2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date: 10/31/2020* *Valid through: 10/31/2021* *Category: IV*

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	Coleman Padsite
Location:	600m N of S, 320m E of W, Section 5, T11N, R8W, MDB&M, Lake County Coleman Pad, Bottle Rock / Francisco Leasehold, Cobb Valley, CA

Name and Equipment Description: **Coleman 5-5 Re-Drill**

Geothermal drilling rig and accessories (NCPA Rig #1), Four electrical generators (CAT D-398TA 750 HP diesel engines PERP Registered), three air compressors (Cummins QSK19-C700 700 HP turbocharged diesel powered air compressors), one down hole misting pump; hydrogen sulfide abatement system utilizing high pressure injection of NaOH and H2O2; and particulate control equipment consisting of misting down hole, constricting and non constricting venturi contactors, low pressure water spray, expanding blooie line, properly sized, smoothed, tangential wet cyclone, properly designed drop or hopper, water treatment and management systems, necessary metering and measuring devices and associated equipment.

Permit Conditions

Condition 1: Emissions

A. Bottle Rock Power, LLC (BRP) shall limit hydrogen sulfide (H2S) emissions during drilling, clean out, and testing to no more than five (5) pounds of H2S per hour and no more than twenty-four (24) pounds per day during all other phases of this project. During verifiable breakdown and for any hot-liner runs, Rule 510 and procedures shall apply. In the event of atmospheric conditions (e.g., drainage, limited mixing, fumigation, downwash, etc.) that result in complaints and concern in receptor areas from high levels of H2S, BRP agrees to reduce the H2S emission limit to two (2) pounds of H2S using abatement plan at the request of the Air Pollution Control Officer (APCO). Certain exceptions to the H2S emission limitations may be allowed by the APCO, in writing, for resource testing if such tests are 12 hours or less in duration and coincide with acceptable meteorological conditions verified by the APCO to ensure good dispersion.

B. If excessively high H2S levels are encountered during drilling, BRP will either: 1) Place into operation additional H2S abatement capacity, or 2) Cease operation and close in the well according to appropriate standards of operation. For the purposes of this permit, excessively high levels of H2S means abated emissions greater than five (5) pounds of H2S per hour or abated emission levels in excess of 500 ppmv.

C. Visible emissions shall not exceed the values listed below for more than three (3) minutes in any one (1) hour: • Ringelmann 0.5 (10% opacity) for detached plume at the cyclone; • Ringelmann 0.5 (10% opacity) for combustion emissions of engine exhaust; and • Ringelmann 1 (20% opacity) for road and pad dust emissions.

D. On commencement of air drilling in significant serpentine, the well logger shall obtain bulk samples that shall be analyzed for asbestos content using TEM, SEM or PLM (California Air Resources Board [ARB] Method 435 Procedures). For the purpose of defining a significant serpentine deposit during geothermal air drilling: "Significant Serpentine" shall mean; drill cutting samples from two consecutive ten-foot interval-drilling sections identified as having 10% or greater serpentine or other asbestos containing ore. The Lake County Air Quality Management District (LCAQMD) shall be promptly notified by phone at 263-7000, provided samples of the drilled material, and unless otherwise agreed upon in writing, notified of the bulk asbestos analysis results within ten working days of sampling.

E. During drilling in significant serpentine visible emissions shall not exceed Ringelmann 0.25 (5% opacity) for detached plume at the cyclone. BRP shall: 1) Increase down hole misting; 2) Increase water loading at the venturi; 3) Reducing the drilling rate; 4) Use wetting agents; and/or 5) Implement additional solids filtration of working water. Such additional effort shall continue until drilling is clear of significant serpentine/asbestos.

Condition 2: Administrative

A. This permit has been issued as a modification to include cleanout, forking or deepening of the well as described in the application and permit review. This permit does not establish a precedent for the issuance of additional permits.

B. The submitted BRP (Tecton) H2S abatement plan approved by the APCO shall be implemented and followed, and is incorporated herein by reference. Logbook entries shall be made a minimum of four (4) times daily while drilling on air or in steam.

C. Diesel fuel utilized shall be California Low Sulfur Diesel containing less than 15ppmw sulfur.

D. If a vapor dominated resource is encountered and it is determined that emissions cannot be maintained pursuant to Parts A & B of LCAQMD Rule 421; or the APCO determines that the well on stand-by (bleed) status will violate the intent of LCAQMD Rule 602 or the associated steamfield permit, then BRP shall with approval of the APCO, install and utilize additional abatement equipment as necessary to bring emissions into compliance. This may include, but is not limited to, immediate conversion to an injector, gas capping, down-hole plugging, and/or the complete closing in of any well in violation of LCAQMD Rules and Regulations.

E. BRP shall utilize the same particulate abatement system described in the permitting review(s) and includes the following configuration: 1) A non-constricting venturi in the smallest diameter portion of the blooie line (non-constricting venturi 12"-15") for use when flow of at least 20,000 lbs/hr

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

PERMIT TO OPERATE

Lake County Air Quality Management District

2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

Permit # P/O 2014-10

By: Douglas Gearhart

Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	Coleman Padsite
Location:	600m N of S, 320m E of W, Section 5, T11N, R8W, MDB&M, Lake County Coleman Pad, Bottle Rock / Francisco Leasehold, Cobb Valley, CA

Name and Equipment Description: **Coleman 6-5**

One (1) geothermal production/injection well, associated valving, condensate and rock removal (catcher), and bleed muffler servicing the Bottle Rock Geothermal Power Plant. One (1) geothermal production well condensate collection piping system constructed of: 20' x 36" slotted and solid pipe, with cone reducer, one (1) 12" cleanout, and two (2) knock-out pots.

Permit Conditions

Condition 1: Emissions

A. Bottle Rock Power, LLC (BRP) shall limit Hydrogen Sulfide (H2S) emissions during drilling, clean out, and testing to no more than five (5) pounds of H2S per hour and no more than twenty-four (24) pounds per day during all other phases of this project. During verified breakdown and for hot-liner installations, Lake County Air Quality Management District (LCAQMD) Rule 510 and procedures shall apply. In the event of atmospheric conditions (*e.g.*, drainage, limited mixing, fumigation, downwash, etc.) that result in complaints and concern in receptor areas from high levels of H2S, BRP agrees to reduce the H2S emission limit to two (2) pounds or less of H2S per hour consistent with the BRP H2S Abatement Plan, at the request of the Air Pollution Control Officer (APCO). Certain exceptions to the H2S emission limitations may be allowed by the APCO, in writing, for resource testing if such tests are 12 hours or less in duration and coincide with acceptable meteorological conditions verified by the APCO to ensure good dispersion.

B. If excessively high H2S levels are encountered during drilling, BRP will either: a) Place into operation additional H2S abatement capacity, or b) Cease operation and close in the well according to appropriate standards of operation. For the purposes of this permit, excessively high levels of H2S means abated emissions greater than five (5) pounds of H2S per hour or abated emission levels in excess of 500 ppm volume.

C. Visible emissions shall not exceed the values listed below for more than three (3) minutes in any one (1) hour: • Ringelmann 0.5 (10% opacity) for detached plume at the cyclone; • Ringelmann 0.5 (10% opacity) for combustion emissions engine exhaust; and • Ringelmann 1 (20% opacity) for road and pad dust emissions.

D. On commencement of air drilling in significant serpentine or upon experiencing red/pink plume exiting the cyclone, the well logger shall immediately obtain bulk samples of the drilled material and log the event in the abatement logbook, and shall be analyzed for asbestos content using TEM, SEM or PLM (California Air Resources Board [ARB] Method 435 Procedures). "Experiencing a pink/red plume" shall mean a plume of greater than 5% opacity lasting for 30 or more seconds. For the purpose of defining a significant serpentine deposit during geothermal air drilling: "Significant Serpentine" shall mean; drill cutting samples from two consecutive ten-foot interval-drilling sections identified as having 10% or greater serpentine content. The LCAQMD shall be promptly notified by phone at 263-7000, provided a portion of the divided bulk samples of the drilled material, and unless otherwise agreed upon in writing, notified of the bulk asbestos analysis results within ten (10) working days of sampling. Bulk Samples collected upon experiencing a pink/red plume shall be promptly analyzed by XRF, or other acceptable means, to include at a minimum arsenic, chrome, nickel and cadmium. BRP shall, to the extent practical attempt to collect a sample of the particulate from the pink/red plume, and/or assist the LCAQMD in such an attempt, for analysis as described.

E. During drilling in significant serpentine, or while experiencing a pink/red plume, visible emissions shall not exceed Ringelmann 0.25 (5% opacity) for detached plume at the cyclone. BRP shall: 1) Increase down hole misting; 2) Increase water loading at the venturi; 3) Reducing the drilling rate; 4) Use wetting agents; and/or 5) Implement additional solids filtration of working water. Such additional effort shall continue until drilling is clear of significant serpentine or drilling conditions contributing to the formation of pink/red plume.

Condition 2: Administrative

A. This permit has been issued for the geothermal well to function in either injection or production mode. The well is constructed at a total depth of 10,700 feet and includes a well bore, well head, valving, piping, flanges, geothermal fluid transmission line header connections, side leg kick-out, two part slotted liner, and associated corrosion mitigation injection equipment. This permit allows drilling for well maintenance; significant drilling and work overs may require an Authority to Construct permit for the modification. This permit does not establish a precedent for the issuance of additional permits.

B. The submitted BRP H2S abatement plan approved by the APCO or subsequent approved revision, shall be implemented and followed, and is incorporated herein by reference. Logbook entries shall be made a minimum of four (4) times daily.

C. Diesel fuel utilized shall be California Low Sulfur Diesel containing less than 15 ppmw sulfur.

D. If a vapor dominated resource is encountered and it is determined that emissions cannot be maintained pursuant to Parts A & B of LCAQMD Rule 421; or the APCO

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 2006-30

Lake County Air Quality Management District
2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103
Facility:	Coleman Padsite
Location:	600m N of S, 320m E of W, Section 5, T11N, R8W, MDB&M, Lake County Coleman Pad, Bottle Rock / Francisco Leasehold, Cobb Valley, CA

Name and Equipment Description: **Coleman 7-5**

Geothermal drilling rig and accessories (NCPA Rig #1, equivalent or surperior), four (4) electrical generators (CAT D-398TA 750 HP diesel engines PERP Registered), three (3) air compressors (Cummins QSK19-C700 700 HP turbocharged diesel powered air compressors), one (1) down hole misting pump; hydrogen sulfide abatement system utilizing high pressure injection of NaOH and H2O2; and particulate control equipment consisting of misting down hole, constricting and non constricting venturi contactors, low pressure water spray, expanding blooie line, properly sized, smoothed, tangential wet cyclone, properly designed drop or hopper, water treatment and management systems, necessary metering and measuring devices and associated equipment.

Permit Conditions

Condition 1: Emissions

A. Bottle Rock Power, LLC (BRP) shall limit hydrogen sulfide (H2S) emissions during drilling, clean out, and testing to no more than five (5) pounds of H2S per hour and no more than twenty-four (24) pounds per day during all other phases of this project. During verifiable breakdown and for any hot-liner runs, Rule 510 and procedures shall apply. In the event of atmospheric conditions (*e.g.*, drainage, limited mixing, fumigation, downwash, etc.) that result in complaints and concern in receptor areas from high levels of H2S, BRP agrees to reduce the H2S emission limit to two (2) pounds of H2S per hour using the approved abatement plan at the request of the Air Pollution Control Officer (APCO). Certain exceptions to the H2S emission limitations may be allowed by the APCO, in writing, for resource testing if such tests are 12 hours or less in duration and coincide with acceptable meteorological conditions verified by the APCO to ensure good dispersion.

B. If excessively high H2S levels are encountered during drilling, BRP will either: 1) Place into operation additional H2S abatement capacity, or 2) Cease operation and close in the well according to appropriate standards of operation. For the purposes of this permit, excessively high levels of H2S means abated emissions greater than five (5) pounds of H2S per hour or abated emission levels in excess of 500 ppmv.

C. Visible emissions shall not exceed the values listed below for more than three (3) minutes in any one (1) hour:

- Ringelmann 0.5 (10% opacity) for detached plume at the cyclone;
- Ringelmann 0.5 (10% opacity) for combustion emissions of engine exhaust; and
- Ringelmann 1 (20% opacity) for road and pad dust emissions.

D. On commencement of air drilling in significant serpentine, the well logger shall obtain bulk samples that shall be analyzed for asbestos content using TEM, SEM or PLM (California Air Resources Board [ARB] Method 435 Procedures). For the purpose of defining a significant serpentine deposit during geothermal air drilling: "Significant Serpentine" shall mean; drill cutting samples from two consecutive ten-foot interval-drilling sections identified as having 10% or greater serpentine or other asbestos containing ore. The Lake County Air Quality Management District (LCAQMD) shall be promptly notified by phone at 263-7000, provided samples of the drilled material, and unless otherwise agreed upon in writing, notified of the bulk asbestos analysis results within ten working days of sampling.

E. During drilling in significant serpentine visible emissions shall not exceed Ringelmann 0.25 (5% opacity) for detached plume at the cyclone. BRP shall: 1) Increase down hole misting; 2) Increase water loading at the venturi; 3) Reducing the drilling rate; 4) Use wetting agents; and/or 5) Implement additional solids filtration of working water. Such additional effort shall continue until drilling is clear of significant serpentine/asbestos.

Condition 2: Administrative

A. This permit has been issued for the construction of a geothermal production well to include a fork leg from the main bore as described in the application and permit review. This permit does not establish a precedent for the issuance of additional permits.

B. The submitted BRP (Tecton) H2S abatement plan approved by the APCO shall be implemented and followed, and is incorporated herein by reference. Logbook entries shall be made a minimum of four (4) times daily while drilling on air or in steam.

C. Diesel fuel utilized shall be California Low Sulfur Diesel containing less than 15ppmw sulfur.

D. If a vapor dominated resource is encountered and it is determined that emissions cannot be maintained pursuant to Parts A & B of LCAQMD Rule 421; or the APCO determines that the well on stand-by (bleed) status will violate the intent of LCAQMD Rule 602 or the associated steamfield permit, then BRP shall with approval of the APCO, install and utilize additional abatement equipment as necessary to bring emissions into compliance. This may include, but is not limited to, immediate conversion to an injector, gas capping, down-hole plugging, and/or the complete closing in of any well in violation of LCAQMD Rules and Regulations.

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 2006-31

Lake County Air Quality Management District
2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	Coleman Padsite
Location:	600m N of S, 320m E of W, Section 5, T11N, R8W, MDB&M, Lake County Coleman Pad, Bottle Rock / Francisco Leasehold, Cobb Valley, CA

Name and Equipment Description: **Coleman 8-5**

Geothermal drilling rig and accessories (NCPA Rig #1, equivalent or surperior), four (4) electrical generators (CAT D-398TA 750 HP diesel engines PERP Registered), three (3) air compressors (Cummins QSK19-C700 700 HP turbocharged diesel powered air compressors), one (1) down hole misting pump; hydrogen sulfide abatement system utilizing high pressure injection of NaOH and H2O2; and particulate control equipment consisting of misting down hole, constricting and non constricting venturi contactors, low pressure water spray, expanding blooie line, properly sized, smoothed, tangential wet cyclone, properly designed drop or hopper, water treatment and management systems, necessary metering and measuring devices and associated equipment.

Permit Conditions

Condition 1: Emissions

A. Bottle Rock Power, LLC (BRP) shall limit hydrogen sulfide (H2S) emissions during drilling, clean out, and testing to no more than five (5) pounds of H2S per hour and no more than twenty-four (24) pounds per day during all other phases of this project. During verifiable breakdown and for any hot-liner runs, Rule 510 and procedures shall apply. In the event of atmospheric conditions (*e.g.*, drainage, limited mixing, fumigation, downwash, etc.) that result in complaints and concern in receptor areas from high levels of H2S, BRP agrees to reduce the H2S emission limit to two (2) pounds of H2S per hour using the approved abatement plan at the request of the Air Pollution Control Officer (APCO). Certain exceptions to the H2S emission limitations may be allowed by the APCO, in writing, for resource testing if such tests are 12 hours or less in duration and coincide with acceptable meteorological conditions verified by the APCO to ensure good dispersion.

B. If excessively high H2S levels are encountered during drilling, BRP will either: 1) Place into operation additional H2S abatement capacity, or 2) Cease operation and close in the well according to appropriate standards of operation. For the purposes of this permit, excessively high levels of H2S means abated emissions greater than five (5) pounds of H2S per hour or abated emission levels in excess of 500 ppmv.

C. Visible emissions shall not exceed the values listed below for more than three (3) minutes in any one (1) hour:

- Ringelmann 0.5 (10% opacity) for detached plume at the cyclone;
- Ringelmann 0.5 (10% opacity) for combustion emissions of engine exhaust; and
- Ringelmann 1 (20% opacity) for road and pad dust emissions.

D. On commencement of air drilling in significant serpentine, the well logger shall obtain bulk samples that shall be analyzed for asbestos content using TEM, SEM or PLM (California Air Resources Board [ARB] Method 435 Procedures). For the purpose of defining a significant serpentine deposit during geothermal air drilling: "Significant Serpentine" shall mean; drill cutting samples from two consecutive ten-foot interval-drilling sections identified as having 10% or greater serpentine or other asbestos containing ore. The Lake County Air Quality Management District (LCAQMD) shall be promptly notified by phone at 263-7000, provided samples of the drilled material, and unless otherwise agreed upon in writing, notified of the bulk asbestos analysis results within ten working days of sampling.

E. During drilling in significant serpentine visible emissions shall not exceed Ringelmann 0.25 (5% opacity) for detached plume at the cyclone. BRP shall: 1) Increase down hole misting; 2) Increase water loading at the venturi; 3) Reducing the drilling rate; 4) Use wetting agents; and/or 5) Implement additional solids filtration of working water. Such additional effort shall continue until drilling is clear of significant serpentine/asbestos.

Condition 2: Administrative

A. This permit has been issued for the construction of a geothermal production well to include a fork leg from the main bore as described in the application and permit review. This permit does not establish a precedent for the issuance of additional permits.

B. The submitted BRP (Tecton) H2S abatement plan approved by the APCO shall be implemented and followed, and is incorporated herein by reference. Logbook entries shall be made a minimum of four (4) times daily while drilling on air or in steam.

C. Diesel fuel utilized shall be California Low Sulfur Diesel containing less than 15ppmw sulfur.

D. If a vapor dominated resource is encountered and it is determined that emissions cannot be maintained pursuant to Parts A & B of LCAQMD Rule 421; or the APCO determines that the well on stand-by (bleed) status will violate the intent of LCAQMD Rule 602 or the associated steamfield permit, then BRP shall with approval of the APCO, install and utilize additional abatement equipment as necessary to bring emissions into compliance. This may include, but is not limited to, immediate conversion to an injector, gas capping, down-hole plugging, and/or the complete closing in of any well in violation of LCAQMD Rules and Regulations.

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

PERMIT TO OPERATE

Lake County Air Quality Management District

2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

Permit # P/O 2014-07

By: Douglas Gearhart

Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* II

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	Bottle Rock Power Plant
Location:	7557 High Valley Rd., Cobb, CA. Sec 5, T11N, R8W, MDB&M Lake County Francisco/Coleman Leasehold

Name and Equipment Description: **Emergency Backup Diesel Generator and Propane Generator**

One (1) Condec-Lima Electric Model AA90614DK generator set, powered by a 1982 model year 760hp Cummins VTA-1710-6-1 diesel engine (S/N 37106133) and one (1) Generac Model 0046742 generator set, powered by a 16hp Generac VII18 propane engine (S/N 4350062).

Permit Conditions

Condition 1: Emissions

A. All equipment shall be regularly maintained in good working order pursuant to manufacturer's guidelines and operated in a manner to prevent or minimize air emissions. The Lake County Air Quality Management District (LCAQMD) shall be notified pursuant to Rule 510, regarding equipment breakdown.

B. The total ROG, PM-10, SOx or NOx emission rate for this facility shall not exceed 25 tons per 12-month period. This emission rate determination shall be consistent with the methodology and assumptions used to evaluate the application under which this permit was issued.

C. Visible emissions shall not exceed Ringelmann 1 (20% opacity) from the diesel engine generator exhaust stack for more than three (3) minutes in any one (1) hour.

Condition 2: Administrative

A. This permit has been issued and is valid for emergency diesel engine generator use when neither house power nor commercial line power is available because of an emergency or line maintenance outage. Use of the generator for any other purpose will subject the source to NSR and reassessment under the Air Toxics Control Measure (ATCM) for Compression Ignition engines to include control equipment retrofit or other upgrades. The propane generator may be used for prime power when commercial line power is not available.

B. Testing and Maintenance operations are allowed for up to 20 hours per 12-month period for the diesel engine.

C. Diesel fuel utilized shall be California Low Sulfur Diesel containing less than 15ppmw sulfur.

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

PERMIT TO OPERATE

Lake County Air Quality Management District

2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

Permit # P/O 2014-06

By: Douglas Gearhart

Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* II

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103
Facility:	Bottle Rock Steamfield Office
Location:	7557 High Valley Rd. Cobb, CA 95426

Name and Equipment Description: **Emergency Backup Diesel Generators and Propane Generator**

One (1) Condec generator set (S/N BC24958EG), powered by a 1982 model year 100.5 hp Deutz F6L413FR diesel engine (S/N 6710917), one (1) Air Diesel F-3592B generator set, powered by a 20 hp Deutz 2L912 diesel engine (S/N B22390FF) and one (1) Generac GH-410 (8 kW) generator set, powered by a 14.8 hp propane engine (S/N 6253552).

Permit Conditions

Condition 1: Emissions

A. All equipment shall be regularly maintained in good working order pursuant to manufacturer's guidelines and operated in a manner to prevent or minimize air emissions. The Lake County Management District (LCAQMD) shall be notified pursuant to Rule 510, regarding equipment breakdown.

B. The total ROG, PM-10, SOx or NOx emission rate for this facility shall not exceed 25 tons per 12-month period. This emission rate determination shall be consistent with the methodology and assumptions used to evaluate the application under which this permit was issued.

C. Visible emissions shall not exceed Ringelmann 1 (20% opacity) from the generator exhaust stack for more than three (3) minutes in any one (1) hour.

Condition 2: Administrative

A. This permit has been issued and is valid for emergency diesel engine generator use when neither house power nor commercial line power is available because of an emergency or line maintenance outage. Use of the generator for any other purpose will subject the source to NSR and reassessment under the Air Toxics Control Measure (ATCM) for Compression Ignition engines to include control equipment retrofit or other upgrades. The propane generator may be used for prime power when commercial line power is not available.

B. Testing and Maintenance operations are allowed for up to 20 hours per 12-month period per diesel engine.

C. Diesel fuel utilized shall be California Low Sulfur Diesel containing less than 15ppmw sulfur.

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

PERMIT TO OPERATE

Lake County Air Quality Management District
2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

Permit # P/O 2014-08

By: Douglas Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date: 10/31/2020* *Valid through: 10/31/2021* *Category: II*

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	Coleman Padsite
Location:	600m N of S, 320m E of W, Section 5, T11N, R8W, MDB&M, Lake County Coleman Pad, Bottle Rock / Francisco Leasehold, Cobb Valley, CA

Name and Equipment Description: **Emergency Backup Propane Generator**

One (1) Generac Guardian Model Generator, powered by a 32 HP, Generac 922cc V-Twin propane engine, S/N:5281627, Model Year 2008.

Permit Conditions

Condition 1: Emissions

A. All equipment shall be regularly maintained in good working order, pursuant to manufacturer's guidelines, and operated in a manner to prevent or minimize air emissions.

B. The total ROG, PM-10, SOx or NOx emission rate for this facility shall not exceed 25 tons per 12-month period.

C. The Lake County Air Quality Management District (LCAQMD) shall be notified pursuant to Rule 510 regarding equipment breakdown.

D. Visible emissions shall not exceed Ringelmann 1 (20% opacity) from the engine exhaust stack for more than three (3) minutes in any one (1) hour.

Condition 2: Administrative

A. This permit has been issued and is valid for emergency generator use when commercial line power is not available because of an emergency or line maintenance outage. Load shedding for cost reduction is not allowed under this permit. Such anticipated use will subject the source to NSR and reassessment.

B. Testing and maintenance operations are allowed for up to 50 hours per 12-month period.

C. The generator shall be propane fueled only, conversion or replacement with diesel shall require reassessment and compliance with the Air Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines.

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 17-76-36A

Lake County Air Quality Management District

2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart

Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date: 10/31/2020* *Valid through: 10/31/2021* *Category: IV*

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	Francisco Padsite
Location:	400m S of N, 310m E of W, Sections 5, T11N, R8W, MDB&M, Lake County Francisco Pad, Francisco / Bottle Rock Leasehold, Cobb Valley, CA

Name and Equipment Description: **Francisco 1-5**

One (1) geothermal production well, associated valving, condensate and rock removal (catcher) and bleed muffler servicing the Bottle Rock Geothermal Power Plant.

Permit Conditions

Condition 1 Bottle Rock Power, LLC (BRP) shall perform and forward to the Lake County Air Quality Management District (LCAQMD), the following characterization of hot water, steam, particulates and/or gases emanating from the subject well(s) within sixty (60) days after completion of the initial geothermal drilling and testing. If the well is abandoned, no analyses will be necessary.

STEAM CONDENSATE/TOTAL STEAM: Benzene, Ammonium (total)*, Arsenic*, Bicarbonate and Carbonate, Sulfates, Chlorides, Nitrates, Boron (total)*, Hydrogen Sulfide (H2S) (total)*, Fluorides (total), Mercury (total), pH, Total Dissolved Solids, Total Suspended Solids, Percent Non-Condensables, and Steam Flow and Temperature*.

GAS PHASE: Benzene, Particulate in Steam (ug particulate/g of Steam, Arsenic, Lead, Cadmium, Total Sulfur, Boron), Ammonia, Mercury Vapor, Radon 222 and Daughters, Methane, Non-Methane Hydrocarbons, Carbon Dioxide, and NESHAPS pollutants as requested. Tests can be performed utilizing the bleed of the subject well(s) or during flow testing. Gas phase (non-condensables or steam diluted with air as appropriate to maintain gas phase and integrity of sample) tests are to be performed if wells are placed on long term standby bleed. The test protocol shall be submitted to the LCAQMD at least three (3) weeks before such sample collection and analytical testing is planned and shall be approved by the LCAQMD prior to actual source testing. If the well is produced immediately, the LCAQMD may delay required testing (specifically those items without an asterisk) until circumstances require a sustained bleed status of the well, this shall be at the LCAQMD's option and BRP's request.

Condition 2 BRP shall notify the LCAQMD at least twenty-four (24) hours prior to initiating the planned venting of the herein permitted well or any associated group of well(s) in the LCAQMD owned or operated by BRP.

Condition 3 In the event source testing of the herein permitted geothermal well is deemed necessary by the Air Pollution Control Officer (APCO), BRP will be available within ten (10) days after written notice to open said well for a 4-8 hour duration.

Condition 4 If chemical or particulate analysis performed as part of Condition 1 suggests the need for further study, including air dispersion analysis, BRP will assist, perform or finance such studies if deemed reasonable and necessary by the APCO.

Condition 5 If locks or unmanned gates are used to secure the project area, the LCAQMD or its representative, will be given keys or combinations and

(Conditions 5 through 19 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 2006-07

Lake County Air Quality Management District
2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	Francisco Padsite
Location:	400m S of N, 310m E of W, Sections 5, T11N, R8W, MDB&M, Lake County Francisco Pad, Francisco / Bottle Rock Leasehold, Cobb Valley, CA

Name and Equipment Description: **Francisco 2-5 Re-Drill**

Geothermal drilling rig and accessories (NCPA Rig #1), Four electrical generators (CAT D-398TA 750 HP diesel engines PERP Registered), three air compressors (Cummins QSK19-C700 700 HP turbocharged diesel powered air compressors), one down hole misting pump; hydrogen sulfide abatement system utilizing high pressure injection of NaOH and H2O2; and particulate control equipment consisting of misting down hole, constricting and non constricting venturi contactors, low pressure water spray, expanding blooie line, properly sized, smoothed, tangential wet cyclone, properly designed drop or hopper, water treatment and management systems, necessary metering and measuring devices and associated equipment.

Permit Conditions

Condition 1: Emissions

A. Bottle Rock Power, LLC (BRP) shall limit hydrogen sulfide (H2S) emissions during drilling, clean out, and testing to no more than five (5) pounds of H2S per hour and no more than twenty-four (24) pounds per day during all other phases of this project. During verifiable breakdown and for any hot-liner runs, Rule 510 and procedures shall apply. In the event of atmospheric conditions (e.g., drainage, limited mixing, fumigation, downwash, etc.) that result in complaints and concern in receptor areas from high levels of H2S, BRP agrees to reduce the H2S emission limit to two (2) pounds of H2S using abatement plan at the request of the Air Pollution Control Officer (APCO). Certain exceptions to the H2S emission limitations may be allowed by the APCO, in writing, for resource testing if such tests are 12 hours or less in duration and coincide with acceptable meteorological conditions verified by the APCO to ensure good dispersion.

B. If excessively high H2S levels are encountered during drilling, BRP will either: 1) Place into operation additional H2S abatement capacity, or 2) Cease operation and close in the well according to appropriate standards of operation. For the purposes of this permit, excessively high levels of H2S means abated emissions greater than five (5) pounds of H2S per hour or abated emission levels in excess of 500 ppmv.

C. Visible emissions shall not exceed the values listed below for more than three (3) minutes in any one (1) hour: • Ringelmann 0.5 (10% opacity) for detached plume at the cyclone; • Ringelmann 0.5 (10% opacity) for combustion emissions of engine exhaust; and • Ringelmann 1 (20% opacity) for road and pad dust emissions.

D. On commencement of air drilling in significant serpentine, the well logger shall obtain bulk samples that shall be analyzed for asbestos content using TEM, SEM or PLM (California Air Resources Board [ARB] Method 435 Procedures). For the purpose of defining a significant serpentine deposit during geothermal air drilling: "Significant Serpentine" shall mean; drill cutting samples from two consecutive ten-foot interval-drilling sections identified as having 10% or greater serpentine or other asbestos containing ore. The Lake County Air Quality Management District (LCAQMD) shall be promptly notified by phone at 263-7000, provided samples of the drilled material, and unless otherwise agreed upon in writing, notified of the bulk asbestos analysis results within ten working days of sampling.

E. During drilling in significant serpentine visible emissions shall not exceed Ringelmann 0.25 (5% opacity) for detached plume at the cyclone. BRP shall: 1) Increase down hole misting; 2) Increase water loading at the venturi; 3) Reducing the drilling rate; 4) Use wetting agents; and/or 5) Implement additional solids filtration of working water. Such additional effort shall continue until drilling is clear of significant serpentine/asbestos.

Condition 2: Administrative

A. This permit has been issued as a modification to include cleanout, forking or deepening of the well as described in the application and permit review. This permit does not establish a precedent for the issuance of additional permits.

B. The submitted BRP (Tecton) H2S abatement plan approved by the APCO shall be implemented and followed, and is incorporated herein by reference. Logbook entries shall be made a minimum of four (4) times daily while drilling on air or in steam.

C. Diesel fuel utilized shall be California Low Sulfur Diesel containing less than 15ppmw sulfur.

D. If a vapor dominated resource is encountered and it is determined that emissions cannot be maintained pursuant to Parts A & B of LCAQMD Rule 421; or the APCO determines that the well on stand-by (bleed) status will violate the intent of LCAQMD Rule 602 or the associated steamfield permit, then BRP shall with approval of the APCO, install and utilize additional abatement equipment as necessary to bring emissions into compliance. This may include, but is not limited to, immediate conversion to an injector, gas capping, down-hole plugging, and/or the complete closing in of any well in violation of LCAQMD Rules and Regulations.

E. BRP shall utilize the same particulate abatement system described in the permitting review(s) and includes the following configuration: 1) A non-constricting venturi in the smallest diameter portion of the blooie line (non-constricting venturi 12"-15") for use when flow of at least 20,000 lbs/hr air/steam and a converging venturi scrubber when

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

PERMIT TO OPERATE

Lake County Air Quality Management District

2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

Permit # P/O 85-030A

By: Douglas Gearhart

Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	Francisco Padsite
Location:	400m S of N, 310m E of W, Sections 5, T11N, R8W, MDB&M, Lake County Francisco Pad, Francisco / Bottle Rock Leasehold, Cobb Valley, CA

Name and Equipment Description: **Francisco 3-5**

One (1) geothermal production well, associated valving, condensate and rock removal (catcher) and bleed muffler servicing the Bottle Rock Geothermal Power Plant.

Permit Conditions

Condition 1 The herein permitted well shall be operated in compliance and consistent with the steam transmission and power plant Authority to Construct (A/C) and Permit to Operate (P/O) conditions where applicable. The herein permitted well shall be operated in compliance with all Lake County Air Quality Management District (LCAQMD), State, and Federal laws and regulations.

Condition 2 Bottle Rock Power, LLC (BRP) shall notify the LCAQMD at least twenty-four (24) hours prior to initiating the planned venting of any well or group of wells in the LCAQMD owned or operated by BRP in an amount in excess of either 3,000 lbs of steam per hour per well or 20,000 lbs of steam per hour total. Testing to characterize emissions may be required by the Air Pollution Control Officer (APCO) for significant well bleeds or vents. In the event source testing of any geothermal well is deemed necessary by the APCO, BRP will provide safe access and sampling ports.

Condition 3 BRP shall submit to the LCAQMD an application for, and receive, an A/C or modify permit prior to constructing, erecting, altering or replacing any equipment which may cause, potentially cause, reduce, control or eliminate the issuance of air contaminants. This does not include normal and routine maintenance nor well clean out and repairs. It does include deepening, altering or increasing the well bore size in a manner to constitute a modification of the source. BRP shall notify the LCAQMD in advance of, and receive approval for, any planned reworking/maintenance of any of the herein permitted production wells. Conditions for approval of such maintenance work will consider the level and duration of emissions, and the conditions incorporated in current BRP A/C permits and performance plans. BRP shall within thirty (30) days after the completion of re-drilling, re-working or flow testing submit to the LCAQMD the results of any routine or required chemical analysis and/or testing accomplished for the herein listed geothermal development wells that indicate emissions or potential emissions into the air.

(Conditions 4 through 12 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 2014-09

Lake County Air Quality Management District

2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart

Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact: Ms. Alice Bray
Owner: Bottle Rock Power, LLC
Mailing Address: 4010 Stone Way N, Suite 400
Seattle, WA 98103

Facility: Francisco Padsite
Location: 400m S of N, 310m E of W, Sections 5, T11N, R8W, MDB&M, Lake County
Francisco Pad, Francisco / Bottle Rock Leasehold, Cobb Valley, CA

Name and Equipment Description: **Francisco 4-5**

One (1) geothermal production/injection well, associated valving, condensate and rock removal (catcher), and bleed muffler servicing the Bottle Rock Geothermal Power Plant.

Permit Conditions

Condition 1: Emissions

A. Bottle Rock Power, LLC (BRP) shall limit Hydrogen Sulfide (H2S) emissions during drilling, clean out, and testing to no more than five (5) pounds of H2S per hour and no more than twenty-four (24) pounds per day during all other phases of this project. During verified breakdown and for hot-liner installations, Lake County Air Quality Management District (LCAQMD) Rule 510 and procedures shall apply. In the event of atmospheric conditions (*e.g.*, drainage, limited mixing, fumigation, downwash, etc.) that result in complaints and concern in receptor areas from high levels of H2S, BRP agrees to reduce the H2S emission limit to two (2) pounds or less of H2S per hour, consistent with the BRP H2S Abatement Plan, at the request of the Air Pollution Control Officer (APCO). Certain exceptions to the H2S emission limitations may be allowed by the APCO, in writing, for resource testing if such tests are 12 hours or less in duration and coincide with acceptable meteorological conditions verified by the APCO to ensure good dispersion.

B. If excessively high H2S levels are encountered during drilling, BRP will either: a) Place into operation additional H2S abatement capacity, or b) Cease operation and close in the well according to appropriate standards of operation. For the purposes of this permit, excessively high levels of H2S means abated emissions greater than five (5) pounds of H2S per hour or abated emission levels in excess of 500 ppm volume.

C. Visible emissions shall not exceed the values listed below for more than three (3) minutes in any one (1) hour: • Ringelmann 0.5 (10% opacity) for detached plume at the cyclone; • Ringelmann 0.5 (10% opacity) for combustion emissions engine exhaust; and • Ringelmann 1 (20% opacity) for road and pad dust emissions.

D. On commencement of air drilling in significant serpentine or upon experiencing red/pink plume exiting the cyclone, the well logger shall immediately obtain bulk samples of the drilled material and log the event in the abatement logbook, and shall be analyzed for asbestos content using TEM, SEM or PLM (California Air Resources Board [ARB] Method 435 Procedures). "Experiencing a pink/red plume" shall mean a plume of greater than 5% opacity lasting for 30 or more seconds. For the purpose of defining a significant serpentine deposit during geothermal air drilling: "Significant Serpentine" shall mean; drill cutting samples from two consecutive ten-foot interval-drilling sections identified as having 10% or greater serpentine content. The LCAQMD shall be promptly notified by phone at 263-7000, provided a portion of the divided bulk samples of the drilled material, and unless otherwise agreed upon in writing, notified of the bulk asbestos analysis results within ten (10) working days of sampling. Bulk Samples collected upon experiencing a pink/red plume shall be promptly analyzed by XRF, or other acceptable means, to include at a minimum arsenic, chrome, nickel and cadmium. BRP shall, to the extent practical attempt to collect a sample of the particulate from the pink/red plume, and/or assist the LCAQMD in such an attempt, for analysis as described.

E. During drilling in significant serpentine, or while experiencing a pink/red plume, visible emissions shall not exceed Ringelmann 0.25 (5% opacity) for detached plume at the cyclone. BRP shall: 1) Increase down hole misting; 2) Increase water loading at the venturi; 3) Reducing the drilling rate; 4) Use wetting agents; and/or 5) Implement additional solids filtration of working water. Such additional effort shall continue until drilling is clear of significant serpentine or drilling conditions contributing to the formation of pink/red plume.

Condition 2: Administrative

A. This permit has been issued for the geothermal well to function in either injection or production mode. The well is constructed at a total depth of 9,901 feet and includes a well bore, well head, valving, piping, flanges, geothermal fluid transmission line header connections, side leg kick-out, two part slotted liner, and associated corrosion mitigation injection equipment. This permit does not establish a precedent for the issuance of additional permits.

B. The submitted BRP H2S abatement plan approved by the APCO or subsequent approved revision, shall be implemented and followed, and is incorporated herein by reference. Logbook entries shall be made a minimum of four (4) times daily.

C. Diesel fuel utilized shall be California Low Sulfur Diesel containing less than 15 ppmw sulfur.

D. If a vapor dominated resource is encountered and it is determined that emissions cannot be maintained pursuant to Parts A & B of LCAQMD Rule 421; or the APCO determines that the well on stand-by (bleed) status will violate the intent of LCAQMD Rule 602, then BRP shall with approval of the APCO, install and utilize additional abatement equipment as necessary to bring emissions into compliance. This may include, but is not limited to, immediate conversion to an injector, gas capping, down-hole plugging, and/or the complete closing in of any well in violation of LCAQMD Rules and Regulations.

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

PERMIT TO OPERATE

Lake County Air Quality Management District

2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

Permit # P/O 86-074A

By: Douglas G. Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	Francisco Padsite
Location:	400m S of N, 310m E of W, Sections 5, T11N, R8W, MDB&M, Lake County Francisco Pad, Francisco / Bottle Rock Leasehold, Cobb Valley, CA

Name and Equipment Description: **Francisco 5-5**

One (1) geothermal production well, associated valving, condensate and rock removal (catcher) and bleed muffler servicing the Bottle Rock Geothermal Power Plant.

Permit Conditions

Condition 1 The herein permitted well shall be operated in compliance and consistent with the steam transmission and power plant Authority to Construct (A/C) and Permit to Operate (P/O) conditions where applicable. The herein permitted well shall be operated in compliance with all Lake County Air Quality Management District (LCAQMD), State, and Federal laws and regulations.

Condition 2 Bottle Rock Power, LLC (BRP) shall notify the LCAQMD at least twenty-four (24) hours prior to initiating the planned venting of any well or group of wells in the LCAQMD owned or operated by BRP in an amount in excess of either 3,000 lbs of steam per hour per well or 20,000 lbs of steam per hour total. Testing to characterize emissions may be required by the Air Pollution Control Officer (APCO) for significant well bleeds or vents. In the event source testing of any geothermal well is deemed necessary by the APCO, BRP will provide safe access and sampling ports.

Condition 3 BRP shall submit to the LCAQMD an application for, and receive, an A/C or modify permit prior to constructing, erecting, altering or replacing any equipment which may cause, potentially cause, reduce, control or eliminate the issuance of air contaminants. This does not include normal and routine maintenance nor well clean out and repairs. It does include deepening, altering or increasing the well bore size in a manner to constitute a modification of the source. BRP shall notify the LCAQMD in advance of, and receive approval for, any planned reworking/maintenance of any of the herein permitted production wells. Conditions for approval of such maintenance work will consider the level and duration of emissions, and the conditions incorporated in current BRP A/C permits and performance plans. BRP shall within thirty (30) days after the completion of re-drilling, re-working or flow testing submit to the LCAQMD the results of any routine or required chemical analysis and/or testing accomplished for the herein listed geothermal development wells that indicate emissions or potential emissions into the air.

(Conditions 4 through 12 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 86-041A

Lake County Air Quality Management District
2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date: 10/31/2020* *Valid through: 10/31/2021* *Category: IV*

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Contact: Ms. Alice Bray
Owner: Bottle Rock Power, LLC
Mailing Address: 4010 Stone Way N, Suite 400
Seattle, WA 98103

Facility: Francisco Padsite
Location: 400m S of N, 310m E of W, Sections 5, T11N, R8W, MDB&M, Lake County
Francisco Pad, Francisco / Bottle Rock Leasehold, Cobb Valley, CA

Name and Equipment Description: **Francisco 6-5**

One (1) geothermal production well, associated valving, condensate and rock removal (catcher) and bleed muffler servicing the Bottle Rock Geothermal Power Plant.

Permit Conditions

Condition 1 Bottle Rock Power, LLC (BRP) shall perform and forward to the Lake County Air Quality Management District (LCAQMD), the following characterization of hot water, steam, particulates and/or gases emanating from the subject well(s) within sixty (60) days after completion of the initial geothermal drilling and testing. If the well is abandoned, no analyses will be necessary.

STEAM CONDENSATE/TOTAL STEAM: Benzene, Ammonium (total)*, Arsenic*, Bicarbonate and Carbonate, Sulfates, Chlorides, Nitrates, Boron (total)*, Hydrogen Sulfide (H2S) (total)*, Fluorides (total), Mercury (total), pH, Total Dissolved Solids, Total Suspended Solids, Percent Non-Condensables, and Steam Flow and Temperature*.

GAS PHASE: Benzene, Particulate in Steam (ug particulate/g of Steam, Arsenic, Lead, Cadmium, Total Sulfur, Boron), Ammonia, Mercury Vapor, Radon 222 and Daughters, Methane, Non-Methane Hydrocarbons, Carbon Dioxide, and NESHAPS pollutants as requested. Tests can be performed utilizing the bleed of the subject well(s) or during flow testing. Gas phase (non-condensables or steam diluted with air as appropriate to maintain gas phase and integrity of sample) tests are to be performed if wells are placed on long term standby bleed. The test protocol shall be submitted to the LCAQMD at least three (3) weeks before such sample collection and analytical testing is planned and shall be approved by the LCAQMD prior to actual source testing. If the well is produced immediately, the LCAQMD may delay required testing (specifically those items without an asterisk) until circumstances require a sustained bleed status of the well, this shall be at the LCAQMD's option and BRP's request.

Condition 2 BRP shall notify the LCAQMD at least twenty-four (24) hours prior to initiating the planned venting of the herein permitted well or any associated group of well(s) in the LCAQMD owned or operated by BRP.

Condition 3 In the event source testing of the herein permitted geothermal well is deemed necessary by the Air Pollution Control Officer (APCO), BRP will be available within ten (10) days after written notice to open said well for a 4-8 hour duration.

Condition 4 If chemical or particulate analysis performed as part of Condition 1 suggests the need for further study, including air dispersion analysis, BRP will assist, perform or finance such studies if deemed reasonable and necessary by the APCO.

Condition 5 If locks or unmanned gates are used to secure the project area, the LCAQMD or its representative, will be given keys or combinations and

(Conditions 5 through 19 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 86-042A

Lake County Air Quality Management District
2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact: Ms. Alice Bray
Owner: Bottle Rock Power, LLC
Mailing Address: 4010 Stone Way N, Suite 400
Seattle, WA 98103

Facility: Francisco Padsite
Location: 400m S of N, 310m E of W, Sections 5, T11N, R8W, MDB&M, Lake County
Francisco Pad, Francisco / Bottle Rock Leasehold, Cobb Valley, CA

Name and Equipment Description: **Francisco 7-5**

One (1) geothermal production well, associated valving, condensate and rock removal (catcher) and bleed muffler servicing the Bottle Rock Geothermal Power Plant.

Permit Conditions

Condition 1 Bottle Rock Power, LLC (BRP) shall perform and forward to the Lake County Air Quality Management District (LCAQMD), the following characterization of hot water, steam, particulates and/or gases emanating from the subject well(s) within sixty (60) days after completion of the initial geothermal drilling and testing. If the well is abandoned, no analyses will be necessary.

STEAM CONDENSATE/TOTAL STEAM: Benzene, Ammonium (total)*, Arsenic*, Bicarbonate and Carbonate, Sulfates, Chlorides, Nitrates, Boron (total)*, Hydrogen Sulfide (H2S) (total)*, Fluorides (total), Mercury (total), pH, Total Dissolved Solids, Total Suspended Solids, Percent Non-Condensables, and Steam Flow and Temperature*.

GAS PHASE: Benzene, Particulate in Steam (ug particulate/g of Steam, Arsenic, Lead, Cadmium, Total Sulfur, Boron), Ammonia, Mercury Vapor, Radon 222 and Daughters, Methane, Non-Methane Hydrocarbons, Carbon Dioxide, and NESHAPS pollutants as requested. Tests can be performed utilizing the bleed of the subject well(s) or during flow testing. Gas phase (non-condensables or steam diluted with air as appropriate to maintain gas phase and integrity of sample) tests are to be performed if wells are placed on long term standby bleed. The test protocol shall be submitted to the LCAQMD at least three (3) weeks before such sample collection and analytical testing is planned and shall be approved by the LCAQMD prior to actual source testing. If the well is produced immediately, the LCAQMD may delay required testing (specifically those items without an asterisk) until circumstances require a sustained bleed status of the well, this shall be at the LCAQMD's option and BRP's request.

Condition 2 BRP shall notify the LCAQMD at least twenty-four (24) hours prior to initiating the planned venting of the herein permitted well or any associated group of well(s) in the LCAQMD owned or operated by BRP.

Condition 3 In the event source testing of the herein permitted geothermal well is deemed necessary by the Air Pollution Control Officer (APCO), BRP will be available within ten (10) days after written notice to open said well for a 4-8 hour duration.

Condition 4 If chemical or particulate analysis performed as part of Condition 1 suggests the need for further study, including air dispersion analysis, BRP will assist, perform or finance such studies if deemed reasonable and necessary by the APCO.

Condition 5 If locks or unmanned gates are used to secure the project area, the LCAQMD or its representative, will be given keys or combinations and

(Conditions 5 through 19 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 2008-28

Lake County Air Quality Management District

2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart

Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date: 10/31/2020* *Valid through: 10/31/2021* *Category: IV*

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	Francisco Padsite
Location:	400m S of N, 310m E of W, Sections 5, T11N, R8W, MDB&M, Lake County Francisco Pad, Francisco / Bottle Rock Leasehold, Cobb Valley, CA

Name and Equipment Description: **Francisco 9-5**

Geothermal drilling rig and accessories (ThermaSource Rig # 108 or equivalent), three (3) electrical generators (1101 Hp CAT 3512 turbocharged PERP registered diesel engines), one (1) top drive engine (1205Hp Detroit diesel model R1638K40 turbocharged and after-cooled, PERP registered diesel engine), three (3) air compressors (717 Hp CAT 900 series turbocharged and after-cooled, diesel PERP registered engines), one (1) air compressor (700 Hp CAT C-18 turbocharged and after-cooled, PERP registered diesel engine), one (1) down hole misting pump (110 Hp Cummins QSB4.5 turbocharged PERP registered diesel engine); H2S abatement system utilizing high pressure injection of NaOH and H2O2; drawdown chemical flow metering devices; particulate control equipment consisting of misting down hole, constricting and non constricting venturi contactors, low pressure water spray, expanding blooie line, properly sized, smoothed, tangential wet cyclone, water treatment and management systems, and metering and measuring devices and associated equipment.

Permit Conditions

Condition 1: Emissions

A. Bottle Rock Power, LLC (BRP) shall limit Hydrogen Sulfide (H2S) emissions during drilling, clean out, and testing to no more than five (5) pounds of H2S per hour and no more than twenty-four (24) pounds per day during all other phases of this project. During verified breakdown and for hot-liner installations, Lake County Air Quality Management District (LCAQMD) Rule 510 and procedures shall apply. In the event of atmospheric conditions (*e.g.*, drainage, limited mixing, fumigation, downwash, etc.) that result in complaints and concern in receptor areas from high levels of H2S, BRP agrees to reduce the H2S emission limit to two (2) pounds or less of H2S per hour consistent with the BRP H2S Abatement Plan, at the request of the Air Pollution Control Officer (APCO). Certain exceptions to the H2S emission limitations may be allowed by the APCO, in writing, for resource testing if such tests are 12 hours or less in duration and coincide with acceptable meteorological conditions verified by the APCO to ensure good dispersion.

B. If excessively high H2S levels are encountered during drilling, BRP will either: a) Place into operation additional H2S abatement capacity, or b) Cease operation and close in the well according to appropriate standards of operation. For the purposes of this permit, excessively high levels of H2S means abated emissions greater than five (5) pounds of H2S per hour or abated emission levels in excess of 500 ppm volume.

C. Visible emissions shall not exceed the values listed below for more than three (3) minutes in any one (1) hour: • Ringelmann 0.5 (10% opacity) for detached plume at the cyclone; • Ringelmann 0.5 (10% opacity) for combustion emissions engine exhaust; and • Ringelmann 1 (20% opacity) for road and pad dust emissions.

D. On commencement of air drilling in significant serpentine or upon experiencing red/pink plume exiting the cyclone, the well logger shall immediately obtain bulk samples of the drilled material and log the event in the abatement logbook, and shall be analyzed for asbestos content using TEM, SEM or PLM (California Air Resources Board [ARB] Method 435 Procedures). "Experiencing a pink/red plume" shall mean a plume of greater than 5% opacity lasting for 30 or more seconds. For the purpose of defining a significant serpentine deposit during geothermal air drilling: "Significant Serpentine" shall mean; drill cutting samples from two consecutive ten-foot interval-drilling sections identified as having 10% or greater serpentine content. The LCAQMD shall be promptly notified by phone at 263-7000, provided a portion of the divided bulk samples of the drilled material, and unless otherwise agreed upon in writing, notified of the bulk asbestos analysis results within ten working days of sampling. Bulk Samples collected upon experiencing a pink/red plume shall be promptly analyzed by XRF, or other acceptable means, to include at a minimum arsenic, chrome, nickel and cadmium. BRP shall, to the extent practical attempt to collect a sample of the particulate from the pink/red plume, and/or assist the LCAQMD in such an attempt, for analysis as described.

E. During drilling in significant serpentine, or while experiencing a pink/red plume, visible emissions shall not exceed Ringelmann 0.25 (5% opacity) for detached plume at the cyclone. BRP shall: 1) Increase down hole misting; 2) Increase water loading at the venturi; 3) Reducing the drilling rate; 4) Use wetting agents; and/or 5) Implement additional solids filtration of working water. Such additional effort shall continue until drilling is clear of significant serpentine or drilling conditions contributing to the formation of pink/red plume.

Condition 2: Administrative

A. This permit has been issued for the construction of a geothermal production well to a total depth of 11,000 feet and includes a well bore, well head, valving, piping, flanges, geothermal fluid transmission line header connections, side leg kick-out, two part slotted liner, and associated corrosion mitigation injection equipment. This permit does not establish a precedent for the issuance of additional permits.

B. The submitted BRP H2S abatement plan approved by the APCO or subsequent approved revision, shall be implemented and followed, and is incorporated herein by reference. Logbook entries shall be made a minimum of four (4) times daily.

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

PERMIT TO OPERATE

Lake County Air Quality Management District

2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

Permit # P/O 2014-09

By: Douglas Gearhart

Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* II

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	Bottle Rock Power Plant
Location:	Bottle Rock Power Steamfield Storage Yard 7557 High Valley Rd. Cobb, CA 95426

Name and Equipment Description: **Gasoline and/or Diesel Dispensing Facility**

One (1) ConVault above ground split storage tank (500 gallons unleaded and 500 gallons diesel). Phase I vapor recovery: pressure/vacuum (P/V) vent (make Husky, model 5885), 11 ft. Phase II vapor recovery: One (1) diesel dispenser and one (1) unleaded dispenser (make Fillrite, model 305AST), two (2) nozzles (make Husky, model H5010), and two (2) hoses (make Dayco, model DL 509).

Permit Conditions

Condition 1: Emissions

A. The Phase I vapor recovery system shall be properly connected and utilized during all storage tank filling operations.

B. The Phase II vapor recovery system shall be properly connected and utilized during all vehicle fueling.

C. Bottle Rock Power, LLC (BRP) shall maintain all equipment in good working order pursuant to manufacturer's guidelines and applicable California Air Resources Board (ARB) certification, and operate in a manner to prevent or minimize air emissions and gasoline leaks.

D. BRP shall immediately correct any gasoline or vapor leak, and all equipment breakdowns shall be reported to the Lake County Air Quality Management District (LCAQMD) pursuant to Section 510, LCAQMD Rules and Regulations.

Condition 2: Administrative

A. This permit has been issued for the purpose of on site fuel dispensing (no fuel sales), with annual use not to exceed 50,000 gallons.

B. The Phase I vapor recovery system installed on the storage tank(s) shall meet the certification requirements of the ARB.

C. The Phase II vapor recovery system shall be maintained to meet ARB certification requirements.

D. All gasoline storage tanks shall have submerged drop tube/fill pipes terminating a maximum of 6" from the tank bottom.

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 2010-14

Lake County Air Quality Management District
2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date: 10/31/2020* *Valid through: 10/31/2021* *Category: Vb*

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103
Facility:	Bottle Rock Facility
Location:	Sections 5&6, T11N, R8W, MDB&M, Lake County Bottle Rock / Francisco Leasehold, Cobb Valley, CA

Name and Equipment Description: **Steam Transmission Line**

One (1) geothermal fluid collection line, associated valving, condensate collection including re-injection line, and steam release abatement system with particulate and H2S removal servicing the Bottle Rock Geothermal Power Plant and one (1) 2002 78hp John Deere Backhoe Loader EIN #MM5E57. Francisco Pad: one (1) 6,200 gallon vent tank, one (1) 1,500 gallon vent tank, one (1) TECO-Westinghouse (or equivalent) 20 hp electric motor, one (1) 500 gpm Gorman-Rupp (or equivalent) pump, Associated piping, instrumentation, and valves. Coleman Pad: one (1) 1,500 gallon vent tank, up to two (2) 20,000 gallon Baker tanks, one (1) TECO-Westinghouse (or equivalent) 20 hp electric motor, one (1) 500 gpm Gorman-Rupp (or equivalent) pump, associated piping, instrumentation, and valves. West Coleman Pad: one (1) 6,200 gallon vent tank, one (1) 1,500 gallon vent tank, associated piping, instrumentation, and valves.

Permit Conditions

Condition 1: Emissions

A. Condensate bleeds shall be opened and utilized only as necessary during cold start-up of the geothermal fluid transmission line. Other bleeds necessitated by continuous normal operation of this line shall total less than 0.3 lbs hydrogen sulfide (H2S) per hour during any one hour. If necessary, abatement systems shall be installed and/or utilized to ensure fugitive H2S emissions of less than 0.3 lbs/hr.

B. Abatement equipment to be utilized and available to prevent venting of air pollutants into the ambient air shall include an Emergency Stacking H2S Abatement System* capable of treating 100% of the total steam flow delivered through the transmission line; a by-pass to the surface condenser of the serviced power plant and abatement to the same level of emissions as required of the power plant; and the ability to remotely and within minutes cut back steam flow to not more than 50% of full steam flow. All abatement facilities shall be used in series and individually as necessary to ensure that an emissions rate of not more than 5 lbs H2S/hr is obtained.

* This abatement system is described in detail in a document entitled, Emergency Steam Stacking H2S Abatement Study, Bottle Rock Steam Gathering System Final Report; February 1982, Job No. 52-3184-001 by Gibbs & Hill for MCR.

C. Dust emissions of three (3) minutes duration in any one (1) hour will be kept below 20% opacity by use of water, palliatives, or surfacing of roads, pads and parking areas during the construction and operation of condensate collection system modification.

D. In the event of generalized atmospheric conditions or localized dangerous contamination of such a nature as to constitute an emergency creating a danger to the health and welfare of the citizens of Lake County, the Lake County Air Quality Management District (LCAQMD) will take immediate action by requiring Bottle Rock Power, LLC (BRP) to reduce or discontinue air contaminant emissions immediately from fluid (steam) transmission lines. A hearing shall be held by the LCAQMD Hearing Board as soon as practical after such action has been taken to determine whether such reduction or discontinuance shall continue, and if so, under what conditions.

E. Steam stacking under normal operations shall be treated by the use of the turbine by-pass to power plant condenser and abated utilizing the power plant abatement system. A de-mister or water scrubber shall be used to ensure compliance with LCAQMD Rule 411 when venting directly downstream and utilizing the steam stacking emergency abatement system.

F. When the total accumulative emissions from this development project during construction reach the five (5) pounds per hour level, or public nuisance issues be validated, BRP shall, at the request of the Air Pollution Control Officer (APCO), assist in obtaining funding to install and maintain, or fund the LCAQMD to install and maintain, an air quality monitoring site (H2S, wind direction, wind speed, temperature) to assist the LCAQMD in determining compliance and the validity of emission limitations as set forth in these conditions.

G. Regarding the turbine by-pass to main condenser power plant abatement system, BRP shall, to the extent possible, work to incorporate reliable and proven valves, noise attenuation of the valving, and desuperheating of by-passed steam/or account for in the design of the system, to maintain the ability to

(Conditions 1 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

PERMIT TO OPERATE

Lake County Air Quality Management District

2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

Permit # P/O 2010-04

By: Douglas Gearhart

Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103
Facility:	Bottle Rock Facility
Location:	Sec 5, T11N, R8W, MDB&M Lake County Francisco/Coleman Leasehold, Cobb Valley, CA

Name and Equipment Description: **Steam Transmission Line Modifications**

Three (3) gate valves on the Steam Transmission Line to provide full isolation of the Francisco Pad, West Coleman Pad, and Power Plant. Two (2) sets of steam wash nozzles, and associated pumps, valves, and piping, located upstream of the main steam separator. Variable speed chemical feed pumps on the emergency steam stacking emissions control system connected to the Distributed Control System.

Permit Conditions

Condition 1: These modifications were done to the previously existing geothermal fluid (steam) transmission pipeline, steam wash, and emergency steam stacking system servicing the Bottle Rock Power Plant; all other permits, associated conditions, and limitations are not modified. The pipeline shall be constructed and operated in a manner to not increase steam stacking during scheduled and unscheduled power generation or transmission line outages or during power plant startups and shutdowns of the unit. Equipment utilized and/or modified which is significantly different than that described in the permit application is subject to permit application and review.

Condition 2: Pipeline cleanout, testing and startup emissions shall be consistent with the submitted project application and minimized to the extent feasible. Bottle Rock Power, LLC (BRP) shall provide the Lake County Air Quality Management District (LCAQMD) seventy-two (72) hours advance notice of scheduled cleanout and testing operations and obtain prior Air Pollution Control Officer (APCO) approval for the date and time of emissions release or obtain a variance.

Condition 3: All drain water discharged shall be directed to the rich condensate collection and disposal line.

Condition 4: This permit does not modify or make less restrictive any emission limitation, reporting, and/or monitoring/testing requirements that presently exist for this facility.

Condition 5: BRP shall provide the LCAQMD, no less than thirty (30) days subsequent to installation of the herein authorized modification, with as-built drawings for the modification, including all steam or gas vent locations.

Condition 6: BRP shall provide safe access to sampling ports that enable representatives of the LCAQMD, California Air Resources Board, or Environmental Protection Agency to collect samples, as approved by the APCO, from the steam stacking muffler, condensate collection basins, or any point release of steam, gas, or emissions to the ambient air.

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 90-001

Lake County Air Quality Management District
2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact: Ms. Alice Bray
Owner: Bottle Rock Power, LLC
Mailing Address: 4010 Stone Way N, Suite 400
Seattle, WA 98103

Facility: West Coleman Padsite
Location: 640m N of S, 150m W of E, Section 6, T11N, R8W, MDB&M, Lake County
Bottle Rock / Francisco Leasehold, Cobb Valley, CA

Name and Equipment Description: **W. Coleman 1-6 Re-Drill**

One (1) geothermal production well, associated valving, condensate and rock removal (catcher) and bleed muffler servicing the Bottle Rock Geothermal Power Plant.

Permit Conditions

Condition 1 Bottle Rock Power, LLC (BRP) shall operate the proposed abatement system to limit emissions during drilling, initial clean out, and testing to a rate of no more than five (5.0) pounds of hydrogen sulfide (H2S) per hour. Should atmospheric conditions result in nuisance complaints or H2S monitoring at the Glenbrook monitoring station exceed 15 ppb, BRP shall limit emissions to no more than two (2) pounds H2S per hour at the request of the Lake County Air Quality Management District (LCAQMD). Detached plume opacity shall be controlled to a 10% opacity by the injection of no less than 60 GPM and excessive splash over or carry through of drift shall be prevented by properly sizing a cyclone scrubber or other acceptable method. Should the well drilling encounter the condition described as "pink or red plume" during the air drilling, initial cleanout, or testing of the herein permitted geothermal well(s), BRP shall act promptly to enter such information into the abatement log book required as part of the performance plan and shall notify the LCAQMD within one (1) hour after such entry is made. BRP shall have posted on site with the permit, phone numbers of the LCAQMD office (263-7000) or Air Pollution Control Officer (APCO) (391-3232) for contact should such incident occur. BRP shall promptly install an improved blooie line water injection/cyclonic separator for the efficient abatement of high loading of small sized particulate (e.g. 0.5 to 5.0 micron). Said system shall be capable of a water injection capacity of a minimum of (400) GPM with as long a residence/contact time as is practicable. Alternate technological approached as proposed by BRP and approved by the APCO shall be allowed and encouraged, including a reduction in drilling rate and misting down hole.

Condition 2 Road, pad, and yard dust for three (3) minutes or more duration in any one (1) hour shall be kept below Ringelmann 0.5 at all times by making use of watering, palliatives, oiling/chip seal, or surfacing of raods used regularly. BRP shall perform or have performed, at LCAQMD request and by a LCAQMD approved method, geological sampling of serpentine exposures of the pad site and/or access road and provide analysis of the asbestos content of the material prior to the construction. BRP shall surface or otherwise cover and maintain all areas identified as containing significant amounts of asbestos which are subject to vehicular wear.

Condition 3 BRP shall promptly notify the LCAQMD in writing should they learn of or encounter conditions where toxic air emissions of concern from an occupational standpoint occur and which are allowed to disperse into the ambient air as a mitigation. BRP shall install, maintain, and operate a gas alarm at a location and as approved by the APCO.

Condition 4 The BRP H2S abatement plan on file with the LCAQMD is accepted contingent upon changes incorporated herein and shall be followed and implemented. Entries made into an onsite log book shall occur a minimum of four (4) times daily once abatement is initiated, and entries shall be made in ink and signed by a responsible person in a format acceptable to the LCAQMD. The abatement equipment, an abatement performance plan, and log book shall be onsite prior to air drilling. The LCAQMD shall be promptly informed as to the responsible onsite person and location of the log book. The official

(Conditions 4 through 14 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 2005-46

Lake County Air Quality Management District
2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	West Coleman Padsite
Location:	West Coleman 2-6, located on Bottle Rock West Coleman Padsite (1155m So. & 134.9m W of the NE Corner Section 6, T11N, R8W, MDB&M, Lake County, N 397,334 E 1,797,546)

Name and Equipment Description: **W. Coleman 2-6 Re-Drill**

Geothermal drilling rig and accessories (NCPA Rig #1), Four electrical generators (CAT D-398TA 750 HP diesel engines PERP Registered), three air compressors (Cummins QSK19-C700 700 HP turbocharged diesel-powered air compressors PERP Registered), one down hole misting pump; hydrogen sulfide abatement system utilizing high pressure injection of NaOH and H2O2; and particulate control equipment consisting of misting down hole, constricting and non constricting venturi contactors, low pressure water spray, expanding blooie line, properly sized, smoothed, tangential wet cyclone, properly designed drop or hopper, water treatment and management systems, necessary metering and measuring devices and associated equipment.

Permit Conditions

Condition 1: Emissions

A. Bottle Rock Power, LLC (BRP) shall limit hydrogen sulfide (H2S) emissions during drilling, clean out, and testing to no more than five (5) pounds of H2S per hour and no more than twenty-four (24) pounds per day during all other phases of this project. During verifiable breakdown and for any hot-liner runs, Rule 510 and procedures shall apply. In the event of atmospheric conditions (e.g., drainage, limited mixing, fumigation, downwash, etc.) that result in complaints and concern in receptor areas from high levels of H2S, BRP agrees to reduce the H2S emission limit to two (2) pounds of H2S using abatement plan at the request of the Air Pollution Control Officer (APCO). Certain exceptions to the H2S emission limitations may be allowed by the APCO, in writing, for resource testing if such tests are 12 hours or less in duration and coincide with acceptable meteorological conditions verified by the APCO to ensure good dispersion.

B. If excessively high H2S levels are encountered during drilling, BRP will either: 1) Place into operation additional H2S abatement capacity, or 2) Cease operation and close in the well according to appropriate standards of operation. For the purposes of this permit, excessively high levels of H2S means abated emissions greater than five (5) pounds of H2S per hour or abated emission levels in excess of 500 ppmv.

C. Visible emissions shall not exceed the values listed below for more than three (3) minutes in any one (1) hour: • Ringelmann 0.5 (10% opacity) for detached plume at the cyclone; • Ringelmann 0.5 (10% opacity) for combustion emissions of engine exhaust; and • Ringelmann 1 (20% opacity) for road and pad dust emissions.

D. On commencement of air drilling in significant serpentine, the well logger shall obtain bulk samples that shall be analyzed for asbestos content using TEM, SEM or PLM (California Air Resources Board [ARB] Method 435 Procedures). For the purpose of defining a significant serpentine deposit during geothermal air drilling: "Significant Serpentine" shall mean; drill cutting samples from two consecutive ten-foot interval-drilling sections identified as having 10% or greater serpentine or other asbestos-containing rock. The Lake County Air Quality Management District (LCAQMD) shall be promptly notified by phone at 263-7000, provided samples of the drilled material, and unless otherwise agreed upon in writing, notified of the bulk asbestos analysis results within ten working days of sampling.

E. During drilling in significant serpentine visible emissions shall not exceed Ringelmann 0.25 (5% opacity) for detached plume at the cyclone. BRP shall: 1) Increase down hole misting; 2) Increase water loading at the venturi; 3) Reduce the drilling rate; 4) Use wetting agents; and/or 5) Implement additional solids filtration of working water. Such additional effort shall continue until drilling is clear of significant serpentine/asbestos.

Condition 2: Administrative

A. This permit has been issued as a modification to include cleanout, forking or deepening of the well as described in the application and permit review. This permit does not establish a precedent for the issuance of additional permits.

B. The submitted BRP (Tecton) H2S abatement plan approved by the APCO shall be implemented and followed, and is incorporated herein by reference. Logbook entries shall be made a minimum of four (4) times daily while drilling on air or in steam.

C. Diesel fuel utilized shall be California Low Sulfur Diesel containing less than 15ppmw sulfur.

D. If a vapor-dominated resource is encountered and it is determined that emissions cannot be maintained pursuant to Parts A & B of LCAQMD Rule 421; or the APCO determines that the well on stand-by (bleed) status will violate the intent of LCAQMD Rule 602 or the associated steamfield permit, then BRP shall, with approval of the APCO, install and utilize additional abatement equipment as necessary to bring emissions into compliance. This may include, but is not limited to, immediate conversion to an injector, gas capping, down-hole plugging, and/or the complete closing in of any well in violation of LCAQMD Rules and Regulations.

E. BRP shall utilize the particulate scrubbing system as substantially described in the permitting review and includes the following configuration: 1) A smooth expansion blooie line with low-pressure constricting and non-constricting interchangeable venturis with water injection for venturi contact/scrubbing. The non-constricting venturi

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 2005-47

Lake County Air Quality Management District
2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart
Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact:	Ms. Alice Bray
Owner:	Bottle Rock Power, LLC
Mailing Address:	4010 Stone Way N, Suite 400 Seattle, WA 98103

Facility:	West Coleman Padsite
Location:	West Coleman 3-6, located on Bottle Rock West Coleman Padsite (1155m So. & 134.9m W of the NE Corner Section 6, T11N, R8W, MDB&M, Lake County, N 397,334 E 1,797,546)

Name and Equipment Description: **W. Coleman 3-6 Re-Drill**

Geothermal drilling rig and accessories (NCPA Rig #1), Four electrical generators (CAT D-398TA 750 HP diesel engines PERP Registered), three air compressors (Cummins QSK19-C700 700 HP turbocharged diesel-powered air compressors PERP Registered), one down hole misting pump; hydrogen sulfide abatement system utilizing high pressure injection of NaOH and H2O2; and particulate control equipment consisting of misting down hole, constricting and non constricting venturi contactors, low pressure water spray, expanding blooie line, properly sized, smoothed, tangential wet cyclone, properly designed drop or hopper, water treatment and management systems, necessary metering and measuring devices and associated equipment.

Permit Conditions

Condition 1: Emissions

A. Bottle Rock Power, LLC (BRP) shall limit hydrogen sulfide (H2S) emissions during drilling, clean out, and testing to no more than five (5) pounds of H2S per hour and no more than twenty-four (24) pounds per day during all other phases of this project. During verifiable breakdown and for any hot-liner runs, Rule 510 and procedures shall apply. In the event of atmospheric conditions (e.g., drainage, limited mixing, fumigation, downwash, etc.) that result in complaints and concern in receptor areas from high levels of H2S, BRP agrees to reduce the H2S emission limit to two (2) pounds of H2S using abatement plan at the request of the Air Pollution Control Officer (APCO). Certain exceptions to the H2S emission limitations may be allowed by the APCO, in writing, for resource testing if such tests are 12 hours or less in duration and coincide with acceptable meteorological conditions verified by the APCO to ensure good dispersion.

B. If excessively high H2S levels are encountered during drilling, BRP will either: 1) Place into operation additional H2S abatement capacity, or 2) Cease operation and close in the well according to appropriate standards of operation. For the purposes of this permit, excessively high levels of H2S means abated emissions greater than five (5) pounds of H2S per hour or abated emission levels in excess of 500 ppmv.

C. Visible emissions shall not exceed the values listed below for more than three (3) minutes in any one (1) hour: • Ringelmann 0.5 (10% opacity) for detached plume at the cyclone; • Ringelmann 0.5 (10% opacity) for combustion emissions of engine exhaust; and • Ringelmann 1 (20% opacity) for road and pad dust emissions.

D. On commencement of air drilling in significant serpentine, the well logger shall obtain bulk samples that shall be analyzed for asbestos content using TEM, SEM or PLM (California Air Resources Board [ARB] Method 435 Procedures). For the purpose of defining a significant serpentine deposit during geothermal air drilling: "Significant Serpentine" shall mean; drill cutting samples from two consecutive ten-foot interval-drilling sections identified as having 10% or greater serpentine or other asbestos-containing rock. The Lake County Air Quality Management District (LCAQMD) shall be promptly notified by phone at 263-7000, provided samples of the drilled material, and unless otherwise agreed upon in writing, notified of the bulk asbestos analysis results within ten working days of sampling.

E. During drilling in significant serpentine visible emissions shall not exceed Ringelmann 0.25 (5% opacity) for detached plume at the cyclone. BRP shall: 1) Increase down hole misting; 2) Increase water loading at the venturi; 3) Reduce the drilling rate; 4) Use wetting agents; and/or 5) Implement additional solids filtration of working water. Such additional effort shall continue until drilling is clear of significant serpentine/asbestos.

Condition 2: Administrative

A. This permit has been issued as a modification to include cleanout, forking or deepening of the well as described in the application and permit review. This permit does not establish a precedent for the issuance of additional permits.

B. The submitted BRP (Tecton) H2S abatement plan approved by the APCO shall be implemented and followed, and is incorporated herein by reference. Logbook entries shall be made a minimum of four (4) times daily while drilling on air or in steam.

C. Diesel fuel utilized shall be California Low Sulfur Diesel containing less than 15ppmw sulfur.

D. If a vapor-dominated resource is encountered and it is determined that emissions cannot be maintained pursuant to Parts A & B of LCAQMD Rule 421; or the APCO determines that the well on stand-by (bleed) status will violate the intent of LCAQMD Rule 602 or the associated steamfield permit, then BRP shall, with approval of the APCO, install and utilize additional abatement equipment as necessary to bring emissions into compliance. This may include, but is not limited to, immediate conversion to an injector, gas capping, down-hole plugging, and/or the complete closing in of any well in violation of LCAQMD Rules and Regulations.

E. BRP shall utilize the particulate scrubbing system as substantially described in the permitting review and includes the following configuration: 1) A smooth expansion blooie line with low-pressure constricting and non-constricting interchangeable venturis with water injection for venturi contact/scrubbing. The non-constricting venturi

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 2005-45

Lake County Air Quality Management District

2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart

Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

Operations under this permit must be conducted in compliance with all specifications and data included with the application under which this permit was issued. Equipment must be properly maintained and kept in good condition at all times. Post this permit or a facsimile (with conditions) in a conspicuous location on or near the equipment.

Contact: Ms. Alice Bray
Owner: Bottle Rock Power, LLC
Mailing Address: 4010 Stone Way N, Suite 400, Seattle, WA 98103

Facility: West Coleman Padsite
Location: West Coleman 4-6, located on Bottle Rock West Coleman Padsite (1155m So. & 134.9m W of the NE Corner Section 6, T11N, R8W, MDB&M, Lake County, N 397,334 E 1,797,546)

Name and Equipment Description: **W. Coleman 4-6 Re-Drill**

Geothermal drilling rig and accessories (NCPA Rig #1), Four electrical generators (CAT D-398TA 750 HP diesel engines PERP Registered), three air compressors (Cummins QSK19-C700 700 HP turbocharged diesel-powered air compressors PERP Registered), one down hole misting pump; hydrogen sulfide abatement system utilizing high pressure injection of NaOH and H2O2; and particulate control equipment consisting of misting down hole, constricting and non constricting venturi contactors, low pressure water spray, expanding blooie line, properly sized, smoothed, tangential wet cyclone, properly designed drop or hopper, water treatment and management systems, necessary metering and measuring devices and associated equipment.

Permit Conditions

Condition 1: Emissions

A. Bottle Rock Power, LLC (BRP) shall limit hydrogen sulfide (H2S) emissions during drilling, clean out, and testing to no more than five (5) pounds of H2S per hour and no more than twenty-four (24) pounds per day during all other phases of this project. During verifiable breakdown and for any hot-liner runs, Rule 510 and procedures shall apply. In the event of atmospheric conditions (e.g., drainage, limited mixing, fumigation, downwash, etc.) that result in complaints and concern in receptor areas from high levels of H2S, BRP agrees to reduce the H2S emission limit to two (2) pounds of H2S using abatement plan at the request of the Air Pollution Control Officer (APCO). Certain exceptions to the H2S emission limitations may be allowed by the APCO, in writing, for resource testing if such tests are 12 hours or less in duration and coincide with acceptable meteorological conditions verified by the APCO to ensure good dispersion.

B. If excessively high H2S levels are encountered during drilling, BRP will either: 1) Place into operation additional H2S abatement capacity, or 2) Cease operation and close in the well according to appropriate standards of operation. For the purposes of this permit, excessively high levels of H2S means abated emissions greater than five (5) pounds of H2S per hour or abated emission levels in excess of 500 ppmv.

C. Visible emissions shall not exceed the values listed below for more than three (3) minutes in any one (1) hour: • Ringelmann 0.5 (10% opacity) for detached plume at the cyclone; • Ringelmann 0.5 (10% opacity) for combustion emissions of engine exhaust; and • Ringelmann 1 (20% opacity) for road and pad dust emissions.

D. On commencement of air drilling in significant serpentine, the well logger shall obtain bulk samples that shall be analyzed for asbestos content using TEM, SEM or PLM (California Air Resources Board [ARB] Method 435 Procedures). For the purpose of defining a significant serpentine deposit during geothermal air drilling: "Significant Serpentine" shall mean; drill cutting samples from two consecutive ten-foot interval-drilling sections identified as having 10% or greater serpentine or other asbestos-containing rock. The Lake County Air Quality Management District (LCAQMD) shall be promptly notified by phone at 263-7000, provided samples of the drilled material, and unless otherwise agreed upon in writing, notified of the bulk asbestos analysis results within ten working days of sampling.

E. During drilling in significant serpentine visible emissions shall not exceed Ringelmann 0.25 (5% opacity) for detached plume at the cyclone. BRP shall: 1) Increase down hole misting; 2) Increase water loading at the venturi; 3) Reduce the drilling rate; 4) Use wetting agents; and/or 5) Implement additional solids filtration of working water. Such additional effort shall continue until drilling is clear of significant serpentine/asbestos.

Condition 2: Administrative

A. This permit has been issued as a modification to include cleanout, forking or deepening of the well as described in the application and permit review. This permit does not establish a precedent for the issuance of additional permits.

B. The submitted BRP (Tecton) H2S abatement plan approved by the APCO shall be implemented and followed, and is incorporated herein by reference. Logbook entries shall be made a minimum of four (4) times daily while drilling on air or in steam.

C. Diesel fuel utilized shall be California Low Sulfur Diesel containing less than 15ppmw sulfur.

D. If a vapor-dominated resource is encountered and it is determined that emissions cannot be maintained pursuant to Parts A & B of LCAQMD Rule 421; or the APCO determines that the well on stand-by (bleed) status will violate the intent of LCAQMD Rule 602 or the associated steamfield permit, then BRP shall, with approval of the APCO, install and utilize additional abatement equipment as necessary to bring emissions into compliance. This may include, but is not limited to, immediate conversion to an injector, gas capping, down-hole plugging, and/or the complete closing in of any well in violation of LCAQMD Rules and Regulations.

E. BRP shall utilize the particulate scrubbing system as substantially described in the permitting review and includes the following configuration: 1) A smooth expansion blooie line with low-pressure constricting and non-constricting interchangeable venturis with water injection for venturi contact/scrubbing. The non-constricting venturi

(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

AUTHORITY TO CONSTRUCT

Permit # A/C 2005-48

Lake County Air Quality Management District

2617 S. Main Street, Lakeport, CA 95453 (707) 263-7000, Fax (707) 263-0421

By: Douglas Gearhart

Douglas G. Gearhart, APCO

Type of Issuance: Renewal *Issuance Date:* 10/31/2020 *Valid through:* 10/31/2021 *Category:* IV

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Contact:	Ms. Alice Bray
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(Conditions 2 through 6 are continued on the back of this card)

THIS PERMIT BECOMES VOID UPON CHANGE OF OWNERSHIP OR LOCATION

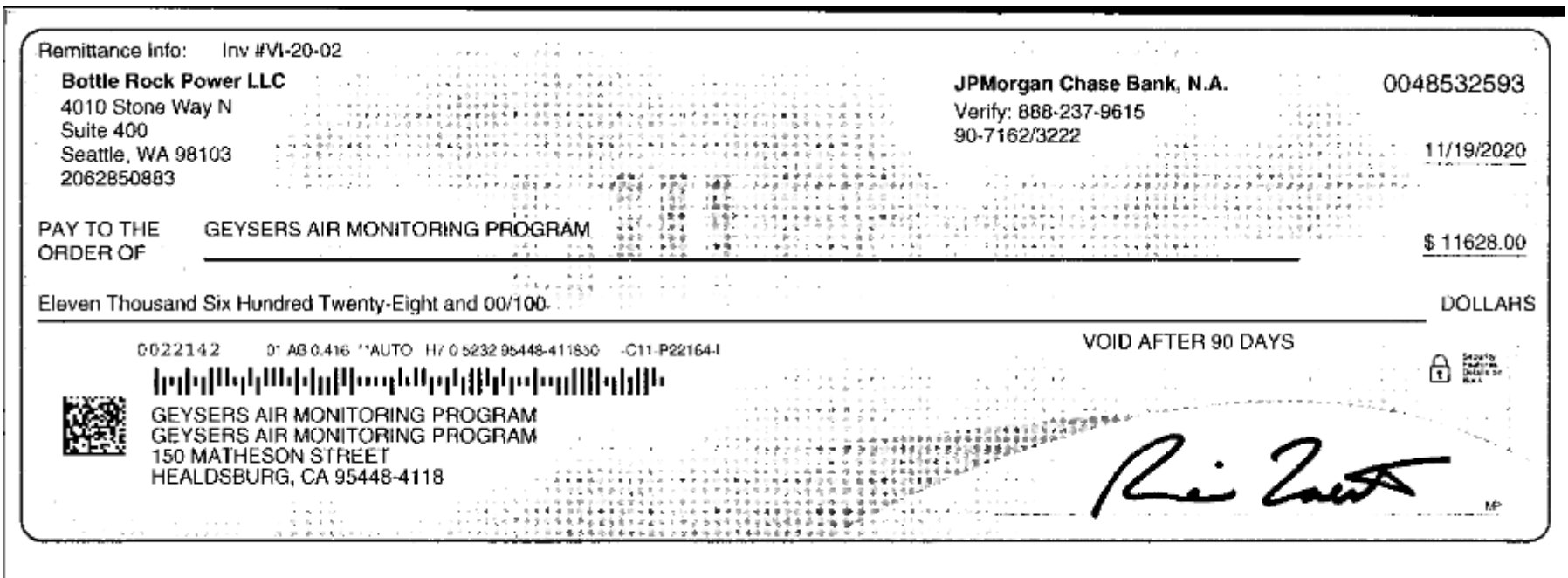
Print

Check Number	48532593	**Amount**	USD 11,628.00
Cleared Date	12/10/20	**Pay To**	GAMP VI c/o NSCAPCD

Bills Paid With This Check

Invoice #	Due Date	Amount	Payment Amount
VI-20-02	12/22/20	USD 11,628.00	USD 11,628.00

Page 1



Remittance Info: Inv #VI-20-02

Bottle Rock Power LLC
4010 Stone Way N
Suite 400
Seattle, WA 98103
2062850883

JPMorgan Chase Bank, N.A.
Verify: 888-237-9615
90-7162/3222

0048532593

11/19/2020

PAY TO THE ORDER OF GEYSERS AIR MONITORING PROGRAM

$ 11628.00

Eleven Thousand Six Hundred Twenty-Eight and 00/100- DOLLARS

0022142 01 AB 0.416 **AUTO H/ 0 5232 95448-411830 -C11-P22164-I

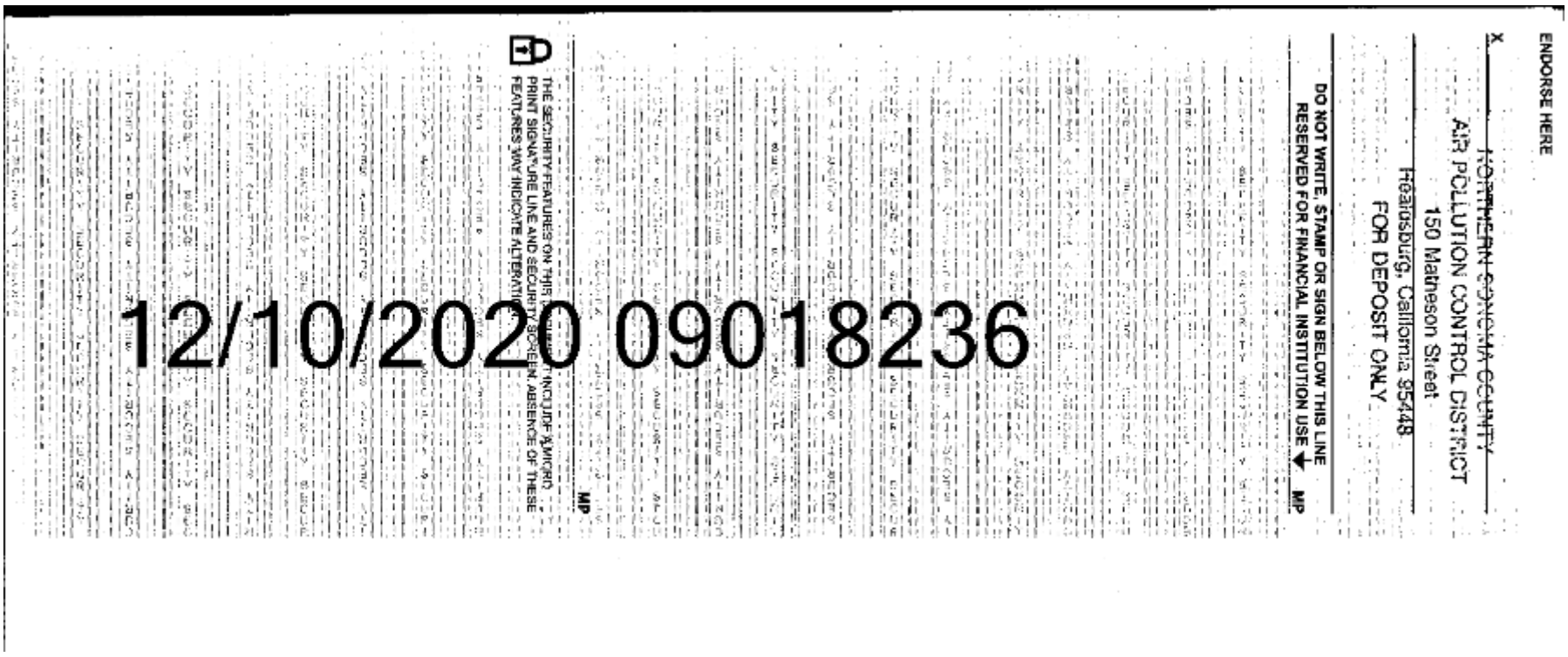
VOID AFTER 90 DAYS

GEYSERS AIR MONITORING PROGRAM
GEYSERS AIR MONITORING PROGRAM
150 MATHESON STREET
HEALDSBURG, CA 95448-4118

MP

⑈0048532593⑈ ⑆322271627⑆ 215376176⑈

Page 2



ENDORSE HERE

X _____

NORTHERN SONOMA COUNTY
AIR POLLUTION CONTROL DISTRICT
150 Matheson Street
Healdsburg, California 95448
FOR DEPOSIT ONLY

DO NOT WRITE, STAMP OR SIGN BELOW THIS LINE
RESERVED FOR FINANCIAL INSTITUTION USE MP

THE SECURITY FEATURES ON THIS DOCUMENT INCLUDE A MICRO PRINT SIGNATURE LINE AND SECURITY SCREEN. ABSENCE OF THESE FEATURES MAY INDICATE ALTERATION

12/10/2020 09018236

Appendix 3

Figure 1 - Vegetation Monitoring Map

Table 1 – Vegetation & Soil Boron Analytical Results

Vegetation & Soil Boron Analytical Reports

Figure 2 – Water Monitoring Map

Table 2 – Groundwater & Surface Water Analytical Results

Groundwater & Surface Water Analytical Reports

Biennial Biological Monitoring Report

Bottle Rock Power, LLC - Vegetation Monitoring Locations

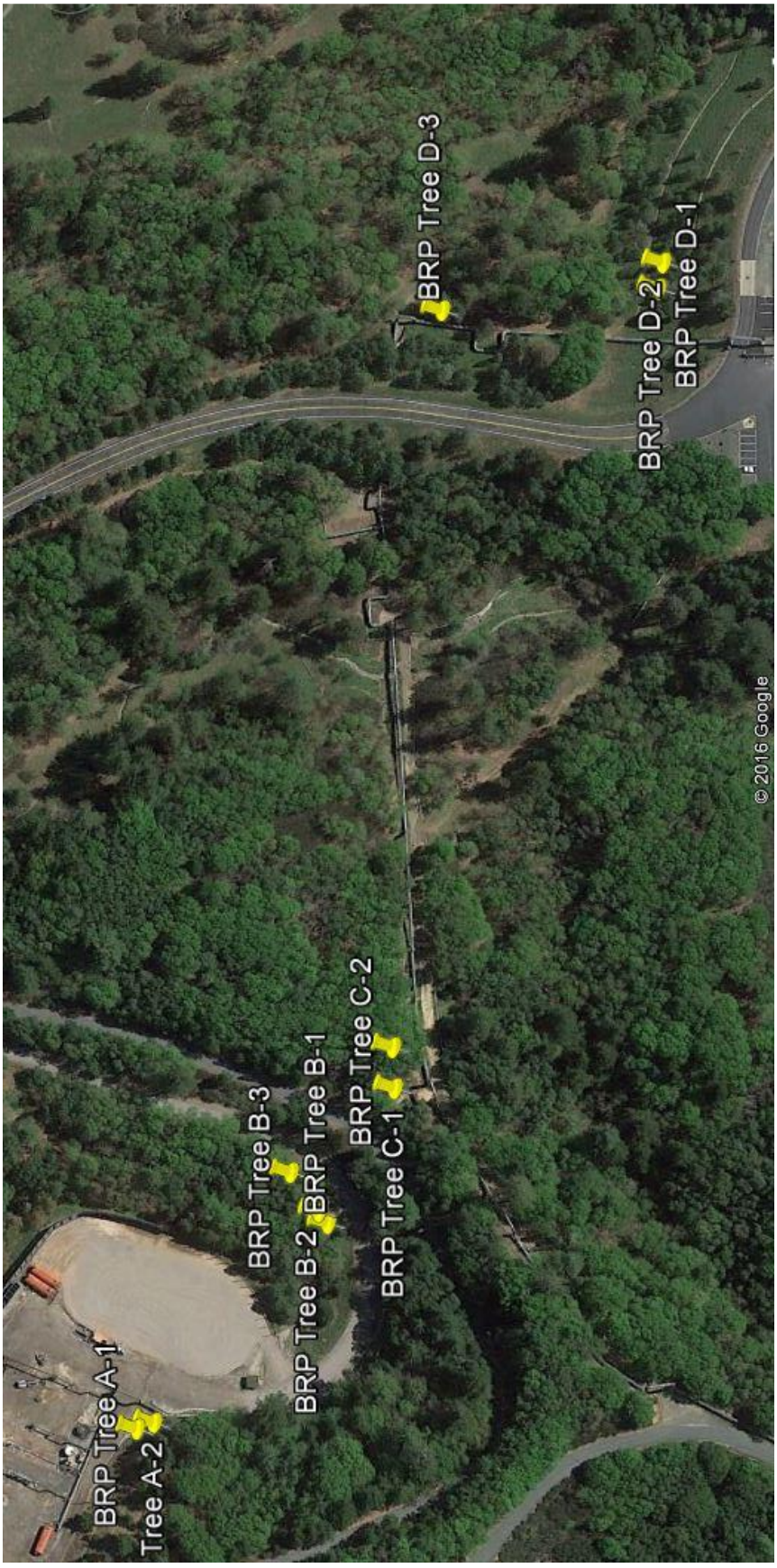


Table 1

Bottle Rock Power, LLC

2020 Vegetation Monitoring Data Needle & Soil Boron Analytical Results

Location ID	UTM Coordinates	Location Description	Sample Type	Boron (mg/kg)	Sample Type	Boron (mg/kg)
A-1	38.83734 -122.77257	Coleman Pad A3-a	Ponderosa Pine Needle	37	Base of Tree Soil	ND
A-2	38.83729 -122.77255	Coleman Pad A3-b	Ponderosa Pine Needle	150	Base of Tree Soil	ND
B-1	38.83675 -122.77177	West Coleman/Coleman Road BB1-a	Ponderosa Pine Needle	320	Base of Tree Soil	6.8
B-2	38.83678 -122.77173	West Coleman/Coleman Road (previously BB1-b) now B-2	Ponderosa Pine Needle	82	Base of Tree Soil	ND
B-3	38.83687 -122.77157	West Coleman/Coleman Road previously BB1-c	Ponderosa Pine Needle	31	Base of Tree Soil	ND
C-1	38.83655 -122.77121	Access Road C-1	Ponderosa Pine Needle	100	Base of Tree Soil	ND
C-2	38.83655 -122.77105	Access Road C-2	Ponderosa Pine Needle	29	Base of Tree Soil	ND
D-1	38.83574 -122.76807	North of Plant Fence Line D-1	Ponderosa Pine Needle	61	Base of Tree Soil	ND
D-2	38.83572 -122.76796	North of Plant Fence Line D-2 (previously D-6)	Ponderosa Pine Needle	34	Base of Tree Soil	ND
D-3	38.8364 -122.76813	North of Plant Fence Line DD-2 (previously DD-2a & b)	Ponderosa Pine Needle	31	Base of Tree Soil	ND

ND - Not Detected

NA - Not Analyzed

Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com
Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

13 January 2021

Bottle Rock Power
Attn: M. Moore
4010 Stone Way North, Suite 400
Seattle, WA 98103
RE: Annual Needles
Work Order: 20L3297

Enclosed are the results of analyses for samples received by the laboratory on 12/28/20 12:04. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette Poplin

Jeanette L. Poplin For Stephen F. McWeeney
Lab Manager

Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com
Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Annual Needles	Reported:
Seattle, WA 98103	Project Number: [none]	01/13/21 11:08

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | T: 925-828-6226 | F: 925-828-6309 | ELAP# 2728
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | T: 916-686-5190 | F: 916-686-5192 | ELAP# 2922
North Bay: 110 Liberty Street | Petaluma, CA 94952 | T: 707-769-3128 | F: 707-769-8093 | ELAP# 2303
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | T: 760-930-2555 | F: 760-930-2510 | ELAP# 3055

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Tree A-1	20L3297-01	Other (W)	12/28/20 00:00	12/28/20 12:04
Tree A-2	20L3297-02	Other (W)	12/28/20 00:00	12/28/20 12:04
Tree B-1	20L3297-03	Other (W)	12/28/20 00:00	12/28/20 12:04
Tree B-2	20L3297-04	Other (W)	12/28/20 00:00	12/28/20 12:04
Tree B-3	20L3297-05	Other (W)	12/28/20 00:00	12/28/20 12:04
Tree C-1	20L3297-06	Other (W)	12/28/20 00:00	12/28/20 12:04
Tree C-2	20L3297-07	Other (W)	12/28/20 00:00	12/28/20 12:04
Tree D-1	20L3297-08	Other (W)	12/28/20 00:00	12/28/20 12:04
Tree D-2	20L3297-09	Other (W)	12/28/20 00:00	12/28/20 12:04
Tree D-3	20L3297-10	Other (W)	12/28/20 00:00	12/28/20 12:04

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Annual Needles	Reported:
Seattle, WA 98103	Project Number: [none]	01/13/21 11:08

	Result	Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
Tree A-1 (20L3297-01)		**Sample Type: Other (W)**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	**37 mg/kg**	**5.0**	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree A-2 (20L3297-02)		**Sample Type: Other (W)**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	**150 mg/kg**	**5.0**	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree B-1 (20L3297-03)		**Sample Type: Other (W)**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	**320 mg/kg**	**5.0**	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree B-2 (20L3297-04)		**Sample Type: Other (W)**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	**82 mg/kg**	**5.0**	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree B-3 (20L3297-05)		**Sample Type: Other (W)**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	**31 mg/kg**	**5.0**	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree C-1 (20L3297-06)		**Sample Type: Other (W)**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	**100 mg/kg**	**5.0**	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree C-2 (20L3297-07)		**Sample Type: Other (W)**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	**29 mg/kg**	**5.0**	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree D-1 (20L3297-08)		**Sample Type: Other (W)**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	**61 mg/kg**	**5.0**	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree D-2 (20L3297-09)		**Sample Type: Other (W)**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	**34 mg/kg**	**5.0**	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree D-3 (20L3297-10)		**Sample Type: Other (W)**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	**31 mg/kg**	**5.0**	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Annual Needles	Reported:
Seattle, WA 98103	Project Number: [none]	01/13/21 11:08

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AA13604 - NB EPA 3051 Microwave										
Blank (AA13604-BLK1)				Prepared: 01/08/21 Analyzed: 01/12/21						
Boron	ND	5.0	mg/kg							
LCS (AA13604-BS1)				Prepared: 01/08/21 Analyzed: 01/12/21						
Boron	24.3	5.0	mg/kg	25.0		97.4	80-120			
LCS Dup (AA13604-BSD1)				Prepared: 01/08/21 Analyzed: 01/12/21						
Boron	23.6	5.0	mg/kg	25.0		94.4	80-120	3.09	20	
Matrix Spike (AA13604-MS1)		**Source: 20L3292-01**		Prepared: 01/08/21 Analyzed: 01/12/21						
Boron	21.4	5.0	mg/kg	25.0	ND	85.5	75-125			
Matrix Spike (AA13604-MS2)		**Source: 20L3297-01**		Prepared: 01/08/21 Analyzed: 01/12/21						
Boron	59.6	5.0	mg/kg	25.0	37.3	89.4	75-125			

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4010 Stone Way North, Suite 400	Project: Annual Needles	Reported:
Seattle, WA 98103	Project Number: [none]	01/13/21 11:08

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
REC	Recovery
RPD	Relative Percent Difference

Alpha Analytical Laboratories Inc.
www.alpha-labs.com
WATERS, SEDIMENTS, SOLIDS

Corporate Laboratory (1551)
208 Mason Street, Ukiah CA 95482
707.468.0401 (phone)
707.468.5267 (fax)
clientservices@alpha-labs.com

North Bay Laboratory (2303)
110 Liberty Street, Petaluma CA 94952

Bay Area Laboratory (2728)
262 Rickenbacker Circle, Livermore CA 94551

Central Valley Laboratory (2922)
9090 Union Park Way #113, Elk Grove CA 95624

San Diego Service Center
2722 Loker Ave West, Ste A, Carlsbad CA 92010

Chain of Custody - Work Order

Reports and Invoices delivered by email in PDF format

Lab No 20L3297 Pg ____ of ____

Report to	Invoice to (if different)	Project Information
Company: Bottle Rock Power	Contact:	Project ID: ~~Bottle Rock Monitoring-GW~~ Annual Needles
Attn: Richard Lacy	Email address:	Project No:
Address: PO Box 326 Cobb, CA 95426	Address:	PO Number:
Phone/Fax: 707-529-3799	Phone/Fax:	
Email Address:		

Signature below authorizes work under terms stated on reverse side.

Field Sampler - Printed Name & Signature: Richard Lacy

Sample Identification	Sampling Date	Sampling Time	Container: 40ml VOA Vial	Plastic	Glass	Sleeve	Other	Preservative: HCl	HNO3	H2SO4	Other	None	Matrix: Drinking Water	Wastewater	Soil	Other	Total Number of Containers per Sample ID	Analysis Request: ALK, Ph, ec	Turbidity & TSS	Hardness, SO4	B, Cu, Fe & Pb	Mn, Na & Zn	As & NO3	Boron		Field pH	Field TDS ppm	
Tree A-1	12/28/12															X								X				
Tree A-2																X								X				
Tree B-1																X								X				
Tree B-2																X								X				
Tree B-3																X								X				
Tree B-1																X								X				
Tree C-2																X								X				
Tree D-1																X								X				
Tree D-2																X								X				
Tree D-3																X								X				

TAT
Standard 10 days ○
RUSH: 5 days ○ 48 hours ○ Other: ____days ○ Preapproval required

TEMP °C
Ukiah
Livermore
Elk Grove
Petaluma 20.0
Carlsbad

Notes / DDW Source Codes

Relinquished by	Received by	Date	Time
Richard Lacy	J A McG	12/28/12	1204

DDW Write On EDT Transmission? ○ Yes ○ No

State System Number: _____

If "Y" please enter the Source Number(s) in the column above

CA Geotracker EDF Report? ○ Yes ○ No

Global ID: Sampling Company Log Code:

EDF to (Email Address):

Travel and Site Time: | Mileage: | Misc. Supplies:

Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com
Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

13 January 2021

Bottle Rock Power
Attn: M. Moore
4010 Stone Way North, Suite 400
Seattle, WA 98103
RE: Annual Soil
Work Order: 20L3292

Enclosed are the results of analyses for samples received by the laboratory on 12/28/20 12:04. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette Poplin

Jeanette L. Poplin For Stephen F. McWeeney
Lab Manager

Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com
Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Annual Soil	Reported:
Seattle, WA 98103	Project Number: [none]	01/13/21 11:22

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | T: 925-828-6226 | F: 925-828-6309 | ELAP# 2728
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | T: 916-686-5190 | F: 916-686-5192 | ELAP# 2922
North Bay: 110 Liberty Street | Petaluma, CA 94952 | T: 707-769-3128 | F: 707-769-8093 | ELAP# 2303
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | T: 760-930-2555 | F: 760-930-2510 | ELAP# 3055

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Tree A-1	20L3292-01	Soil	12/28/20 00:00	12/28/20 12:04
Tree A-2	20L3292-02	Soil	12/28/20 00:00	12/28/20 12:04
Tree B-1	20L3292-03	Soil	12/28/20 00:00	12/28/20 12:04
Tree B-2	20L3292-04	Soil	12/28/20 00:00	12/28/20 12:04
Tree B-3	20L3292-05	Soil	12/28/20 00:00	12/28/20 12:04
Tree C-1	20L3292-06	Soil	12/28/20 00:00	12/28/20 12:04
Tree C-2	20L3292-07	Soil	12/28/20 00:00	12/28/20 12:04
Tree D-1	20L3292-08	Soil	12/28/20 00:00	12/28/20 12:04
Tree D-2	20L3292-09	Soil	12/28/20 00:00	12/28/20 12:04
Tree D-3	20L3292-10	Soil	12/28/20 00:00	12/28/20 12:04

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Annual Soil	Reported:
Seattle, WA 98103	Project Number: [none]	01/13/21 11:22

	Result	Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
Tree A-1 (20L3292-01)		**Sample Type: Soil**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	ND mg/kg	5.0	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree A-2 (20L3292-02)		**Sample Type: Soil**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	ND mg/kg	5.0	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree B-1 (20L3292-03)		**Sample Type: Soil**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	**6.8 mg/kg**	**5.0**	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree B-2 (20L3292-04)		**Sample Type: Soil**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	ND mg/kg	5.0	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree B-3 (20L3292-05)		**Sample Type: Soil**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	ND mg/kg	5.0	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree C-1 (20L3292-06)		**Sample Type: Soil**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	ND mg/kg	5.0	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree C-2 (20L3292-07)		**Sample Type: Soil**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	ND mg/kg	5.0	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree D-1 (20L3292-08)		**Sample Type: Soil**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	ND mg/kg	5.0	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree D-2 (20L3292-09)		**Sample Type: Soil**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	ND mg/kg	5.0	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	
Tree D-3 (20L3292-10)		**Sample Type: Soil**			**Sampled: 12/28/20 00:00**				
Metals by EPA 6000/7000 Series Methods									
Boron	ND mg/kg	5.0	1	AA13604	01/08/21 11:35	01/12/21 12:50	2303	EPA 6010B	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Annual Soil	Reported:
Seattle, WA 98103	Project Number: [none]	01/13/21 11:22

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AA13604 - NB EPA 3051 Microwave										
Blank (AA13604-BLK1)				Prepared: 01/08/21 Analyzed: 01/12/21						
Boron	ND	5.0	mg/kg							
LCS (AA13604-BS1)				Prepared: 01/08/21 Analyzed: 01/12/21						
Boron	24.3	5.0	mg/kg	25.0		97.4	80-120			
LCS Dup (AA13604-BSD1)				Prepared: 01/08/21 Analyzed: 01/12/21						
Boron	23.6	5.0	mg/kg	25.0		94.4	80-120	3.09	20	
Matrix Spike (AA13604-MS1)		**Source: 20L3292-01**		Prepared: 01/08/21 Analyzed: 01/12/21						
Boron	21.4	5.0	mg/kg	25.0	ND	85.5	75-125			
Matrix Spike (AA13604-MS2)		**Source: 20L3297-01**		Prepared: 01/08/21 Analyzed: 01/12/21						
Boron	59.6	5.0	mg/kg	25.0	37.3	89.4	75-125			

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Annual Soil	Reported:
Seattle, WA 98103	Project Number: [none]	01/13/21 11:22

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
REC	Recovery
RPD	Relative Percent Difference

Alpha Analytical Laboratories Inc.
www.alpha-labs.com
WATERS, SEDIMENTS, SOLIDS

Corporate Laboratory (1551)
208 Mason Street, Ukiah CA 95482
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North Bay Laboratory (2303)
110 Liberty Street, Petaluma CA 94952

Bay Area Laboratory (2728)
262 Rickenbacker Circle, Livermore CA 94551

Central Valley Laboratory (2922)
9090 Union Park Way #113, Elk Grove CA 95624

San Diego Service Center
2722 Loker Ave West, Ste A, Carlsbad CA 92010

Chain of Custody - Work Order

Reports and Invoices delivered by email in PDF format

Lab No 20L3292 Pg ______ of ______

Report to	Invoice to (if different)	Project Information
Company: Bottle Rock Power	Contact:	Project ID: ~~Bottle Rock Monitoring-GW~~ Annual Soil
Attn: ~~Jay Hopper~~ Richard Lacy	Email address:	Project No:
Address: PO Box 326 Cobb, CA 95426	Address:	PO Number:
Phone/Fax: 707-529-3799	Phone/Fax:	
Email Address:		

Signature below authorizes work under terms stated on reverse side.

Field Sampler - Printed Name & Signature: Richard Lacy (signature) Richard Lacy

Sh 12/28/20 cc Sample oil

Sample Identification	Sampling Date	Sampling Time	40ml VOA Vial	Plastic	Glass	Sleeve	Other	HCl	HNO3	H2SO4	Other	None	Drinking Water	Wastewater	Soil	~~Other~~	Total Number of Containers per Sample ID	ALK, Ph, ec	Turbidity & TSS	Hardness, SO4	B, Cu, Fe & Pb	Mn, Na & Zn	As & NO3	Total Boron		Field pH	Field TDS ppm		Notes / DDW Source Codes
Tree A-1	12/28/20														X	X	2							X					
Tree A-2	12/28/20														X	X	2							X					
Tree B-1	12/28/20														X	X	2							X					
Tree B-2	12/28/20														X	X	2							X					
Tree B-3	12/28/20														X	X	2							X					
Tree C-1	12/28/20														X	X	2							X					
Tree C-2	12/28/20														X	X	2							X					
Tree D-1	12/28/20														X	X	2							X					
Tree D-2	12/28/20														X	X	2							X					
Tree D-3	12/28/20														X	X	2							X					

TAT
Standard 10 days ○
RUSH: 5 days ○
48 hours ○
Other: ____days ○
Preapproval required

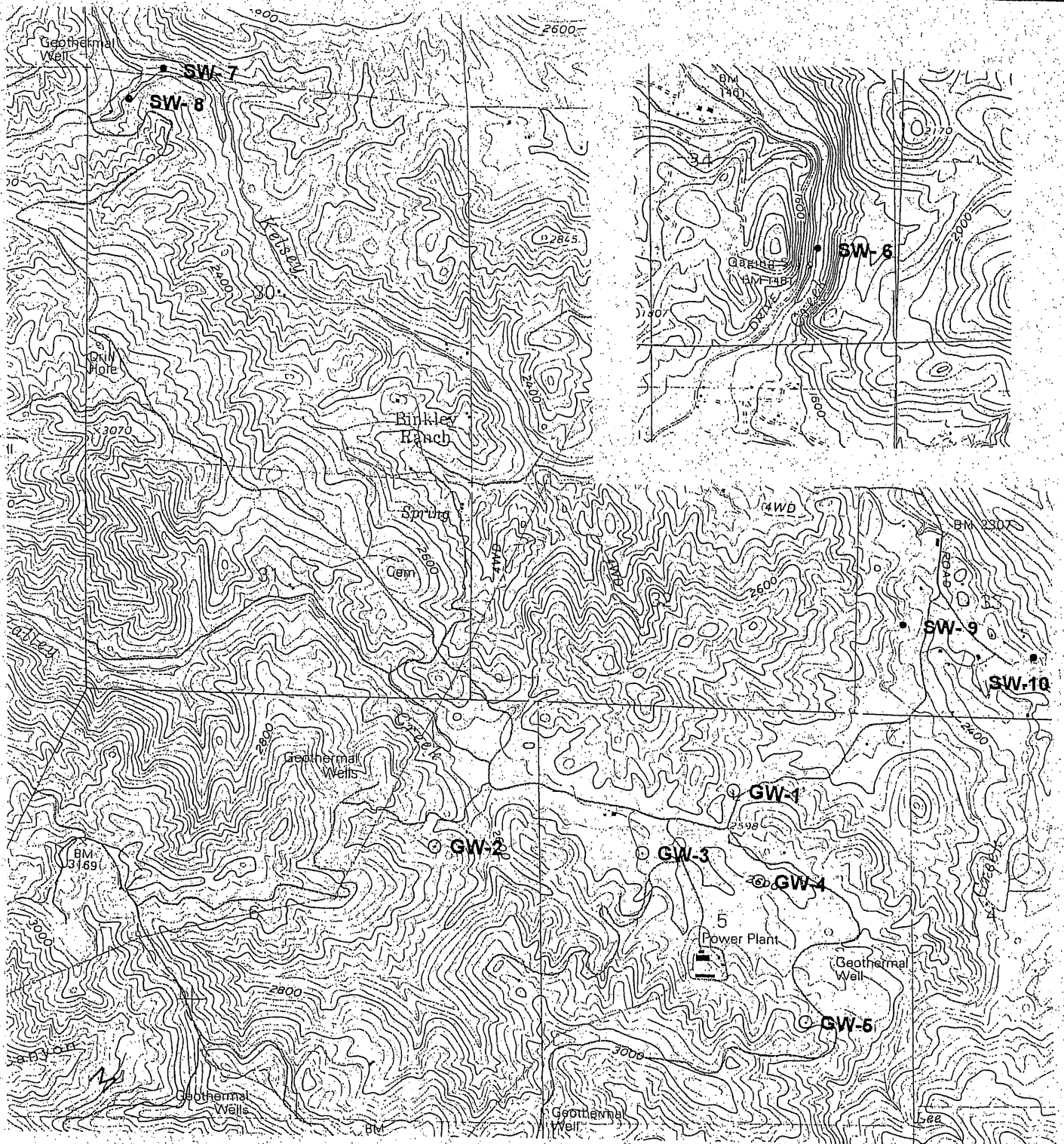
TEMP °C
Ukiah
Livermore
Elk Grove
Petaluma 2.0
Carlsbad

Relinquished by	Received by	Date	Time
Richard Lacy	(signature)	12/28/20	1304

DDW Write On EDT Transmission? ○ Yes ○ No
State System Number: ____________
If "Y" please enter the Source Number(s) in the column above

CA Geotracker EDF Report? ○ Yes ○ No
Global ID: Sampling Company Log Code:
EDF to (Email Address):

Travel and Site Time:	Mileage:	Misc. Supplies:



EGS INC

Bottle Rock Monitoring Program

Water Quality Sample Locations

Scale: 1inch = 2000 feet

Project No: 0068-026-02

Date: June 2003

FIG.1.1

Table 2
Bottle Rock Power, LLC
2020 Ground Water and Surface Water Monitoring
1st Quarter Analytical Results

Location ID	GPS Coordinates	Location & Description	Arsenic µg/l	Calcium mg/l	Magnesium mg/l	Hardness mg/l	Boron mg/l	Copper mg/l	Iron mg/l	Lead mg/l	Manganese mg/l	Sodium mg/l	Zinc mg/l	pH	Electrical Conductivity umhos/cm	Disolved Oxygen mg/l	Turbidity NTU	Total Alkalinity mg/l	Nitrate mg/l	Sulfate mg/l	Total Suspended Solids mg/l	Total Coliform MPN
GW-1	38 50' 27.84" N 122 45' 59.07" W	Barret Spring; Running seep at sharp turn, downslope on High Valley Road	ND	33	10	125	0.37	0.03	0.83	ND	0.68	24	0.42	7.76	370	NA	5.3	160	ND	7.2	22	NA
GW-3	38 50' 21.57" N 122 46' 17.46 W	BRP WW1; Northern most water supply well	ND	53	16	200	0.11	ND	ND	ND	0.14	9.4	ND	7.56	420	NA	ND	180	ND	20	1.2	NA
SW-6	38 55' 33.58" N 122 50' 39.91" W	Kelsey Creek - Downstream; ~ 3 miles west of HWY 29 on Kelsey Creek	NA	15	21	122	0.11	ND	ND	ND	ND	6.9	ND	7.81	270	9.6	ND	130	NA	4.2	ND	420
SW-7	38 52' 04.62" N 122 47' 43.13" W	High Valley Creek; behind Binkley Ranch House	NA	17	16	109	0.17	ND	0.12	ND	ND	6	ND	7.56	240	9.1	ND	110	NA	10	ND	410
SW-8	38 52' 08.29" N 122 47' 40.01" W	Kelsey Creek - Middle; Northwest of Binkley Ranch House, upstream of confluence with High Valley Creek	NA	8	4.3	38	ND	ND	ND	ND	ND	4.6	ND	7.46	110	10	ND	57	NA	2.8	ND	75
SW-9	38 50' 40.18" N 122 45' 29.61" W	Alder Creek; Adjacent to High Valley Road bridge crossing Alder Creek	NA	8	4.4	38	ND	ND	ND	ND	ND	4.7	ND	7.37	110	10	ND	58	NA	2.9	1	70
SW-10	38 50' 36.22" N 122 44' 57.25" W	Kelsey Creek - Upstream; ~ 0.5 miles west of High Valley Road gate on Bottle Rock Road	NA	7.7	6.6	46	ND	ND	0.17	ND	ND	5.8	ND	7.47	130	9.4	2.1	55	NA	1.5	3.3	980

ND = Not Detected
NA = Not Analyzed

Table 2
Bottle Rock Power, LLC
2020 Ground Water and Surface Water Monitoring
2nd Quarter Analytical Results

Location ID	GPS Coordinates	Location & Description	Arsenic µg/l	Calcium mg/l	Magnesium mg/l	Hardness mg/l	Boron mg/l	Copper mg/l	Iron mg/l	Lead mg/l	Manganese mg/l	Sodium mg/l	Zinc mg/l	pH	Electrical Conductivity umhos/cm	Disolved Oxygen mg/l	Turbidity NTU	Total Alkalinity mg/l	Nitrate mg/l	Sulfate mg/l	Total Suspended Solids mg/l	Total Coliform MPN
GW-1	38 50' 27.84" N 122 45' 59.07" W	Barret Spring; Running seep at sharp turn, downslope on High Valley Road	ND	50	16	189	0.11	ND	ND	ND	0.13	9.1	ND	7.7	400	NA	ND	160	ND	20	ND	NA
GW-3	38 50' 21.57" N 122 46' 17.46 W	BRP WW1; Northern most water supply well	ND	38	13	151	0.45	0.3	0.14	0.25	0.14	20	0.33	7.33	380	NA	1.1	170	ND	7.8	ND	NA
SW-6	38 55' 33.58" N 122 50' 39.91" W	Kelsey Creek - Downstream; ~ 3 miles west of HWY 29 on Kelsey Creek	ND	6.8	3.5	31	ND	ND	ND	ND	ND	4.9	ND	7.9	130	8.3	2.1	72	NA	0.76	2.3	>2419.6
SW-7	38 52' 04.62" N 122 47' 43.13" W	High Valley Creek; behind Binkley Ranch House	ND	13	40	197	0.38	ND	ND	ND	ND	7.8	ND	7.4	300	5.6	ND	140	NA	9.5	ND	410
SW-8	38 52' 08.29" N 122 47' 40.01" W	Kelsey Creek - Middle; Northwest of Binkley Ranch House, upstream of confluence with High Valley Creek	ND	6.9	3.6	32	ND	ND	ND	ND	ND	4.9	ND	7.54	90	7.6	0.32	41	NA	1.6	ND	1600
SW-9	38 50' 40.18" N 122 45' 29.61" W	Alder Creek; Adjacent to High Valley Road bridge crossing Alder Creek	ND	6.8	3.5	31	ND	ND	ND	ND	ND	4.8	ND	7.48	91	7.4	0.38	40	NA	1.5	ND	1600
SW-10	38 50' 36.22" N 122 44' 57.25" W	Kelsey Creek - Upstream; ~ 0.5 miles west of High Valley Road gate on Bottle Rock Road	ND	6.8	3.5	32	ND	ND	ND	ND	ND	4.8	ND	7.73	130	7.4	1.8	66	NA	0.73	2.1	>2419.6

ND = Not Detected
NA = Not Analyzed

Table 2
Bottle Rock Power, LLC
2020 Ground Water and Surface Water Monitoring
3rd Quarter Analytical Results

Location ID	GPS Coordinates	Location & Description	Arsenic µg/l	Calcium mg/l	Magnesium mg/l	Hardness mg/l	Boron mg/l	Copper mg/l	Iron mg/l	Lead mg/l	Manganese mg/l	Sodium mg/l	Zinc mg/l	pH	Electrical Conductivity umhos/cm	Disolved Oxygen mg/l	Turbidity NTU	Total Alkalinity mg/l	Nitrate mg/l	Sulfate mg/l	Total Suspended Solids mg/l	Total Coliform MPN
GW-1	38 50' 27.84" N 122 45' 59.07" W	Barret Spring; Running seep at sharp turn, downslope on High Valley Road	ND	47	15	181	ND	ND	ND	ND	0.096	8.2	ND	7.89	390	NA	ND	180	ND	19	ND	NA
GW-3	38 50' 21.57" N 122 46' 17.46 W	BRP WW1; Northern most water supply well	ND	33	9.9	122	0.39	ND	0.15	ND	0.057	24	ND	7.64	360	NA	0.61	170	ND	6.3	ND	NA
SW-6	38 55' 33.58" N 122 50' 39.91" W	Kelsey Creek - Downstream; ~ 3 miles west of HWY 29 on Kelsey Creek	ND	ND	2.7	22	ND	ND	ND	ND	0.029	ND	ND	7.4	74	9.0	0.29	23	NA	1.2	ND	870
SW-7	38 52' 04.62" N 122 47' 43.13" W	High Valley Creek; behind Binkley Ranch House	ND	7.3	19	42	ND	ND	0.1	ND	ND	5.9	ND	7.51	120	9	0.86	59	NA	0.71	ND	1300
SW-8	38 52' 08.29" N 122 47' 40.01" W	Kelsey Creek - Middle; Northwest of Binkley Ranch House, upstream of confluence with High Valley Creek	ND	7.8	6.1	45	ND	ND	ND	ND	ND	6.3	ND	7.55	120	9	0.87	58	NA	0.74	ND	1700
SW-9	38 50' 40.18" N 122 45' 29.61" W	Alder Creek; Adjacent to High Valley Road bridge crossing Alder Creek	ND	ND	2.6	21	ND	ND	ND	ND	ND	ND	ND	7.18	72	9.3	ND	31	NA	1.3	ND	920
SW-10	38 50' 36.22" N 122 44' 57.25" W	Kelsey Creek - Upstream; ~ 0.5 miles west of High Valley Road gate on Bottle Rock Road	ND	8	6.2	45	ND	ND	ND	ND	ND	6.4	ND	7.55	120	9.5	0.9	58	NA	0.76	1.3	1600

ND = Not Detected
NA = Not Analyzed

Table 2
Bottle Rock Power, LLC
2020 Ground Water and Surface Water Monitoring
4th Quarter Analytical Results

Location ID	GPS Coordinates	Location & Description	Arsenic µg/l	Calcium mg/l	Magnesium mg/l	Hardness mg/l	Boron mg/l	Copper mg/l	Iron mg/l	Lead mg/l	Manganese mg/l	Sodium mg/l	Zinc mg/l	pH	Electrical Conductivity umhos/cm	Disolved Oxygen mg/l	Turbidity NTU	Total Alkalinity mg/l	Nitrate mg/l	Sulfate mg/l	Total Suspended Solids mg/l	Total Coliform MPN
GW-1	38 50' 27.84" N 122 45' 59.07" W	Barret Spring; Running seep at sharp turn, downslope on High Valley Road	ND	52	15	192	ND	ND	ND	ND	ND	7.8	ND	7.9	390	NA	ND	190	ND	22	ND	NA
GW-3	38 50' 21.57" N 122 46' 17.46 W	BRP WW1; Northern most water supply well	ND	36	9.4	129	0.41	ND	1.1	ND	0.13	24	0.04	7.57	350	NA	5.8	170	ND	5.7	4.3	NA
SW-6	38 55' 33.58" N 122 50' 39.91" W	Kelsey Creek - Downstream; ~ 3 miles west of HWY 29 on Kelsey	ND	8.4	4.1	38	ND	ND	ND	ND	ND	5	ND	7.43	110	9.8	0.28	45	NA	4.1	1.1	250
SW-7	38 52' 04.62" N 122 47' 43.13" W	High Valley Creek; behind Binkley Ranch House	ND	8.5	4.2	39	ND	ND	ND	ND	ND	5.2	ND	7.48	110	9.9	0.26	46	NA	4.1	ND	290
SW-8	38 52' 08.29" N 122 47' 40.01" W	Kelsey Creek - Middle; Northwest of Binkley Ranch House, upstream of confluence with High Valley Creek	ND	8.5	4.1	38	ND	ND	ND	ND	ND	5.1	ND	7.47	110	10	0.26	47	NA	4.2	ND	310
SW-9	38 50' 40.18" N 122 45' 29.61" W	Alder Creek; Adjacent to High Valley Road bridge crossing Alder Creek	ND	8.4	4.2	38	ND	ND	ND	ND	ND	5	ND	7.39	110	10	0.32	47	NA	4.1	ND	370
SW-10	38 50' 36.22" N 122 44' 57.25" W	Kelsey Creek - Upstream; ~ 0.5 miles west of High Valley Road gate on Bottle Rock Road	ND	8.3	4.1	38	ND	ND	ND	ND	ND	4.9	ND	7.32	110	10	0.3	48	NA	4.2	ND	250

ND = Not Detected
NA = Not Analyzed

Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com
Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

21 April 2020

Bottle Rock Power
Attn: Jay Hepper
4010 Stone Way North, Suite 400
Seattle, WA 98103
RE: Groundwater
Work Order: 20D0254

Enclosed are the results of analyses for samples received by the laboratory on 04/02/20 11:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette Poplin

Jeanette L. Poplin For Stephen F. McWeeney
Lab Manager

Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com
Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-GW	04/21/20 10:56

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | T: 925-828-6226 | F: 925-828-6309 | ELAP# 2728
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | T: 916-686-5190 | F: 916-686-5192 | ELAP# 2922
North Bay: 110 Liberty Street | Petaluma, CA 94952 | T: 707-769-3128 | F: 707-769-8093 | ELAP# 2303
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | T: 760-930-2555 | F: 760-930-2510 | ELAP# 3055

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW 1	20D0254-01	Water	04/02/20 08:00	04/02/20 11:35
GW 3	20D0254-02	Water	04/02/20 08:30	04/02/20 11:35

Alpha Analytical Laboratories, Inc. email: clientservices@alpha-labs.com
Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-GW	04/21/20 10:56

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
GW 1 (20D0254-01)		**Sample Type: Water**				**Sampled: 04/02/20 08:00**				
Metals by EPA 200 Series Methods										
Arsenic	ND	ug/L	2.0	1	AD03042	04/03/20 08:13	04/06/20 15:42	2303	EPA 200.5	
Boron	**0.37**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:04	2303	EPA 200.7	
Calcium	**33**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:04	2303	EPA 200.7	
Copper	**0.029**	**mg/L**	**0.020**	1	AD03385	04/07/20 10:55	04/07/20 15:04	2303	EPA 200.7	
Iron	**0.83**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:04	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:04	2303	EPA 200.7	
Magnesium	**10**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:04	2303	EPA 200.7	
Manganese	**0.68**	**mg/L**	**0.020**	1	AD03385	04/07/20 10:55	04/07/20 15:04	2303	EPA 200.7	
Sodium	**24**	**mg/L**	**0.20**	1	AD03385	04/07/20 10:55	04/07/20 15:04	2303	EPA 200.7	
Zinc	**0.42**	**mg/L**	**0.050**	1	AD03385	04/07/20 10:55	04/07/20 15:04	2303	EPA 200.7	
Conventional Chemistry Parameters by APHA/EPA Methods										
pH	**7.76**	**pH Units**	**1.00**	1	AD03153	04/02/20 12:00	04/02/20 15:21	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**370**	**umhos/cm**	**10**	1	AD03153	04/02/20 12:00	04/02/20 15:21	2303	SM2510B	
Total Alkalinity as CaCO3	**160**	**mg/L**	**5.0**	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Total Suspended Solids	**22**	**mg/L**	**1.0**	1	AD03262	04/04/20 08:30	04/04/20 14:00	1551	SM2540D	
Turbidity	**5.3**	**NTU**	**0.25**	1	AD03152	04/02/20 12:00	04/02/20 15:24	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**160**	**mg/L**	**5.0**	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Hardness, Total	**125**	**mg/L**	**1**	1	AD03385	04/07/20 10:55	04/07/20 15:04	2303	SM2340B	
Anions by EPA Method 300.0										
Nitrate as N	ND	mg/L	0.40	1	AD03156	04/02/20 13:23	04/02/20 13:50	2303	EPA 300.0	
Sulfate as SO4	**7.2**	**mg/L**	**0.50**	1	AD03156	04/02/20 13:23	04/02/20 13:50	2303	EPA 300.0	
GW 3 (20D0254-02)		**Sample Type: Water**				**Sampled: 04/02/20 08:30**				
Metals by EPA 200 Series Methods										
Arsenic	ND	ug/L	2.0	1	AD03042	04/03/20 08:13	04/06/20 15:42	2303	EPA 200.5	
Boron	**0.11**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/15/20 14:33	2303	EPA 200.7	
Calcium	**53**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/15/20 14:33	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/15/20 14:33	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AD03385	04/07/20 10:55	04/15/20 14:33	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/15/20 14:33	2303	EPA 200.7	
Magnesium	**16**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/15/20 14:33	2303	EPA 200.7	
Manganese	**0.14**	**mg/L**	**0.020**	1	AD03385	04/07/20 10:55	04/15/20 14:33	2303	EPA 200.7	
Sodium	**9.4**	**mg/L**	**0.20**	1	AD03385	04/07/20 10:55	04/15/20 14:33	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AD03385	04/07/20 10:55	04/15/20 14:33	2303	EPA 200.7	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-GW	04/21/20 10:56

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
GW 3 (20D0254-02)	**Sample Type: Water**					**Sampled: 04/02/20 08:30**				
Conventional Chemistry Parameters by APHA/EPA Methods										
pH	**7.56**	**pH Units**	**1.00**	1	AD03153	04/02/20 12:00	04/02/20 15:21	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**420**	**umhos/cm**	**10**	1	AD03153	04/02/20 12:00	04/02/20 15:21	2303	SM2510B	
Total Alkalinity as CaCO3	**180**	**mg/L**	**5.0**	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Total Suspended Solids	**1.2**	**mg/L**	**1.0**	1	AD03262	04/04/20 08:30	04/04/20 14:00	1551	SM2540D	
Turbidity	ND	NTU	0.25	1	AD03152	04/02/20 12:00	04/02/20 15:24	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**180**	**mg/L**	**5.0**	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Hardness, Total	**200**	**mg/L**	**1**	1	AD03385	04/07/20 10:55	04/15/20 14:33	2303	SM2340B	
Anions by EPA Method 300.0										
Nitrate as N	ND	mg/L	0.40	1	AD03156	04/02/20 13:23	04/02/20 14:08	2303	EPA 300.0	
Sulfate as SO4	**20**	**mg/L**	**0.50**	1	AD03156	04/02/20 13:23	04/02/20 14:08	2303	EPA 300.0	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-GW	04/21/20 10:56

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD03042 - NB EPA 200 series										
Blank (AD03042-BLK1)				Prepared: 04/01/20 Analyzed: 04/03/20						
Arsenic	ND	2.0	ug/L							
LCS (AD03042-BS1)				Prepared: 04/01/20 Analyzed: 04/03/20						
Arsenic	7.28	2.0	ug/L	8.00		91.1	85-115			
LCS Dup (AD03042-BSD1)				Prepared: 04/01/20 Analyzed: 04/03/20						
Arsenic	8.54	2.0	ug/L	8.00		107	85-115	15.8	20	
Duplicate (AD03042-DUP1)		**Source: 20C3529-01**		Prepared: 04/01/20 Analyzed: 04/06/20						
Arsenic	ND	2.0	ug/L		ND			200	20	
Matrix Spike (AD03042-MS1)		**Source: 20C3548-01**		Prepared: 04/01/20 Analyzed: 04/03/20						
Arsenic	7.47	2.0	ug/L	8.00	ND	93.4	70-130			
Matrix Spike (AD03042-MS2)		**Source: 20C3650-01**		Prepared: 04/01/20 Analyzed: 04/03/20						
Arsenic	7.37	2.0	ug/L	8.00	ND	92.1	70-130			
Batch AD03385 - NB EPA 200 series										
Blank (AD03385-BLK1)				Prepared & Analyzed: 04/07/20						
Boron	ND	0.10	mg/L							
Calcium	ND	0.10	mg/L							
Copper	ND	0.020	mg/L							
Iron	ND	0.10	mg/L							
Lead	ND	0.020	mg/L							
Magnesium	ND	0.10	mg/L							
Manganese	ND	0.020	mg/L							
Sodium	ND	0.20	mg/L							
Zinc	ND	0.050	mg/L							

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-GW	04/21/20 10:56

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD03385 - NB EPA 200 series										
LCS (AD03385-BS1)				Prepared & Analyzed: 04/07/20						
Boron	0.511	0.10	mg/L	0.500		102	85-115			
Calcium	0.504	0.10	mg/L	0.500		101	85-115			
Copper	0.513	0.020	mg/L	0.500		103	85-115			
Iron	0.523	0.10	mg/L	0.500		105	85-115			
Lead	0.526	0.020	mg/L	0.500		105	85-115			
Magnesium	0.535	0.10	mg/L	0.500		107	85-115			
Manganese	0.506	0.020	mg/L	0.500		101	85-115			
Sodium	0.527	0.20	mg/L	0.500		105	85-115			
Zinc	0.552	0.050	mg/L	0.500		110	85-115			
LCS Dup (AD03385-BSD1)				Prepared & Analyzed: 04/07/20						
Boron	0.512	0.10	mg/L	0.500		102	85-115	0.0391	20	
Calcium	0.508	0.10	mg/L	0.500		102	85-115	0.791	20	
Copper	0.512	0.020	mg/L	0.500		102	85-115	0.137	20	
Iron	0.523	0.10	mg/L	0.500		105	85-115	0.0574	20	
Lead	0.526	0.020	mg/L	0.500		105	85-115	0.0380	20	
Magnesium	0.534	0.10	mg/L	0.500		107	85-115	0.243	20	
Manganese	0.507	0.020	mg/L	0.500		101	85-115	0.217	20	
Sodium	0.527	0.20	mg/L	0.500		105	85-115	0.0190	20	
Zinc	0.552	0.050	mg/L	0.500		110	85-115	0.109	20	
MRL Check (AD03385-MRL1)				Prepared & Analyzed: 04/07/20						
Boron	ND	0.10	mg/L	0.00500			0-200			
Calcium	ND	0.10	mg/L	0.00500			0-200			
Copper	ND	0.020	mg/L	0.00500			0-200			
Iron	ND	0.10	mg/L	0.00500			0-200			
Lead	ND	0.020	mg/L	0.00500			0-200			
Magnesium	ND	0.10	mg/L	0.00500			0-200			
Manganese	ND	0.020	mg/L	0.00500			0-200			
Sodium	ND	0.20	mg/L	0.00500			0-200			
Zinc	ND	0.050	mg/L	0.00500			0-200			

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-GW	04/21/20 10:56

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD03385 - NB EPA 200 series										
MRL Check (AD03385-MRL2)				Prepared & Analyzed: 04/07/20						
Boron	ND	0.10	mg/L	0.0500			0-200			
Calcium	ND	0.10	mg/L	0.0500			0-200			
Copper	0.0458	0.020	mg/L	0.0500		91.6	0-200			
Iron	0.0517	0.10	mg/L	0.0500		103	0-200			
Lead	0.0519	0.020	mg/L	0.0500		104	0-200			
Magnesium	0.0445	0.10	mg/L	0.0500		89.0	0-200			
Manganese	0.0514	0.020	mg/L	0.0500		103	0-200			
Sodium	ND	0.20	mg/L	0.0500			0-200			
Zinc	ND	0.050	mg/L	0.0500			0-200			
Matrix Spike (AD03385-MS1)		**Source: 20D0257-01**		Prepared & Analyzed: 04/07/20						
Boron	0.631	0.10	mg/L	0.500	0.110	104	70-130			
Copper	0.488	0.020	mg/L	0.500	ND	97.6	70-130			
Iron	0.547	0.10	mg/L	0.500	ND	109	70-130			
Lead	0.512	0.020	mg/L	0.500	ND	102	70-130			
Manganese	0.500	0.020	mg/L	0.500	ND	100	70-130			
Sodium	7.28	0.20	mg/L	0.500	6.93	68.8	70-130			QM-07
Zinc	0.537	0.050	mg/L	0.500	ND	107	70-130			
Matrix Spike (AD03385-MS2)		**Source: 20D0257-05**		Prepared & Analyzed: 04/07/20						
Boron	0.888	0.10	mg/L	0.500	ND	178	70-130			QM-07
Copper	0.531	0.020	mg/L	0.500	ND	106	70-130			
Iron	1.31	0.10	mg/L	0.500	0.170	228	70-130			QM-07
Lead	0.523	0.020	mg/L	0.500	ND	105	70-130			
Manganese	1.15	0.020	mg/L	0.500	ND	226	70-130			QM-07
Sodium	23.4	0.20	mg/L	0.500	5.82	NR	70-130			QM-07
Zinc	0.963	0.050	mg/L	0.500	ND	193	70-130			QM-07

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-GW	04/21/20 10:56

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD03385 - NB EPA 200 series										
Matrix Spike Dup (AD03385-MSD1)		**Source: 20D0257-01**		Prepared & Analyzed: 04/07/20						
Boron	0.636	0.10	mg/L	0.500	0.110	105	70-130	0.852	20	
Copper	0.487	0.020	mg/L	0.500	ND	97.4	70-130	0.267	20	
Iron	0.546	0.10	mg/L	0.500	ND	109	70-130	0.183	20	
Lead	0.510	0.020	mg/L	0.500	ND	102	70-130	0.313	20	
Manganese	0.503	0.020	mg/L	0.500	ND	101	70-130	0.578	20	
Sodium	7.42	0.20	mg/L	0.500	6.93	97.8	70-130	1.97	20	
Zinc	0.532	0.050	mg/L	0.500	ND	106	70-130	0.935	20	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-GW	04/21/20 10:56

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD03060 - NB General Prep										
Blank (AD03060-BLK1)				Prepared & Analyzed: 04/02/20						
Total Alkalinity as CaCO3	ND	5.0	mg/L							
Bicarbonate Alkalinity as CaCO3	ND	5.0	mg/L							
Carbonate Alkalinity as CaCO3	ND	5.0	mg/L							
Hydroxide Alkalinity as CaCO3	ND	5.0	mg/L							
LCS (AD03060-BS1)				Prepared & Analyzed: 04/02/20						
Total Alkalinity as CaCO3	977	5.0	mg/L	1000		97.7	80-120			
Duplicate (AD03060-DUP1)		**Source: 20C2936-01**		Prepared & Analyzed: 04/02/20						
Total Alkalinity as CaCO3	146	5.0	mg/L		148			1.42	20	
Bicarbonate Alkalinity as CaCO3	145	5.0	mg/L		147			1.41	20	
Carbonate Alkalinity as CaCO3	ND	5.0	mg/L		ND				20	
Hydroxide Alkalinity as CaCO3	ND	5.0	mg/L		ND				20	
Batch AD03152 - NB General Prep										
Duplicate (AD03152-DUP1)		**Source: 20D0257-01**		Prepared & Analyzed: 04/02/20						
Turbidity	ND	0.25	NTU		ND			0.00	20	
Batch AD03153 - NB General Prep										
Duplicate (AD03153-DUP1)		**Source: 20D0254-01**		Prepared & Analyzed: 04/02/20						
pH	7.75	1.00	pH Units		7.76			0.129	20	
Specific Conductance (EC)	363	10	umhos/cm		370			1.91	5	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-GW	04/21/20 10:56

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD03262 - General Preparation										
Blank (AD03262-BLK1)				Prepared & Analyzed: 04/04/20						
Total Suspended Solids	ND	1.0	mg/L							
Duplicate (AD03262-DUP1)	**Source: 20D0323-01**			Prepared & Analyzed: 04/04/20						
Total Suspended Solids	56.7	1.0	mg/L		54.7			3.52	30	
Duplicate (AD03262-DUP2)	**Source: 20D0325-01**			Prepared & Analyzed: 04/04/20						
Total Suspended Solids	189	1.0	mg/L		190			0.897	30	
Batch AD03385 - NB EPA 200 series										
Blank (AD03385-BLK1)				Prepared & Analyzed: 04/07/20						
Hardness, Total	ND	1	mg/L							

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-GW	04/21/20 10:56

Anions by EPA Method 300.0 - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD03156 - NB General Prep										
Blank (AD03156-BLK1)				Prepared & Analyzed: 04/02/20						
Nitrate as N	ND	0.40	mg/L							
Sulfate as SO4	ND	0.50	mg/L							
LCS (AD03156-BS1)				Prepared & Analyzed: 04/02/20						
Nitrate as N	1.81	0.40	mg/L	1.81		100	90-110			
Sulfate as SO4	8.15	0.50	mg/L	8.00		102	90-110			
Duplicate (AD03156-DUP1)		**Source: 20D0257-05**		Prepared & Analyzed: 04/02/20						
Nitrate as N	ND	0.40	mg/L		ND				20	
Sulfate as SO4	1.46	0.50	mg/L		1.54			4.80	20	
MRL Check (AD03156-MRL1)				Prepared & Analyzed: 04/02/20						
Nitrate as N	0.360	0.40	mg/L	0.361		99.7	60-140			
Sulfate as SO4	1.80	0.50	mg/L	1.60		112	60-140			
Matrix Spike (AD03156-MS1)		**Source: 20D0254-01**		Prepared & Analyzed: 04/02/20						
Nitrate as N	1.78	0.40	mg/L	1.81	ND	98.7	80-120			
Sulfate as SO4	15.2	0.50	mg/L	8.00	7.16	101	80-120			
Matrix Spike Dup (AD03156-MSD1)		**Source: 20D0254-01**		Prepared & Analyzed: 04/02/20						
Nitrate as N	1.78	0.40	mg/L	1.81	ND	98.3	80-120	0.393	20	
Sulfate as SO4	15.3	0.50	mg/L	8.00	7.16	101	80-120	0.420	20	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-GW	04/21/20 10:56

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
T-14	Residual chlorine, dissolved oxygen, sulfite, and pH must be analyzed in the field to meet the EPA specified 15 minute hold time.
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
REC	Recovery
RPD	Relative Percent Difference

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WATERS, SEDIMENTS, SOLIDS

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Chain of Custody - Work Order

Reports and Invoices delivered by email in PDF format

Lab No 20D0254 Pg ____ of ____

Report to	Invoice to (if different)	Project Information
Company: Bottle Rock Power	Contact:	Project ID: Bottle Rock Monitoring-GW
Attn: ~~Jay Hopper~~ Richard Lacy	Email address:	Project No:
Address: PO Box 326, Cobb, CA 95426	Address:	PO Number:
Phone/Fax: ~~707-529-3799~~ 707-987-2532	Phone/Fax:	
Email Address:		

Signature below authorizes work under terms stated on reverse side.

TAT: Standard 10 days (X); RUSH: 5 days ( ), 48 hours ( ), Other: ____days ( ), Preapproval required

TEMP °C: Ukiah; Livermore; Elk Grove; Petaluma 2.0; Carlsbad

Field Sampler - Printed Name & Signature:

Sample Identification	Sampling Date	Sampling Time	Container: 40ml VOA Vial	Container: Plastic	Container: Glass	Container: Sleeve	Container: Other	Preservative: HCl	Preservative: HNO3	Preservative: H2SO4	Preservative: Other	Preservative: None	Matrix: Drinking Water	Matrix: Wastewater	Matrix: Soil	Matrix: Other	Total Number of Containers per Sample ID	Analysis Request: ALK, Ph, ec	Turbidity & TSS	Hardness, SO4	B, Cu, Fe & Pb	Mn, Na & Zn	As & NO3			~~Field pH~~	~~Field TDS ppm~~		Notes / DDW Source Codes
GW 1	4/2/20	8:00 AM		X														X	X	X	X	X	X					
GW 3	4/2/20	8:30 AM		X														X	X	X	X	X	X					

Relinquished by	Received by	Date	Time
Richard Lacy		4/2/20	1135

DDW Write On EDT Transmission? ( ) Yes ( ) No

State **System** Number: _____

If "Y" please enter the Source Number(s) in the column above

CA Geotracker EDF Report? ( ) Yes ( ) No

Global ID: Sampling Company Log Code:

EDF to (Email Address):

Travel and Site Time: | Mileage: | Misc. Supplies:

WORK ORDER

20D0254

Alpha Analytical Laboratories North Bay to Ukiah Chain of Custody

Client:	**Bottle Rock Power**	**Client Code:**	**NB_BOTTLEROCK** **Bid:** **Master Bid**
Project:	**Groundwater**	**Project Number:**	**Bottle Rock Monitoring-GW PO #:**

Date Due: 04/16/20 15:00 (10 day TAT)
Received By: Davide B Furtado Date Received: 04/02/20 11:35
Logged In By: Lindsay L Smith Date Logged 04/02/20 11:42

Samples Received at: _____ deg C All containers received and intact: YES NO

Analysis	Department	Expires	Comments
20D0254-01 GW-1 [Water] Sampled 04/02/20 08:00			
Solids, TSS-SM2540D	Wet Chem	04/09/20 08:00	
20D0254-02 GW-3 [Water] Sampled 04/02/20 08:30			
Solids, TSS-SM2540D	Wet Chem	04/09/20 08:30	

Containers Supplied:
1L Poly - Unpres (A)
1L Poly - Unpres (A)

5-C

	4/2/20			4/2/20	1300
Relinquished By	Date	Time	Received By	Date	Time
	4/2/20	1520		4-2-20	1520
Relinquished By	Date	Time	Received By	Date	Time

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Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

07 July 2020

Bottle Rock Power
Attn: Jay Hepper
4010 Stone Way North, Suite 400
Seattle, WA 98103
RE: Groundwater
Work Order: 20F3116

Enclosed are the results of analyses for samples received by the laboratory on 06/26/20 12:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette Poplin

Jeanette L. Poplin For Stephen F. McWeeney
Lab Manager

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	07/07/20 09:57

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | T: 925-828-6226 | F: 925-828-6309 | ELAP# 2728
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | T: 916-686-5190 | F: 916-686-5192 | ELAP# 2922
North Bay: 110 Liberty Street | Petaluma, CA 94952 | T: 707-769-3128 | F: 707-769-8093 | ELAP# 2303
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | T: 760-930-2555 | F: 760-930-2510 | ELAP# 3055

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW 1	20F3116-01	Water	06/26/20 09:00	06/26/20 12:15
GW 3	20F3116-02	Water	06/26/20 09:15	06/26/20 12:15

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	07/07/20 09:57

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
GW 1 (20F3116-01)		**Sample Type: Water**				**Sampled: 06/26/20 09:00**				
Metals by EPA 200 Series Methods										
Arsenic	ND	ug/L	2.0	1	AF04482	06/29/20 16:19	06/30/20 13:48	2303	EPA 200.5	
Boron	**0.11**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:17	2303	EPA 200.7	
Calcium	**50**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:17	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:17	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AF04498	06/30/20 08:53	06/30/20 16:17	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:17	2303	EPA 200.7	
Magnesium	**16**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:17	2303	EPA 200.7	
Manganese	**0.13**	**mg/L**	**0.020**	1	AF04498	06/30/20 08:53	06/30/20 16:17	2303	EPA 200.7	
Sodium	**9.1**	**mg/L**	**0.20**	1	AF04498	06/30/20 08:53	06/30/20 16:17	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AF04498	06/30/20 08:53	06/30/20 16:17	2303	EPA 200.7	
Conventional Chemistry Parameters by APHA/EPA Methods										
pH	**7.70**	**pH Units**	**1.00**	1	AF04317	06/26/20 13:31	06/26/20 15:18	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**400**	**umhos/cm**	**10**	1	AF04317	06/26/20 13:31	06/26/20 15:18	2303	SM2510B	
Total Alkalinity as CaCO3	**160**	**mg/L**	**5.0**	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AF04494	06/30/20 13:30	07/01/20 10:45	1551	SM2540D	
Turbidity	ND	NTU	0.25	1	AF03568	06/26/20 15:00	06/26/20 16:23	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**160**	**mg/L**	**5.0**	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Hardness, Total	**189**	**mg/L**	**1**	1	AF04498	06/30/20 08:53	06/30/20 16:17	2303	SM2340B	
Anions by EPA Method 300.0										
Nitrate as N	ND	mg/L	0.40	1	AF04423	06/26/20 13:44	06/26/20 14:23	2303	EPA 300.0	
Sulfate as SO4	**20**	**mg/L**	**0.50**	1	AF04423	06/26/20 13:44	06/26/20 14:23	2303	EPA 300.0	
GW 3 (20F3116-02)		**Sample Type: Water**				**Sampled: 06/26/20 09:15**				
Metals by EPA 200 Series Methods										
Arsenic	ND	ug/L	2.0	1	AF04482	06/29/20 16:19	06/30/20 13:48	2303	EPA 200.5	
Boron	**0.45**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:20	2303	EPA 200.7	
Calcium	**38**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:20	2303	EPA 200.7	
Copper	**0.34**	**mg/L**	**0.020**	1	AF04498	06/30/20 08:53	06/30/20 16:20	2303	EPA 200.7	
Iron	**0.14**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:20	2303	EPA 200.7	
Lead	**0.25**	**mg/L**	**0.020**	1	AF04498	06/30/20 08:53	06/30/20 16:20	2303	EPA 200.7	
Magnesium	**13**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:20	2303	EPA 200.7	
Manganese	**0.14**	**mg/L**	**0.020**	1	AF04498	06/30/20 08:53	06/30/20 16:20	2303	EPA 200.7	
Sodium	**20**	**mg/L**	**0.20**	1	AF04498	06/30/20 08:53	06/30/20 16:20	2303	EPA 200.7	
Zinc	**0.33**	**mg/L**	**0.050**	1	AF04498	06/30/20 08:53	06/30/20 16:20	2303	EPA 200.7	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	07/07/20 09:57

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
GW 3 (20F3116-02)	**Sample Type: Water**					**Sampled: 06/26/20 09:15**				
Conventional Chemistry Parameters by APHA/EPA Methods										
pH	**7.33**	**pH Units**	**1.00**	1	AF04317	06/26/20 13:31	06/26/20 15:18	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**380**	**umhos/cm**	**10**	1	AF04317	06/26/20 13:31	06/26/20 15:18	2303	SM2510B	
Total Alkalinity as CaCO3	**170**	**mg/L**	**5.0**	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AF04494	06/30/20 13:30	07/01/20 10:45	1551	SM2540D	
Turbidity	**1.1**	**NTU**	**0.25**	1	AF03568	06/26/20 15:00	06/26/20 16:23	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**170**	**mg/L**	**5.0**	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Hardness, Total	**151**	**mg/L**	**1**	1	AF04498	06/30/20 08:53	06/30/20 16:20	2303	SM2340B	
Anions by EPA Method 300.0										
Nitrate as N	ND	mg/L	0.40	1	AF04423	06/26/20 13:44	06/26/20 14:41	2303	EPA 300.0	
Sulfate as SO4	**7.8**	**mg/L**	**0.50**	1	AF04423	06/26/20 13:44	06/26/20 14:41	2303	EPA 300.0	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	07/07/20 09:57

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF04482 - NB EPA 200 series										
Blank (AF04482-BLK1)				Prepared: 06/29/20 Analyzed: 06/30/20						
Arsenic	ND	2.0	ug/L							
LCS (AF04482-BS1)				Prepared: 06/29/20 Analyzed: 06/30/20						
Arsenic	10.8	2.0	ug/L	10.0		108	85-115			
LCS Dup (AF04482-BSD1)				Prepared: 06/29/20 Analyzed: 06/30/20						
Arsenic	9.98	2.0	ug/L	10.0		99.8	85-115	8.12	20	
Duplicate (AF04482-DUP1)		**Source: 20F3177-01**		Prepared: 06/29/20 Analyzed: 06/30/20						
Arsenic	4.15	2.0	ug/L		4.18			0.601	20	
Matrix Spike (AF04482-MS1)		**Source: 20F3174-02**		Prepared: 06/29/20 Analyzed: 06/30/20						
Arsenic	16.1	2.0	ug/L	10.0	6.36	97.3	70-130			
Matrix Spike Dup (AF04482-MSD1)		**Source: 20F3174-02**		Prepared: 06/29/20 Analyzed: 06/30/20						
Arsenic	16.4	2.0	ug/L	10.0	6.36	100	70-130	1.66	20	
Batch AF04498 - NB EPA 200 series										
Blank (AF04498-BLK1)				Prepared & Analyzed: 06/30/20						
Boron	ND	0.10	mg/L							
Calcium	0.440	0.10	mg/L							QB-01
Copper	ND	0.020	mg/L							
Iron	ND	0.10	mg/L							
Lead	ND	0.020	mg/L							
Magnesium	ND	0.10	mg/L							
Manganese	ND	0.020	mg/L							
Sodium	ND	0.20	mg/L							
Zinc	ND	0.050	mg/L							

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	07/07/20 09:57

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF04498 - NB EPA 200 series										
LCS (AF04498-BS1)				Prepared & Analyzed: 06/30/20						
Boron	0.499	0.10	mg/L	0.500		99.8	85-115			
Calcium	0.608	0.10	mg/L	0.500		122	85-115			QL-03
Copper	0.517	0.020	mg/L	0.500		103	85-115			
Iron	0.528	0.10	mg/L	0.500		106	85-115			
Lead	0.513	0.020	mg/L	0.500		103	85-115			
Magnesium	0.509	0.10	mg/L	0.500		102	85-115			
Manganese	0.520	0.020	mg/L	0.500		104	85-115			
Sodium	0.513	0.20	mg/L	0.500		103	85-115			
Zinc	0.521	0.050	mg/L	0.500		104	85-115			
LCS Dup (AF04498-BSD1)				Prepared & Analyzed: 06/30/20						
Boron	0.500	0.10	mg/L	0.500		100	85-115	0.320	20	
Calcium	0.608	0.10	mg/L	0.500		122	85-115	0.0329	20	QL-03
Copper	0.518	0.020	mg/L	0.500		104	85-115	0.116	20	
Iron	0.529	0.10	mg/L	0.500		106	85-115	0.265	20	
Lead	0.516	0.020	mg/L	0.500		103	85-115	0.428	20	
Magnesium	0.510	0.10	mg/L	0.500		102	85-115	0.0589	20	
Manganese	0.520	0.020	mg/L	0.500		104	85-115	0.0962	20	
Sodium	0.514	0.20	mg/L	0.500		103	85-115	0.117	20	
Zinc	0.523	0.050	mg/L	0.500		105	85-115	0.364	20	
Duplicate (AF04498-DUP1)	**Source: 20F3118-05**			Prepared & Analyzed: 06/30/20						
Boron	ND	0.10	mg/L		ND			2.17	20	
Calcium	6.73	0.10	mg/L		6.83			1.36	20	
Copper	ND	0.020	mg/L		ND				20	
Iron	ND	0.10	mg/L		ND			1.37	20	
Lead	ND	0.020	mg/L		ND				20	
Magnesium	3.48	0.10	mg/L		3.55			1.96	20	
Manganese	ND	0.020	mg/L		ND				20	
Sodium	4.82	0.20	mg/L		4.85			0.677	20	
Zinc	ND	0.050	mg/L		ND				20	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	07/07/20 09:57

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF04498 - NB EPA 200 series										
Matrix Spike (AF04498-MS1)	**Source: 20F3118-01**			Prepared & Analyzed: 06/30/20						
Boron	0.586	0.10	mg/L	0.500	ND	104	70-130			
Copper	0.525	0.020	mg/L	0.500	ND	105	70-130			
Iron	0.584	0.10	mg/L	0.500	ND	117	70-130			
Lead	0.519	0.020	mg/L	0.500	ND	104	70-130			
Manganese	0.534	0.020	mg/L	0.500	ND	107	70-130			
Sodium	5.40	0.20	mg/L	0.500	4.88	104	70-130			
Zinc	0.534	0.050	mg/L	0.500	ND	107	70-130			
Matrix Spike Dup (AF04498-MSD1)	**Source: 20F3118-01**			Prepared & Analyzed: 06/30/20						
Boron	0.588	0.10	mg/L	0.500	ND	105	70-130	0.222	20	
Copper	0.526	0.020	mg/L	0.500	ND	105	70-130	0.190	20	
Iron	0.588	0.10	mg/L	0.500	ND	118	70-130	0.512	20	
Lead	0.518	0.020	mg/L	0.500	ND	104	70-130	0.231	20	
Manganese	0.535	0.020	mg/L	0.500	ND	107	70-130	0.131	20	
Sodium	5.41	0.20	mg/L	0.500	4.88	105	70-130	0.0315	20	
Zinc	0.535	0.050	mg/L	0.500	ND	107	70-130	0.0561	20	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	07/07/20 09:57

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF03568 - NB General Prep										
Blank (AF03568-BLK1)				Prepared & Analyzed: 06/10/20						
Turbidity	ND	0.25	NTU							
Duplicate (AF03568-DUP1)		**Source: 20F1435-01**		Prepared & Analyzed: 06/10/20						
Turbidity	12.6	0.25	NTU		12.6			0.00	20	
Batch AF04317 - NB General Prep										
Duplicate (AF04317-DUP1)		**Source: 20F3050-01**		Prepared & Analyzed: 06/25/20						
pH	7.24	1.00	pH Units		7.24			0.00	20	
Specific Conductance (EC)	330	10	umhos/cm		325			1.53	5	
Batch AF04494 - General Preparation										
Blank (AF04494-BLK1)				Prepared: 06/30/20 Analyzed: 07/01/20						
Total Suspended Solids	ND	1.0	mg/L							
Duplicate (AF04494-DUP1)		**Source: 20F3186-01**		Prepared: 06/30/20 Analyzed: 07/01/20						
Total Suspended Solids	29.3	1.0	mg/L		29.9			2.02	30	
Duplicate (AF04494-DUP2)		**Source: 20F3285-01**		Prepared: 06/30/20 Analyzed: 07/01/20						
Total Suspended Solids	255	1.0	mg/L		259			1.43	30	
Batch AF04498 - NB EPA 200 series										
Blank (AF04498-BLK1)				Prepared & Analyzed: 06/30/20						
Hardness, Total	ND	1	mg/L							

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	07/07/20 09:57

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF04498 - NB EPA 200 series										
Duplicate (AF04498-DUP1)		**Source: 20F3118-05**		Prepared & Analyzed: 06/30/20						
Hardness, Total	31	1	mg/L		32			1.64	20	
Batch AG03150 - NB General Prep										
LCS (AG03150-BS1)				Prepared & Analyzed: 07/01/20						
Total Alkalinity as CaCO3	240	5.0	mg/L	250		96.1	80-120			
Duplicate (AG03150-DUP1)		**Source: 20F3306-01**		Prepared & Analyzed: 07/01/20						
Total Alkalinity as CaCO3	146	5.0	mg/L		142			3.22	20	
Bicarbonate Alkalinity as CaCO3	146	5.0	mg/L		142			3.23	20	
Carbonate Alkalinity as CaCO3	ND	5.0	mg/L		ND				20	
Hydroxide Alkalinity as CaCO3	ND	5.0	mg/L		ND				20	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	07/07/20 09:57

Anions by EPA Method 300.0 - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF04423 - NB General Prep										
Blank (AF04423-BLK1)				Prepared: 06/26/20 Analyzed: 06/27/20						
Sulfate as SO4	ND	0.50	mg/L							
Nitrate as N	ND	0.40	mg/L							
LCS (AF04423-BS1)				Prepared: 06/26/20 Analyzed: 06/27/20						
Sulfate as SO4	7.53	0.50	mg/L	8.00		94.1	90-110			
Nitrate as N	1.64	0.40	mg/L	1.81		90.7	90-110			
Duplicate (AF04423-DUP1)		**Source: 20F3129-01**		Prepared: 06/26/20 Analyzed: 06/27/20						
Nitrate as N	ND	0.40	mg/L		ND				20	
Sulfate as SO4	ND	0.50	mg/L		ND				20	
MRL Check (AF04423-MRL1)				Prepared: 06/26/20 Analyzed: 06/27/20						
Nitrate as N	0.326	0.40	mg/L	0.361		90.3	60-140			
Sulfate as SO4	1.72	0.50	mg/L	1.60		108	60-140			
Matrix Spike (AF04423-MS1)		**Source: 20F3129-01**		Prepared: 06/26/20 Analyzed: 06/27/20						
Sulfate as SO4	7.85	0.50	mg/L	8.00	ND	98.1	80-120			
Nitrate as N	1.94	0.40	mg/L	1.81	ND	107	80-120			
Matrix Spike (AF04423-MS2)		**Source: 20F3121-01**		Prepared: 06/26/20 Analyzed: 06/27/20						
Nitrate as N	1.69	0.40	mg/L	1.81	ND	93.6	80-120			
Sulfate as SO4	122	0.50	mg/L	8.00	115	85.2	80-120			
Matrix Spike Dup (AF04423-MSD1)		**Source: 20F3129-01**		Prepared: 06/26/20 Analyzed: 06/27/20						
Nitrate as N	1.65	0.40	mg/L	1.81	ND	91.6	80-120	16.0	20	
Sulfate as SO4	7.88	0.50	mg/L	8.00	ND	98.5	80-120	0.394	20	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	07/07/20 09:57

Notes and Definitions

QB-01	The method blank contains analyte at a concentration above the MRL; however, the analyte in all associated samples was either ND or greater than 10X the blank concentration.
QL-03	Although the LCS/LCSD recovery for this analyte is outside of in-house developed control limits, it is within the EPA recommended range of 70-130%.
T-14	Residual chlorine, dissolved oxygen, sulfite, and pH must be analyzed in the field to meet the EPA specified 15 minute hold time.
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
REC	Recovery
RPD	Relative Percent Difference

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Bay Area Laboratory (2728)
262 Rickenbacker Circle, Livermore CA 94551

Central Valley Laboratory (2922)
9090 Union Park Way #113, Elk Grove CA 95624

San Diego Service Center
2722 Loker Ave West, Ste A, Carlsbad CA 92010

Chain of Custody - Work Order

Reports and Invoices delivered by email in PDF format

Lab No 20F3116 Pg ____ of ____

Signature below authorizes work under terms stated on reverse side.

Report to	Invoice to (if different)	Project Information
Company: Bottle Rock Power	Contact:	Project ID: Bottle Rock Monitoring-GW
Attn: ~~Jay Hopper~~ Richard Lacy	Email address:	Project No:
Address: PO Box 326, Cobb, CA 95426	Address:	PO Number:
Phone/Fax: 707-529-3799	Phone/Fax:	
Email Address:		

Field Sampler - Printed Name & Signature: Richard Lacy Richard Lacy

TAT: Standard 10 days ○ | RUSH: 5 days ○ 48 hours ○ Other: ____days ○ Preapproval required

TEMP °C: Ukiah | Livermore | Elk Grove | Petaluma 5-4 | Carlsbad

Sample Identification	Sampling Date	Sampling Time	Container: 40ml VOA Vial	Container: Plastic	Container: Glass	Container: Sleeve	Container: Other	Preservative: HCl	Preservative: HNO3	Preservative: H2SO4	Preservative: Other	Preservative: None	Matrix: Drinking Water	Matrix: Wastewater	Matrix: Soil	Matrix: Other	Total Number of Containers per Sample ID	Analysis Request: ALK, Ph, ec	Turbidity & TSS	Hardness, SO4	B, Cu, Fe & Pb	Mn, Na & Zn	As & NO3	Field pH	Field TDS ppm	Notes / DDW Source Codes
~~GW 1~~	6/26/20	9:00		X													3	X	X	X	X	X	X			
~~GW 3~~	6/26/20			X													3	X	X	X	X	X	X			
~~GW 3~~ Dup	~~6/26/20~~	9:15		X																						
~~GW 3~~	6/26/20			X																						
~~GW 1~~	6/26/20			X																						
~~GW 1~~	6/26/20			X																						

Relinquished by	Received by	Date	Time
Richard Lacy		6/26/20	12:15

DDW Write On EDT Transmission? ○ Yes ○ No

State System Number: _____

If "Y" please enter the Source Number(s) in the column above

CA Geotracker EDF Report? ○ Yes ○ No

Global ID: Sampling Company Log Code:

EDF to (Email Address):

Travel and Site Time: | Mileage: | Misc. Supplies:

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21 October 2020

Bottle Rock Power
Attn: M. Moore
4010 Stone Way North, Suite 400
Seattle, WA 98103
RE: Groundwater
Work Order: 20J1440

Enclosed are the results of analyses for samples received by the laboratory on 10/12/20 13:43. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette Poplin

Jeanette L. Poplin For Stephen F. McWeeney
Lab Manager

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:49

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | T: 925-828-6226 | F: 925-828-6309 | ELAP# 2728
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | T: 916-686-5190 | F: 916-686-5192 | ELAP# 2922
North Bay: 110 Liberty Street | Petaluma, CA 94952 | T: 707-769-3128 | F: 707-769-8093 | ELAP# 2303
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | T: 760-930-2555 | F: 760-930-2510 | ELAP# 3055

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW 1	20J1440-01	Water	10/12/20 10:00	10/12/20 13:43
GW 3	20J1440-02	Water	10/12/20 09:30	10/12/20 13:43

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:49

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
GW 1 (20J1440-01)		**Sample Type: Water**				**Sampled: 10/12/20 10:00**				
Metals by EPA 200 Series Methods										
Arsenic	ND	ug/L	2.0	1	AJ03699	10/13/20 10:57	10/14/20 12:16	2303	EPA 200.5	
Boron	ND	mg/L	0.10	1	AJ03715	10/13/20 13:38	10/14/20 10:10	2303	EPA 200.7	
Calcium	**47**	**mg/L**	**5.0**	1	AJ03715	10/13/20 13:38	10/14/20 10:10	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:10	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AJ03715	10/13/20 13:38	10/14/20 10:10	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:10	2303	EPA 200.7	
Magnesium	**15**	**mg/L**	**0.50**	1	AJ03715	10/13/20 13:38	10/14/20 10:10	2303	EPA 200.7	
Manganese	**0.096**	**mg/L**	**0.020**	1	AJ03715	10/13/20 13:38	10/14/20 10:10	2303	EPA 200.7	
Sodium	**8.2**	**mg/L**	**5.0**	1	AJ03715	10/13/20 13:38	10/14/20 10:10	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AJ03715	10/13/20 13:38	10/14/20 10:10	2303	EPA 200.7	
Conventional Chemistry Parameters by APHA/EPA Methods										
pH	**7.89**	**pH Units**	**1.00**	1	AJ03396	10/12/20 15:00	10/12/20 16:15	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**390**	**umhos/cm**	**10**	1	AJ03396	10/12/20 15:00	10/12/20 16:15	2303	SM2510B	
Total Alkalinity as CaCO3	**180**	**mg/L**	**5.0**	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AJ03682	10/13/20 14:30	10/14/20 13:15	1551	SM2540D	
Turbidity	ND	NTU	0.25	1	AJ03545	10/13/20 08:00	10/13/20 09:22	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**180**	**mg/L**	**5.0**	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Hardness, Total	**181**	**mg/L**	**1**	1	AJ03715	10/13/20 13:38	10/14/20 10:10	2303	SM2340B	
Anions by EPA Method 300.0										
Nitrate as N	ND	mg/L	0.40	1	AJ03661	10/12/20 15:27	10/12/20 17:31	2303	EPA 300.0	
Sulfate as SO4	**19**	**mg/L**	**0.50**	1	AJ03661	10/12/20 15:27	10/12/20 17:31	2303	EPA 300.0	
GW 3 (20J1440-02)		**Sample Type: Water**				**Sampled: 10/12/20 09:30**				
Metals by EPA 200 Series Methods										
Arsenic	ND	ug/L	2.0	1	AJ03699	10/13/20 10:57	10/14/20 12:19	2303	EPA 200.5	
Boron	**0.39**	**mg/L**	**0.10**	1	AJ03715	10/13/20 13:38	10/14/20 10:13	2303	EPA 200.7	
Calcium	**33**	**mg/L**	**5.0**	1	AJ03715	10/13/20 13:38	10/14/20 10:13	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:13	2303	EPA 200.7	
Iron	**0.15**	**mg/L**	**0.10**	1	AJ03715	10/13/20 13:38	10/14/20 10:13	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:13	2303	EPA 200.7	
Magnesium	**9.9**	**mg/L**	**0.50**	1	AJ03715	10/13/20 13:38	10/14/20 10:13	2303	EPA 200.7	
Manganese	**0.057**	**mg/L**	**0.020**	1	AJ03715	10/13/20 13:38	10/14/20 10:13	2303	EPA 200.7	
Sodium	**24**	**mg/L**	**5.0**	1	AJ03715	10/13/20 13:38	10/14/20 10:13	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AJ03715	10/13/20 13:38	10/14/20 10:13	2303	EPA 200.7	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:49

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
GW 3 (20J1440-02)		**Sample Type: Water**				**Sampled: 10/12/20 09:30**				
Conventional Chemistry Parameters by APHA/EPA Methods										
pH	**7.64**	**pH Units**	**1.00**	1	AJ03396	10/12/20 15:00	10/12/20 16:15	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**360**	**umhos/cm**	**10**	1	AJ03396	10/12/20 15:00	10/12/20 16:15	2303	SM2510B	
Total Alkalinity as CaCO3	**170**	**mg/L**	**5.0**	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AJ03682	10/13/20 14:30	10/14/20 13:15	1551	SM2540D	
Turbidity	**0.61**	**NTU**	**0.25**	1	AJ03545	10/13/20 08:00	10/13/20 09:22	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**170**	**mg/L**	**5.0**	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Hardness, Total	**122**	**mg/L**	**1**	1	AJ03715	10/13/20 13:38	10/14/20 10:13	2303	SM2340B	
Anions by EPA Method 300.0										
Nitrate as N	ND	mg/L	0.40	1	AJ03661	10/12/20 15:27	10/12/20 17:49	2303	EPA 300.0	
Sulfate as SO4	**6.3**	**mg/L**	**0.50**	1	AJ03661	10/12/20 15:27	10/12/20 17:49	2303	EPA 300.0	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:49

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AJ03699 - NB EPA 200 series Direct Analysis										
Blank (AJ03699-BLK1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Arsenic	ND	2.0	ug/L							
LCS (AJ03699-BS1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Arsenic	8.44	2.0	ug/L	10.0		84.4	85-115			QL-07
LCS Dup (AJ03699-BSD1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Arsenic	9.09	2.0	ug/L	10.0		90.9	85-115	7.48	20	
Duplicate (AJ03699-DUP1)		**Source: 20J1465-01**		Prepared: 10/13/20 Analyzed: 10/14/20						
Arsenic	3.70	2.0	ug/L		3.38			8.90	20	
MRL Check (AJ03699-MRL1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Arsenic	2.56	2.0	ug/L	4.00		64.0	0-200			
MRL Check (AJ03699-MRL2)				Prepared: 10/13/20 Analyzed: 10/14/20						
Arsenic	5.48	2.0	ug/L	5.00		110	0-200			
Matrix Spike (AJ03699-MS1)		**Source: 20J1465-01**		Prepared: 10/13/20 Analyzed: 10/14/20						
Arsenic	12.0	2.0	ug/L	10.0	3.38	86.2	70-130			
Matrix Spike Dup (AJ03699-MSD1)		**Source: 20J1465-01**		Prepared: 10/13/20 Analyzed: 10/14/20						
Arsenic	12.8	2.0	ug/L	10.0	3.38	94.6	70-130	6.77	20	
Batch AJ03715 - NB EPA 200 series Direct Analysis										
Blank (AJ03715-BLK1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Boron	ND	0.10	mg/L							
Calcium	ND	5.0	mg/L							
Copper	ND	0.020	mg/L							
Iron	ND	0.10	mg/L							
Lead	ND	0.020	mg/L							
Magnesium	ND	0.50	mg/L							
Manganese	ND	0.020	mg/L							
Sodium	ND	5.0	mg/L							
Zinc	ND	0.050	mg/L							

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:49

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AJ03715 - NB EPA 200 series Direct Analysis										
LCS (AJ03715-BS1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Boron	0.540	0.10	mg/L	0.500		108	85-115			
Calcium	27.8	5.0	mg/L	25.5		109	85-115			
Copper	0.518	0.020	mg/L	0.500		104	85-115			
Iron	0.549	0.10	mg/L	0.500		110	85-115			
Lead	0.552	0.020	mg/L	0.500		110	85-115			
Magnesium	27.6	0.50	mg/L	25.5		108	85-115			
Manganese	0.543	0.020	mg/L	0.500		109	85-115			
Sodium	26.7	5.0	mg/L	25.5		105	85-115			
Zinc	0.584	0.050	mg/L	0.500		117	85-115			QL-03
LCS Dup (AJ03715-BSD1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Boron	0.513	0.10	mg/L	0.500		103	85-115	5.14	20	
Calcium	26.0	5.0	mg/L	25.5		102	85-115	6.60	20	
Copper	0.495	0.020	mg/L	0.500		99.1	85-115	4.48	20	
Iron	0.538	0.10	mg/L	0.500		108	85-115	1.97	20	
Lead	0.526	0.020	mg/L	0.500		105	85-115	4.86	20	
Magnesium	25.6	0.50	mg/L	25.5		101	85-115	7.22	20	
Manganese	0.519	0.020	mg/L	0.500		104	85-115	4.50	20	
Sodium	24.9	5.0	mg/L	25.5		97.5	85-115	7.09	20	
Zinc	0.558	0.050	mg/L	0.500		112	85-115	4.50	20	
Duplicate (AJ03715-DUP1)		**Source: 20J1448-01**		Prepared: 10/13/20 Analyzed: 10/14/20						
Boron	0.928	0.10	mg/L		0.898			3.38	20	
Calcium	10.9	5.0	mg/L		10.5			3.87	20	
Copper	ND	0.020	mg/L		ND				20	
Iron	0.305	0.10	mg/L		0.296			2.93	20	
Lead	ND	0.020	mg/L		ND				20	
Magnesium	2.35	0.50	mg/L		2.25			4.41	20	
Manganese	0.0231	0.020	mg/L		0.0224			3.08	20	
Sodium	66.0	5.0	mg/L		63.7			3.69	20	
Zinc	ND	0.050	mg/L		ND				20	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:49

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AJ03715 - NB EPA 200 series Direct Analysis										
Matrix Spike (AJ03715-MS1)	**Source: 20J1443-01**			Prepared: 10/13/20 Analyzed: 10/14/20						
Boron	0.581	0.10	mg/L	0.500	ND	116	70-130			
Copper	0.504	0.020	mg/L	0.500	ND	101	70-130			
Iron	0.564	0.10	mg/L	0.500	ND	113	70-130			
Lead	0.533	0.020	mg/L	0.500	ND	107	70-130			
Manganese	0.528	0.020	mg/L	0.500	0.0290	99.8	70-130			
Sodium	30.8	5.0	mg/L	25.5	ND	102	70-130			
Zinc	0.546	0.050	mg/L	0.500	ND	109	70-130			
Matrix Spike Dup (AJ03715-MSD1)	**Source: 20J1443-01**			Prepared: 10/13/20 Analyzed: 10/14/20						
Boron	0.582	0.10	mg/L	0.500	ND	116	70-130	0.241	20	
Copper	0.506	0.020	mg/L	0.500	ND	101	70-130	0.277	20	
Iron	0.565	0.10	mg/L	0.500	ND	113	70-130	0.230	20	
Lead	0.533	0.020	mg/L	0.500	ND	107	70-130	0.0375	20	
Manganese	0.530	0.020	mg/L	0.500	0.0290	100	70-130	0.303	20	
Sodium	31.0	5.0	mg/L	25.5	ND	103	70-130	0.598	20	
Zinc	0.547	0.050	mg/L	0.500	ND	109	70-130	0.183	20	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:49

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AJ03259 - NB General Prep										
Blank (AJ03259-BLK1)				Prepared & Analyzed: 10/05/20						
Total Alkalinity as CaCO3	ND	5.0	mg/L							
Bicarbonate Alkalinity as CaCO3	ND	5.0	mg/L							
Carbonate Alkalinity as CaCO3	ND	5.0	mg/L							
Hydroxide Alkalinity as CaCO3	ND	5.0	mg/L							
LCS (AJ03259-BS1)				Prepared & Analyzed: 10/05/20						
Total Alkalinity as CaCO3	999	5.0	mg/L	1000		99.9	80-120			
Duplicate (AJ03259-DUP1)		**Source: 20J0250-01**		Prepared & Analyzed: 10/05/20						
Total Alkalinity as CaCO3	266	5.0	mg/L		268			0.895	20	
Bicarbonate Alkalinity as CaCO3	263	5.0	mg/L		265			0.920	20	
Carbonate Alkalinity as CaCO3	ND	5.0	mg/L		ND			1.01	20	
Hydroxide Alkalinity as CaCO3	ND	5.0	mg/L		ND				20	
Batch AJ03396 - NB General Prep										
Duplicate (AJ03396-DUP1)		**Source: 20J0854-01**		Prepared & Analyzed: 10/07/20						
pH	8.00	1.00	pH Units		8.00			0.00	20	
Specific Conductance (EC)	669	10	umhos/cm		672			0.447	5	
Batch AJ03682 - General Preparation										
Blank (AJ03682-BLK1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Total Suspended Solids	ND	1.0	mg/L							
Duplicate (AJ03682-DUP1)		**Source: 20J1536-01**		Prepared: 10/13/20 Analyzed: 10/14/20						
Total Suspended Solids	69.5	1.0	mg/L		72.2			3.80	30	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:49

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AJ03682 - General Preparation										
Duplicate (AJ03682-DUP2)		**Source: 20J1538-01**		Prepared: 10/13/20 Analyzed: 10/14/20						
Total Suspended Solids	75.4	1.0	mg/L		78.8			4.36	30	
Batch AJ03715 - NB EPA 200 series Direct Analysis										
Blank (AJ03715-BLK1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Hardness, Total	3	1	mg/L							QB-01
Duplicate (AJ03715-DUP1)		**Source: 20J1448-01**		Prepared: 10/13/20 Analyzed: 10/14/20						
Hardness, Total	37	1	mg/L		36			4.01	20	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:49

Anions by EPA Method 300.0 - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AJ03661 - NB General Prep										
Blank (AJ03661-BLK1)				Prepared & Analyzed: 10/12/20						
Nitrate as N	ND	0.40	mg/L							
Sulfate as SO4	ND	0.50	mg/L							
LCS (AJ03661-BS1)				Prepared & Analyzed: 10/12/20						
Sulfate as SO4	7.85	0.50	mg/L	8.00		98.1	90-110			
Nitrate as N	1.92	0.40	mg/L	1.81		106	90-110			
Duplicate (AJ03661-DUP1)		**Source: 20J1448-01**		Prepared & Analyzed: 10/12/20						
Sulfate as SO4	0.534	0.50	mg/L		ND			7.38	20	
Nitrate as N	ND	0.40	mg/L		ND				20	
MRL Check (AJ03661-MRL1)				Prepared & Analyzed: 10/12/20						
Nitrate as N	0.349	0.40	mg/L	0.361		96.6	60-140			
Sulfate as SO4	1.77	0.50	mg/L	1.60		110	60-140			
Matrix Spike (AJ03661-MS1)		**Source: 20J1448-01**		Prepared & Analyzed: 10/12/20						
Nitrate as N	1.74	0.40	mg/L	1.81	ND	96.1	80-120			
Sulfate as SO4	7.36	0.50	mg/L	8.00	ND	85.8	80-120			
Matrix Spike Dup (AJ03661-MSD1)		**Source: 20J1448-01**		Prepared & Analyzed: 10/12/20						
Sulfate as SO4	7.28	0.50	mg/L	8.00	ND	84.8	80-120	1.11	20	
Nitrate as N	1.80	0.40	mg/L	1.81	ND	99.6	80-120	3.62	20	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:49

Notes and Definitions

QB-01	The method blank contains analyte at a concentration above the MRL; however, the analyte in all associated samples was either ND or greater than 10X the blank concentration.
QL-03	Although the LCS/LCSD recovery for this analyte is outside of in-house developed control limits, it is within the EPA recommended range of 70-130%.
QL-07	The controls limits for this analysis are provisional until enough statistics have been collected to calculate in-house limits.
T-14	Residual chlorine, dissolved oxygen, sulfite, and pH must be analyzed in the field to meet the EPA specified 15 minute hold time.
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
REC	Recovery
RPD	Relative Percent Difference

Alpha Analytical Laboratories Inc.
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WATERS, SEDIMENTS, SOLIDS

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110 Liberty Street, Petaluma CA 94952

Bay Area Laboratory (2728)
262 Rickenbacker Circle, Livermore CA 94551

Central Valley Laboratory (2922)
9090 Union Park Way #113, Elk Grove CA 95624

San Diego Service Center
2722 Loker Ave West, Ste A, Carlsbad CA 92010

Chain of Custody - Work Order

Reports and Invoices delivered by email in PDF format

Lab No 2001440 Pg ____ of ____

Report to	Invoice to (if different)	Project Information
Company: Bottle Rock Power	Contact:	Project ID: Bottle Rock Monitoring-GW
Attn: ~~Jay Hepper~~ Richard Lacy	Email address:	Project No:
Address: PO Box 326, Cobb, CA 95426	Address:	PO Number:
Phone/Fax: 707-529-3799	Phone/Fax:	
Email Address:		

Signature below authorizes work under terms stated on reverse side.

Field Sampler - Printed Name & Signature: Richard Lacy / Richard Lacy (signature)

TAT: Standard 10 days ○; RUSH: 5 days ○; 48 hours ○; Other: ____ days ○; Preapproval required

TEMP °C: Ukiah; Livermore; Elk Grove; Petaluma 10.8; Carlsbad

Sample Identification	Sampling Date	Sampling Time	40ml VOA Vial	Plastic	Glass	Sleeve	Other	HCl	HNO3	H2SO4	Other	None	Drinking Water	Wastewater	Soil	Other	Total Number of Containers per Sample ID	ALK, Ph, ec	Turbidity & TSS	Hardness, SO4	B, Cu, Fe & Pb	Mn, Na & Zn	As & NO3				Field pH	Field TDS ppm	Notes / DDW Source Codes
GW 1	10/12/20	10:00 AM		X													3	X	X	X	X	X	X						
GW 3	10/12/20	9:30 AM		X													3	X	X	X	X	X	X						

Relinquished by	Received by	Date	Time
Richard Lacy (signature)	(signature)	10/12/20	2:43 PM

DDW Write On EDT Transmission? ○ Yes ○ No
State System Number: ____
If "Y" please enter the Source Number(s) in the column above

CA Geotracker EDF Report? ○ Yes ○ No
Global ID: Sampling Company Log Code:
EDF to (Email Address):
Travel and Site Time: Mileage: Misc. Supplies:

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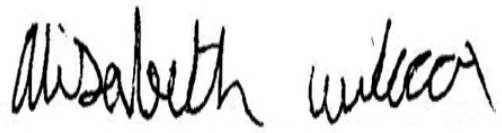
12 January 2021

Bottle Rock Power
Attn: Terra Rogers
4010 Stone Way North, Suite 400
Seattle, WA 98103
RE: Groundwater
Work Order: 20L3285

Enclosed are the results of analyses for samples received by the laboratory on 12/28/20 12:04. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Alisabeth J. Wilcox For Stephen F. McWeeney
Lab Manager

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | T: 925-828-6226 | F: 925-828-6309 | ELAP# 2728
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | T: 916-686-5190 | F: 916-686-5192 | ELAP# 2922
North Bay: 110 Liberty Street | Petaluma, CA 94952 | T: 707-769-3128 | F: 707-769-8093 | ELAP# 2303
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | T: 760-930-2555 | F: 760-930-2510 | ELAP# 3055

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW 1	20L3285-01	Water	12/28/20 09:09	12/28/20 12:04
GW 3	20L3285-02	Water	12/28/20 08:58	12/28/20 12:04

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
GW 1 (20L3285-01)			**Sample Type: Water**			**Sampled: 12/28/20 09:09**				
Metals by EPA 200 Series Methods										
Boron	ND	mg/L	0.20	1	AL04571	12/31/20 11:40	01/07/21 14:45	1551	EPA 200.7	
Calcium	**52**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:45	1551	EPA 200.7	
Copper	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:45	1551	EPA 200.7	
Iron	ND	mg/L	0.10	1	AL04571	12/31/20 11:40	01/07/21 14:45	1551	EPA 200.7	
Lead	ND	mg/L	0.050	1	AL04571	12/31/20 11:40	01/07/21 14:45	1551	EPA 200.7	
Magnesium	**15**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:45	1551	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:45	1551	EPA 200.7	
Sodium	**7.8**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:45	1551	EPA 200.7	
Zinc	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:45	1551	EPA 200.7	
Metals by EPA Method 200.8 ICP/MS										
Arsenic	ND	ug/L	2.0	4	AA13327	01/06/21 11:45	01/07/21 13:04	1551	EPA 200.8	
Conventional Chemistry Parameters by APHA/EPA Methods										
pH	**7.90**	**pH Units**	**1.00**	1	AL03587	12/28/20 13:31	12/28/20 15:19	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**390**	**umhos/cm**	**10**	1	AL03587	12/28/20 13:31	12/28/20 15:19	2303	SM2510B	
Total Alkalinity as CaCO3	**190**	**mg/L**	**5.0**	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AL04665	12/30/20 09:00	01/06/21 07:40	1551	SM2540D	
Turbidity	ND	NTU	0.25	1	AL04555	12/29/20 09:34	12/29/20 09:51	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**190**	**mg/L**	**5.0**	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Hardness, Total	**192**	**mg/L**	**5**	1	AL04571	12/31/20 11:40	01/07/21 14:45	1551	SM2340B	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
GW 1 (20L3285-01)			**Sample Type: Water**			**Sampled: 12/28/20 09:09**				
Anions by EPA Method 300.0										
Nitrate as N	ND	mg/L	0.40	1	AL04465	12/28/20 13:00	12/28/20 15:56	2303	EPA 300.0	
Sulfate as SO4	**22**	**mg/L**	**0.50**	1	AL04465	12/28/20 13:00	12/28/20 15:56	2303	EPA 300.0	
GW 3 (20L3285-02)			**Sample Type: Water**			**Sampled: 12/28/20 08:58**				
Metals by EPA 200 Series Methods										
Boron	**0.41**	**mg/L**	**0.20**	1	AL04571	12/31/20 11:40	01/07/21 15:50	1551	EPA 200.7	
Calcium	**36**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 15:50	1551	EPA 200.7	
Copper	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 15:50	1551	EPA 200.7	
Iron	**1.1**	**mg/L**	**0.10**	1	AL04571	12/31/20 11:40	01/07/21 15:50	1551	EPA 200.7	
Lead	ND	mg/L	0.050	1	AL04571	12/31/20 11:40	01/07/21 15:50	1551	EPA 200.7	
Magnesium	**9.4**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 15:50	1551	EPA 200.7	
Manganese	**0.13**	**mg/L**	**0.020**	1	AL04571	12/31/20 11:40	01/07/21 15:50	1551	EPA 200.7	
Sodium	**24**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 15:50	1551	EPA 200.7	
Zinc	**0.036**	**mg/L**	**0.020**	1	AL04571	12/31/20 11:40	01/07/21 15:50	1551	EPA 200.7	
Metals by EPA Method 200.8 ICP/MS										
Arsenic	ND	ug/L	2.0	4	AA13327	01/06/21 11:45	01/07/21 12:56	1551	EPA 200.8	
Conventional Chemistry Parameters by APHA/EPA Methods										
pH	**7.57**	**pH Units**	**1.00**	1	AL04514	12/28/20 13:31	12/28/20 15:21	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**350**	**umhos/cm**	**10**	1	AL04514	12/28/20 13:31	12/28/20 15:21	2303	SM2510B	
Total Alkalinity as CaCO3	**170**	**mg/L**	**5.0**	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Total Suspended Solids	**4.3**	**mg/L**	**1.0**	1	AL04665	12/30/20 09:00	01/06/21 07:40	1551	SM2540D	
Turbidity	**5.8**	**NTU**	**0.25**	1	AL04555	12/29/20 09:34	12/29/20 09:51	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**170**	**mg/L**	**5.0**	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Hardness, Total	**129**	**mg/L**	**5**	1	AL04571	12/31/20 11:40	01/07/21 15:50	1551	SM2340B	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

	Result	Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
GW 3 (20L3285-02)		**Sample Type: Water**			**Sampled: 12/28/20 08:58**				
Anions by EPA Method 300.0									
Nitrate as N	ND mg/L	0.40	1	AL04465	12/28/20 13:00	12/28/20 16:13	2303	EPA 300.0	
Sulfate as SO4	**5.7 mg/L**	**0.50**	1	AL04465	12/28/20 13:00	12/28/20 16:13	2303	EPA 300.0	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL04571 - Metals Digest										
Blank (AL04571-BLK1)				Prepared: 12/31/20 Analyzed: 01/07/21						
Boron	ND	0.20	mg/L							
Calcium	ND	1.0	mg/L							
Copper	ND	0.020	mg/L							
Iron	ND	0.10	mg/L							
Lead	ND	0.050	mg/L							
Magnesium	ND	1.0	mg/L							
Manganese	ND	0.020	mg/L							
Sodium	ND	1.0	mg/L							
Zinc	ND	0.020	mg/L							
LCS (AL04571-BS1)				Prepared: 12/31/20 Analyzed: 01/07/21						
Boron	0.420	0.20	mg/L	0.400		105	85-115			
Calcium	7.37	1.0	mg/L	8.00		92.1	85-115			
Copper	0.212	0.020	mg/L	0.200		106	85-115			
Iron	1.83	0.10	mg/L	2.00		91.4	85-115			
Lead	0.188	0.050	mg/L	0.200		94.2	85-115			
Magnesium	7.28	1.0	mg/L	8.00		91.0	85-115			
Manganese	0.196	0.020	mg/L	0.200		97.9	85-115			
Sodium	7.54	1.0	mg/L	8.00		94.2	85-115			
Zinc	0.195	0.020	mg/L	0.200		97.6	85-115			
Duplicate (AL04571-DUP1)		**Source: 20L3284-02**		Prepared: 12/31/20 Analyzed: 01/07/21						
Boron	ND	0.20	mg/L		ND			5.23	20	
Calcium	8.32	1.0	mg/L		8.52			2.31	20	
Copper	ND	0.020	mg/L		ND				20	
Iron	ND	0.10	mg/L		ND				20	
Lead	ND	0.050	mg/L		ND				20	
Magnesium	4.01	1.0	mg/L		4.19			4.52	20	
Manganese	ND	0.020	mg/L		ND				20	
Sodium	5.10	1.0	mg/L		5.18			1.59	20	
Zinc	ND	0.020	mg/L		ND				20	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL04571 - Metals Digest										
Matrix Spike (AL04571-MS1)	**Source: 20L3284-02**			Prepared: 12/31/20 Analyzed: 01/07/21						
Boron	0.466	0.20	mg/L	0.400	ND	98.6	70-130			
Calcium	16.4	1.0	mg/L	8.00	8.52	98.5	70-130			
Copper	0.216	0.020	mg/L	0.200	ND	108	70-130			
Iron	1.88	0.10	mg/L	2.00	ND	94.1	70-130			
Lead	0.190	0.050	mg/L	0.200	ND	95.2	70-130			
Magnesium	11.6	1.0	mg/L	8.00	4.19	93.0	70-130			
Manganese	0.208	0.020	mg/L	0.200	ND	104	70-130			
Sodium	12.1	1.0	mg/L	8.00	5.18	86.4	70-130			
Zinc	0.198	0.020	mg/L	0.200	ND	99.1	70-130			
Matrix Spike (AL04571-MS2)	**Source: 20L3275-01**			Prepared: 12/31/20 Analyzed: 01/07/21						
Boron	0.431	0.20	mg/L	0.400	ND	108	70-130			
Calcium	45.5	1.0	mg/L	8.00	37.4	101	70-130			
Copper	0.211	0.020	mg/L	0.200	ND	106	70-130			
Iron	2.62	0.10	mg/L	2.00	0.843	88.7	70-130			
Lead	0.182	0.050	mg/L	0.200	ND	90.9	70-130			
Magnesium	20.7	1.0	mg/L	8.00	12.8	99.2	70-130			
Manganese	0.540	0.020	mg/L	0.200	0.346	96.9	70-130			
Sodium	15.3	1.0	mg/L	8.00	7.88	92.4	70-130			
Zinc	0.185	0.020	mg/L	0.200	ND	92.6	70-130			
Matrix Spike Dup (AL04571-MSD1)	**Source: 20L3284-02**			Prepared: 12/31/20 Analyzed: 01/07/21						
Boron	0.456	0.20	mg/L	0.400	ND	96.0	70-130	2.30	20	
Calcium	16.2	1.0	mg/L	8.00	8.52	95.7	70-130	1.37	20	
Copper	0.213	0.020	mg/L	0.200	ND	107	70-130	1.12	20	
Iron	1.86	0.10	mg/L	2.00	ND	93.2	70-130	1.01	20	
Lead	0.186	0.050	mg/L	0.200	ND	93.1	70-130	2.17	20	
Magnesium	11.5	1.0	mg/L	8.00	4.19	91.1	70-130	1.26	20	
Manganese	0.201	0.020	mg/L	0.200	ND	100	70-130	3.34	20	
Sodium	12.0	1.0	mg/L	8.00	5.18	85.8	70-130	0.445	20	
Zinc	0.193	0.020	mg/L	0.200	ND	96.7	70-130	2.46	20	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Metals by EPA Method 200.8 ICP/MS - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AA13327 - EPA 200.8										
Blank (AA13327-BLK1)				Prepared: 01/06/21 Analyzed: 01/07/21						
Arsenic	ND	2.0	ug/L							
LCS (AA13327-BS1)				Prepared: 01/06/21 Analyzed: 01/07/21						
Arsenic	19.9	2.0	ug/L	20.0		99.4	85-115			
Duplicate (AA13327-DUP1)		**Source: 20L3679-01**		Prepared: 01/06/21 Analyzed: 01/07/21						
Arsenic	ND	2.0	ug/L		ND				20	
Matrix Spike (AA13327-MS1)		**Source: 20L3679-01**		Prepared: 01/06/21 Analyzed: 01/07/21						
Arsenic	19.5	2.0	ug/L	20.0	ND	97.5	70-130			
Matrix Spike (AA13327-MS2)		**Source: 20L3285-02**		Prepared: 01/06/21 Analyzed: 01/07/21						
Arsenic	21.2	2.0	ug/L	20.0	ND	106	70-130			
Matrix Spike Dup (AA13327-MSD1)		**Source: 20L3679-01**		Prepared: 01/06/21 Analyzed: 01/07/21						
Arsenic	19.4	2.0	ug/L	20.0	ND	96.9	70-130	0.603	20	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AA13422 - NB General Prep										
Blank (AA13422-BLK1)				Prepared & Analyzed: 01/06/21						
Total Alkalinity as CaCO3	ND	5.0	mg/L							
Bicarbonate Alkalinity as CaCO3	ND	5.0	mg/L							
Carbonate Alkalinity as CaCO3	ND	5.0	mg/L							
Hydroxide Alkalinity as CaCO3	ND	5.0	mg/L							
LCS (AA13422-BS1)				Prepared & Analyzed: 01/06/21						
Total Alkalinity as CaCO3	1000	5.0	mg/L	1000		100	80-120			
Duplicate (AA13422-DUP1)		**Source: 20L3285-01**		Prepared & Analyzed: 01/06/21						
Total Alkalinity as CaCO3	185	5.0	mg/L		187			0.753	20	
Bicarbonate Alkalinity as CaCO3	184	5.0	mg/L		185			0.759	20	
Carbonate Alkalinity as CaCO3	ND	5.0	mg/L		ND			0.727	20	
Hydroxide Alkalinity as CaCO3	ND	5.0	mg/L		ND				20	
Batch AL03587 - NB General Prep										
Duplicate (AL03587-DUP1)		**Source: 20L1701-01**		Prepared & Analyzed: 12/10/20						
Specific Conductance (EC)	421	10	umhos/cm		426			1.18	5	
pH	7.36	1.00	pH Units		7.35			0.136	20	
Batch AL04514 - NB General Prep										
Duplicate (AL04514-DUP1)		**Source: 20L3285-02**		Prepared & Analyzed: 12/28/20						
Specific Conductance (EC)	354	10	umhos/cm		350			1.14	5	
pH	7.58	1.00	pH Units		7.57			0.132	20	T-14

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL04555 - NB General Prep										
Blank (AL04555-BLK1)				Prepared & Analyzed: 12/29/20						
Turbidity	ND	0.25	NTU							
Duplicate (AL04555-DUP1)		**Source: 20L3284-01**		Prepared & Analyzed: 12/29/20						
Turbidity	0.290	0.25	NTU		0.280			3.51	20	
Batch AL04571 - Metals Digest										
Blank (AL04571-BLK1)				Prepared: 12/31/20 Analyzed: 01/07/21						
Hardness, Total	ND	5	mg/L							
Duplicate (AL04571-DUP1)		**Source: 20L3284-02**		Prepared: 12/31/20 Analyzed: 01/07/21						
Hardness, Total	37	5	mg/L		39			3.29	20	
Batch AL04665 - General Preparation										
Blank (AL04665-BLK1)				Prepared: 12/30/20 Analyzed: 01/06/21						
Total Suspended Solids	ND	1.0	mg/L							
Duplicate (AL04665-DUP1)		**Source: 20L3428-01**		Prepared: 12/30/20 Analyzed: 01/06/21						
Total Suspended Solids	98.3	1.0	mg/L		103			4.67	30	
Duplicate (AL04665-DUP2)		**Source: 20L3441-01**		Prepared: 12/30/20 Analyzed: 01/06/21						
Total Suspended Solids	45.1	1.0	mg/L		45.0			0.222	30	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Anions by EPA Method 300.0 - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL04465 - NB General Prep										
Blank (AL04465-BLK1)				Prepared & Analyzed: 12/28/20						
Sulfate as SO4	ND	0.50	mg/L							
Nitrate as N	ND	0.40	mg/L							
LCS (AL04465-BS1)				Prepared & Analyzed: 12/28/20						
Nitrate as N	1.85	0.40	mg/L	1.81		102	90-110			
Sulfate as SO4	7.21	0.50	mg/L	8.00		90.1	90-110			
Duplicate (AL04465-DUP1)		**Source: 20L3243-02**		Prepared & Analyzed: 12/28/20						
Sulfate as SO4	24.1	0.50	mg/L		23.8			1.01	20	
Nitrate as N	ND	0.40	mg/L		ND			0.673	20	
MRL Check (AL04465-MRL1)				Prepared & Analyzed: 12/28/20						
Sulfate as SO4	1.58	0.50	mg/L	1.60		98.9	60-140			
Nitrate as N	0.283	0.40	mg/L	0.361		78.3	60-140			
Matrix Spike (AL04465-MS1)		**Source: 20L3243-02**		Prepared & Analyzed: 12/28/20						
Nitrate as N	1.68	0.40	mg/L	1.81	ND	84.7	80-120			
Sulfate as SO4	31.8	0.50	mg/L	8.00	23.8	99.8	80-120			
Matrix Spike (AL04465-MS2)		**Source: 20L3284-01**		Prepared & Analyzed: 12/28/20						
Nitrate as N	2.26	0.40	mg/L	1.81	0.529	96.0	80-120			
Sulfate as SO4	11.3	0.50	mg/L	8.00	4.12	90.3	80-120			
Matrix Spike Dup (AL04465-MSD1)		**Source: 20L3243-02**		Prepared & Analyzed: 12/28/20						
Nitrate as N	1.68	0.40	mg/L	1.81	ND	84.7	80-120	0.0596	20	
Sulfate as SO4	32.0	0.50	mg/L	8.00	23.8	102	80-120	0.511	20	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Groundwater	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Notes and Definitions

T-14	Residual chlorine, dissolved oxygen, sulfite, and pH must be analyzed in the field to meet the EPA specified 15 minute hold time.
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
REC	Recovery
RPD	Relative Percent Difference

Alpha Analytical Laboratories Inc.
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WATERS, SEDIMENTS, SOLIDS

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Bay Area Laboratory (2728)
262 Rickenbacker Circle, Livermore CA 94551

Central Valley Laboratory (2922)
9090 Union Park Way #113, Elk Grove CA 95624

San Diego Service Center
2722 Loker Ave West, Ste A, Carlsbad CA 92010

Chain of Custody - Work Order

Reports and Invoices delivered by email in PDF format

Lab No 20L3285 Pg ____ of ____

Report to	Invoice to (if different)	Project Information
Company: Bottle Rock Power	Contact:	Project ID: Bottle Rock Monitoring-GW
Attn: Jay Hepper	Email address:	Project No:
Address: PO Box 326, Cobb, CA 95426	Address:	PO Number:
Phone/Fax: 707-529-3799	Phone/Fax:	
Email Address:		

Signature below authorizes work under terms stated on reverse side.

Field Sampler - Printed Name & Signature: Richard Lacy

Sample Identification	Sampling Date	Sampling Time	Container: 40ml VOA Vial	Container: Plastic	Container: Glass	Container: Sleeve	Container: Other	Preservative: HCl	Preservative: HNO3	Preservative: H2SO4	Preservative: Other	Preservative: None	Matrix: Drinking Water	Matrix: Wastewater	Matrix: Soil	Matrix: Other	Total Number of Containers per Sample ID	Analysis Request: ALK, Ph, ec	Turbidity & TSS	Hardness, SO4	B, Cu, Fe & Pb	Mn, Na & Zn	As & NO3	Field pH	Field TDS ppm	Notes / DDW Source Codes
GW-1	12/28/20	9:09		X													3	X	X	X	X	X	X			
GW-3	12/28/20	8:58		X													3	X	X	X	X	X	X			

TAT
- Standard 10 days (X)
- RUSH: 5 days ( ) 48 hours ( ) Other: ___ days ( ) Preapproval required

TEMP °C
Ukiah
Livermore
Elk Grove
Petaluma 5.3
Carlsbad

Relinquished by	Received by	Date	Time
Richard Lacy	[signature]	12/28/20	1004

DDW Write On EDT Transmission? ( ) Yes ( ) No
State System Number: _____
If "Y" please enter the Source Number(s) in the column above

CA Geotracker EDF Report? ( ) Yes ( ) No
Global ID: Sampling Company Log Code:
EDF to (Email Address):

Travel and Site Time:	Mileage:	Misc. Supplies:

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16 April 2020

Bottle Rock Power
Attn: Terra Rogers
4010 Stone Way North, Suite 400
Seattle, WA 98103
RE: Surface Water
Work Order: 20D0257

Enclosed are the results of analyses for samples received by the laboratory on 04/02/20 11:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette Poplin

Jeanette L. Poplin For Stephen F. McWeeney
Lab Manager

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-SW	04/16/20 09:24

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | T: 925-828-6226 | F: 925-828-6309 | ELAP# 2728
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | T: 916-686-5190 | F: 916-686-5192 | ELAP# 2922
North Bay: 110 Liberty Street | Petaluma, CA 94952 | T: 707-769-3128 | F: 707-769-8093 | ELAP# 2303
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | T: 760-930-2555 | F: 760-930-2510 | ELAP# 3055

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW-6	20D0257-01	Water	04/02/20 07:00	04/02/20 11:35
SW-7	20D0257-02	Water	04/02/20 07:15	04/02/20 11:35
SW-8	20D0257-03	Water	04/02/20 07:30	04/02/20 11:35
SW-9	20D0257-04	Water	04/02/20 07:40	04/02/20 11:35
SW-10	20D0257-05	Water	04/02/20 07:50	04/02/20 11:35

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-SW	04/16/20 09:24

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-6 (20D0257-01)			**Sample Type: Water**			**Sampled: 04/02/20 07:00**				
Metals by EPA 200 Series Methods										
Boron	**0.11**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:07	2303	EPA 200.7	
Calcium	**15**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:07	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:07	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AD03385	04/07/20 10:55	04/07/20 15:07	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:07	2303	EPA 200.7	
Magnesium	**21**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:07	2303	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:07	2303	EPA 200.7	
Sodium	**6.9**	**mg/L**	**0.20**	1	AD03385	04/07/20 10:55	04/07/20 15:07	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AD03385	04/07/20 10:55	04/07/20 15:07	2303	EPA 200.7	
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**9.6**	**mg/L**	**0.20**	1	AD03152	04/02/20 12:00	04/02/20 15:24	2303	SM4500-O G	T-14
pH	**7.81**	**pH Units**	**1.00**	1	AD03153	04/02/20 12:00	04/02/20 15:21	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**270**	**umhos/cm**	**10**	1	AD03153	04/02/20 12:00	04/02/20 15:21	2303	SM2510B	
Total Alkalinity as CaCO3	**130**	**mg/L**	**5.0**	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AD03262	04/04/20 08:30	04/04/20 14:00	1551	SM2540D	
Turbidity	ND	NTU	0.25	1	AD03152	04/02/20 12:00	04/02/20 15:24	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**120**	**mg/L**	**5.0**	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Hardness, Total	**122**	**mg/L**	**1**	1	AD03385	04/07/20 10:55	04/07/20 15:07	2303	SM2340B	
Anions by EPA Method 300.0										
Sulfate as SO4	**4.2**	**mg/L**	**0.50**	1	AD03156	04/02/20 13:23	04/02/20 14:26	2303	EPA 300.0	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-SW	04/16/20 09:24

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-6 (20D0257-01)			**Sample Type: Water**			**Sampled: 04/02/20 07:00**				
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**420**	**MPN/100mL**	**1.0**	1	AD03165	04/02/20 14:15	04/03/20 15:45	2303	SM9223B	
E. Coli	**37**	**MPN/100mL**	**1.0**	1	AD03165	04/02/20 14:15	04/03/20 15:45	2303	SM9223B	
SW-7 (20D0257-02)			**Sample Type: Water**			**Sampled: 04/02/20 07:15**				
Metals by EPA 200 Series Methods										
Boron	**0.17**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:11	2303	EPA 200.7	
Calcium	**17**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:11	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:11	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AD03385	04/07/20 10:55	04/07/20 15:11	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:11	2303	EPA 200.7	
Magnesium	**16**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:11	2303	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:11	2303	EPA 200.7	
Sodium	**6.0**	**mg/L**	**0.20**	1	AD03385	04/07/20 10:55	04/07/20 15:11	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AD03385	04/07/20 10:55	04/07/20 15:11	2303	EPA 200.7	
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**9.1**	**mg/L**	**0.20**	1	AD03152	04/02/20 12:00	04/02/20 15:24	2303	SM4500-O G	T-14
pH	**7.56**	**pH Units**	**1.00**	1	AD03153	04/02/20 12:00	04/02/20 15:21	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**240**	**umhos/cm**	**10**	1	AD03153	04/02/20 12:00	04/02/20 15:21	2303	SM2510B	
Total Alkalinity as CaCO3	**110**	**mg/L**	**5.0**	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AD03262	04/04/20 08:30	04/04/20 14:00	1551	SM2540D	
Turbidity	ND	NTU	0.25	1	AD03152	04/02/20 12:00	04/02/20 15:24	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**110**	**mg/L**	**5.0**	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Hardness, Total	**109**	**mg/L**	**1**	1	AD03385	04/07/20 10:55	04/07/20 15:11	2303	SM2340B	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-SW	04/16/20 09:24

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-7 (20D0257-02)		**Sample Type: Water**				**Sampled: 04/02/20 07:15**				
Anions by EPA Method 300.0										
Sulfate as SO4	**10**	**mg/L**	**0.50**	1	AD03156	04/02/20 13:23	04/02/20 14:44	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**410**	**MPN/100mL**	**1.0**	1	AD03165	04/02/20 14:15	04/03/20 14:50	2303	SM9223B	
E. Coli	ND	MPN/100mL	1.0	1	AD03165	04/02/20 14:15	04/03/20 14:50	2303	SM9223B	
SW-8 (20D0257-03)		**Sample Type: Water**				**Sampled: 04/02/20 07:30**				
Metals by EPA 200 Series Methods										
Boron	ND	mg/L	0.10	1	AD03385	04/07/20 10:55	04/07/20 15:14	2303	EPA 200.7	
Calcium	**8.0**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:14	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:14	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AD03385	04/07/20 10:55	04/07/20 15:14	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:14	2303	EPA 200.7	
Magnesium	**4.3**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:14	2303	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:14	2303	EPA 200.7	
Sodium	**4.6**	**mg/L**	**0.20**	1	AD03385	04/07/20 10:55	04/07/20 15:14	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AD03385	04/07/20 10:55	04/07/20 15:14	2303	EPA 200.7	
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**10**	**mg/L**	**0.20**	1	AD03152	04/02/20 12:00	04/02/20 15:24	2303	SM4500-O G	T-14
pH	**7.46**	**pH Units**	**1.00**	1	AD03153	04/02/20 12:00	04/02/20 15:21	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**110**	**umhos/cm**	**10**	1	AD03153	04/02/20 12:00	04/02/20 15:21	2303	SM2510B	
Total Alkalinity as CaCO3	**57**	**mg/L**	**5.0**	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AD03262	04/04/20 08:30	04/04/20 14:00	1551	SM2540D	
Turbidity	ND	NTU	0.25	1	AD03152	04/02/20 12:00	04/02/20 15:24	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**57**	**mg/L**	**5.0**	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Hardness, Total	**38**	**mg/L**	**1**	1	AD03385	04/07/20 10:55	04/07/20 15:14	2303	SM2340B	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-SW	04/16/20 09:24

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-8 (20D0257-03)		**Sample Type: Water**				**Sampled: 04/02/20 07:30**				
Anions by EPA Method 300.0										
Sulfate as SO4	**2.8**	**mg/L**	**0.50**	1	AD03156	04/02/20 13:23	04/02/20 15:02	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**75**	**MPN/100mL**	**1.0**	1	AD03165	04/02/20 14:15	04/03/20 14:50	2303	SM9223B	
E. Coli	**4.1**	**MPN/100mL**	**1.0**	1	AD03165	04/02/20 14:15	04/03/20 14:50	2303	SM9223B	
SW-9 (20D0257-04)		**Sample Type: Water**				**Sampled: 04/02/20 07:40**				
Metals by EPA 200 Series Methods										
Boron	ND	mg/L	0.10	1	AD03385	04/07/20 10:55	04/07/20 15:18	2303	EPA 200.7	
Calcium	**8.0**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:18	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:18	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AD03385	04/07/20 10:55	04/07/20 15:18	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:18	2303	EPA 200.7	
Magnesium	**4.4**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:18	2303	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:18	2303	EPA 200.7	
Sodium	**4.7**	**mg/L**	**0.20**	1	AD03385	04/07/20 10:55	04/07/20 15:18	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AD03385	04/07/20 10:55	04/07/20 15:18	2303	EPA 200.7	
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**10**	**mg/L**	**0.20**	1	AD03152	04/02/20 12:00	04/02/20 15:24	2303	SM4500-O G	T-14
pH	**7.37**	**pH Units**	**1.00**	1	AD03153	04/02/20 12:00	04/02/20 15:21	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**110**	**umhos/cm**	**10**	1	AD03153	04/02/20 12:00	04/02/20 15:21	2303	SM2510B	
Total Alkalinity as CaCO3	**58**	**mg/L**	**5.0**	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Total Suspended Solids	**1.0**	**mg/L**	**1.0**	1	AD03262	04/04/20 08:30	04/04/20 14:00	1551	SM2540D	
Turbidity	ND	NTU	0.25	1	AD03152	04/02/20 12:00	04/02/20 15:24	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**57**	**mg/L**	**5.0**	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Hardness, Total	**38**	**mg/L**	**1**	1	AD03385	04/07/20 10:55	04/07/20 15:18	2303	SM2340B	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-SW	04/16/20 09:24

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-9 (20D0257-04)		**Sample Type: Water**				**Sampled: 04/02/20 07:40**				
Anions by EPA Method 300.0										
Sulfate as SO4	**2.9**	**mg/L**	**0.50**	1	AD03156	04/02/20 13:23	04/02/20 15:19	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**70**	**MPN/100mL**	**1.0**	1	AD03165	04/02/20 14:15	04/03/20 14:50	2303	SM9223B	
E. Coli	**3.0**	**MPN/100mL**	**1.0**	1	AD03165	04/02/20 14:15	04/03/20 14:50	2303	SM9223B	
SW-10 (20D0257-05)		**Sample Type: Water**				**Sampled: 04/02/20 07:50**				
Metals by EPA 200 Series Methods										
Boron	ND	mg/L	0.10	1	AD03385	04/07/20 10:55	04/07/20 15:21	2303	EPA 200.7	
Calcium	**7.7**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:21	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:21	2303	EPA 200.7	
Iron	**0.17**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:21	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:21	2303	EPA 200.7	
Magnesium	**6.6**	**mg/L**	**0.10**	1	AD03385	04/07/20 10:55	04/07/20 15:21	2303	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AD03385	04/07/20 10:55	04/07/20 15:21	2303	EPA 200.7	
Sodium	**5.8**	**mg/L**	**0.20**	1	AD03385	04/07/20 10:55	04/07/20 15:21	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AD03385	04/07/20 10:55	04/07/20 15:21	2303	EPA 200.7	
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**9.4**	**mg/L**	**0.20**	1	AD03152	04/02/20 12:00	04/02/20 15:24	2303	SM4500-O G	T-14
pH	**7.47**	**pH Units**	**1.00**	1	AD03153	04/02/20 12:00	04/02/20 15:21	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**130**	**umhos/cm**	**10**	1	AD03153	04/02/20 12:00	04/02/20 15:21	2303	SM2510B	
Total Alkalinity as CaCO3	**55**	**mg/L**	**5.0**	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Total Suspended Solids	**3.3**	**mg/L**	**1.0**	1	AD03262	04/04/20 08:30	04/04/20 14:00	1551	SM2540D	
Turbidity	**2.1**	**NTU**	**0.25**	1	AD03152	04/02/20 12:00	04/02/20 15:24	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**55**	**mg/L**	**5.0**	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AD03060	04/07/20 08:00	04/07/20 15:49	2303	SM2320B	
Hardness, Total	**46**	**mg/L**	**1**	1	AD03385	04/07/20 10:55	04/07/20 15:21	2303	SM2340B	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-SW	04/16/20 09:24

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-10 (20D0257-05)		**Sample Type: Water**				**Sampled: 04/02/20 07:50**				
Anions by EPA Method 300.0										
Sulfate as SO4	**1.5**	**mg/L**	**0.50**	1	AD03156	04/02/20 13:23	04/02/20 15:37	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**980**	**MPN/100mL**	**1.0**	1	AD03165	04/02/20 14:15	04/03/20 14:50	2303	SM9223B	
E. Coli	**1.0**	**MPN/100mL**	**1.0**	1	AD03165	04/02/20 14:15	04/03/20 14:50	2303	SM9223B	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-SW	04/16/20 09:24

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD03385 - NB EPA 200 series										
Blank (AD03385-BLK1)				Prepared & Analyzed: 04/07/20						
Boron	ND	0.10	mg/L							
Calcium	ND	0.10	mg/L							
Copper	ND	0.020	mg/L							
Iron	ND	0.10	mg/L							
Lead	ND	0.020	mg/L							
Magnesium	ND	0.10	mg/L							
Manganese	ND	0.020	mg/L							
Sodium	ND	0.20	mg/L							
Zinc	ND	0.050	mg/L							
LCS (AD03385-BS1)				Prepared & Analyzed: 04/07/20						
Boron	0.511	0.10	mg/L	0.500		102	85-115			
Calcium	0.504	0.10	mg/L	0.500		101	85-115			
Copper	0.513	0.020	mg/L	0.500		103	85-115			
Iron	0.523	0.10	mg/L	0.500		105	85-115			
Lead	0.526	0.020	mg/L	0.500		105	85-115			
Magnesium	0.535	0.10	mg/L	0.500		107	85-115			
Manganese	0.506	0.020	mg/L	0.500		101	85-115			
Sodium	0.527	0.20	mg/L	0.500		105	85-115			
Zinc	0.552	0.050	mg/L	0.500		110	85-115			
LCS Dup (AD03385-BSD1)				Prepared & Analyzed: 04/07/20						
Boron	0.512	0.10	mg/L	0.500		102	85-115	0.0391	20	
Calcium	0.508	0.10	mg/L	0.500		102	85-115	0.791	20	
Copper	0.512	0.020	mg/L	0.500		102	85-115	0.137	20	
Iron	0.523	0.10	mg/L	0.500		105	85-115	0.0574	20	
Lead	0.526	0.020	mg/L	0.500		105	85-115	0.0380	20	
Magnesium	0.534	0.10	mg/L	0.500		107	85-115	0.243	20	
Manganese	0.507	0.020	mg/L	0.500		101	85-115	0.217	20	
Sodium	0.527	0.20	mg/L	0.500		105	85-115	0.0190	20	
Zinc	0.552	0.050	mg/L	0.500		110	85-115	0.109	20	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-SW	04/16/20 09:24

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD03385 - NB EPA 200 series										
MRL Check (AD03385-MRL1)				Prepared & Analyzed: 04/07/20						
Boron	ND	0.10	mg/L	0.00500			0-200			
Calcium	ND	0.10	mg/L	0.00500			0-200			
Copper	ND	0.020	mg/L	0.00500			0-200			
Iron	ND	0.10	mg/L	0.00500			0-200			
Lead	ND	0.020	mg/L	0.00500			0-200			
Magnesium	ND	0.10	mg/L	0.00500			0-200			
Manganese	ND	0.020	mg/L	0.00500			0-200			
Sodium	ND	0.20	mg/L	0.00500			0-200			
Zinc	ND	0.050	mg/L	0.00500			0-200			
MRL Check (AD03385-MRL2)				Prepared & Analyzed: 04/07/20						
Boron	ND	0.10	mg/L	0.0500			0-200			
Calcium	ND	0.10	mg/L	0.0500			0-200			
Copper	0.0458	0.020	mg/L	0.0500		91.6	0-200			
Iron	0.0517	0.10	mg/L	0.0500		103	0-200			
Lead	0.0519	0.020	mg/L	0.0500		104	0-200			
Magnesium	0.0445	0.10	mg/L	0.0500		89.0	0-200			
Manganese	0.0514	0.020	mg/L	0.0500		103	0-200			
Sodium	ND	0.20	mg/L	0.0500			0-200			
Zinc	ND	0.050	mg/L	0.0500			0-200			
Matrix Spike (AD03385-MS1)	**Source: 20D0257-01**			Prepared & Analyzed: 04/07/20						
Boron	0.631	0.10	mg/L	0.500	0.110	104	70-130			
Copper	0.488	0.020	mg/L	0.500	ND	97.6	70-130			
Iron	0.547	0.10	mg/L	0.500	ND	109	70-130			
Lead	0.512	0.020	mg/L	0.500	ND	102	70-130			
Manganese	0.500	0.020	mg/L	0.500	ND	100	70-130			
Sodium	7.28	0.20	mg/L	0.500	6.93	68.8	70-130			QM-07
Zinc	0.537	0.050	mg/L	0.500	ND	107	70-130			

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-SW	04/16/20 09:24

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD03385 - NB EPA 200 series										
Matrix Spike (AD03385-MS2)	**Source: 20D0257-05**			Prepared & Analyzed: 04/07/20						
Boron	0.888	0.10	mg/L	0.500	ND	178	70-130			QM-07
Copper	0.531	0.020	mg/L	0.500	ND	106	70-130			
Iron	1.31	0.10	mg/L	0.500	0.170	228	70-130			QM-07
Lead	0.523	0.020	mg/L	0.500	ND	105	70-130			
Manganese	1.15	0.020	mg/L	0.500	ND	226	70-130			QM-07
Sodium	23.4	0.20	mg/L	0.500	5.82	NR	70-130			QM-07
Zinc	0.963	0.050	mg/L	0.500	ND	193	70-130			QM-07
Matrix Spike Dup (AD03385-MSD1)	**Source: 20D0257-01**			Prepared & Analyzed: 04/07/20						
Boron	0.636	0.10	mg/L	0.500	0.110	105	70-130	0.852	20	
Copper	0.487	0.020	mg/L	0.500	ND	97.4	70-130	0.267	20	
Iron	0.546	0.10	mg/L	0.500	ND	109	70-130	0.183	20	
Lead	0.510	0.020	mg/L	0.500	ND	102	70-130	0.313	20	
Manganese	0.503	0.020	mg/L	0.500	ND	101	70-130	0.578	20	
Sodium	7.42	0.20	mg/L	0.500	6.93	97.8	70-130	1.97	20	
Zinc	0.532	0.050	mg/L	0.500	ND	106	70-130	0.935	20	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-SW	04/16/20 09:24

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD03060 - NB General Prep										
Blank (AD03060-BLK1)				Prepared & Analyzed: 04/02/20						
Total Alkalinity as CaCO3	ND	5.0	mg/L							
Bicarbonate Alkalinity as CaCO3	ND	5.0	mg/L							
Carbonate Alkalinity as CaCO3	ND	5.0	mg/L							
Hydroxide Alkalinity as CaCO3	ND	5.0	mg/L							
LCS (AD03060-BS1)				Prepared & Analyzed: 04/02/20						
Total Alkalinity as CaCO3	977	5.0	mg/L	1000		97.7	80-120			
Duplicate (AD03060-DUP1)		**Source: 20C2936-01**		Prepared & Analyzed: 04/02/20						
Total Alkalinity as CaCO3	146	5.0	mg/L		148			1.42	20	
Bicarbonate Alkalinity as CaCO3	145	5.0	mg/L		147			1.41	20	
Carbonate Alkalinity as CaCO3	ND	5.0	mg/L		ND				20	
Hydroxide Alkalinity as CaCO3	ND	5.0	mg/L		ND				20	
Batch AD03152 - NB General Prep										
Duplicate (AD03152-DUP1)		**Source: 20D0257-01**		Prepared & Analyzed: 04/02/20						
Turbidity	ND	0.25	NTU		ND			0.00	20	
Dissolved Oxygen	9.57	0.20	mg/L		9.63			0.625	200	
Batch AD03153 - NB General Prep										
Duplicate (AD03153-DUP1)		**Source: 20D0254-01**		Prepared & Analyzed: 04/02/20						
pH	7.75	1.00	pH Units		7.76			0.129	20	
Specific Conductance (EC)	363	10	umhos/cm		370			1.91	5	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-SW	04/16/20 09:24

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD03262 - General Preparation										
Blank (AD03262-BLK1)				Prepared & Analyzed: 04/04/20						
Total Suspended Solids	ND	1.0	mg/L							
Duplicate (AD03262-DUP1)		**Source: 20D0323-01**		Prepared & Analyzed: 04/04/20						
Total Suspended Solids	56.7	1.0	mg/L		54.7			3.52	30	
Duplicate (AD03262-DUP2)		**Source: 20D0325-01**		Prepared & Analyzed: 04/04/20						
Total Suspended Solids	189	1.0	mg/L		190			0.897	30	
Batch AD03385 - NB EPA 200 series										
Blank (AD03385-BLK1)				Prepared & Analyzed: 04/07/20						
Hardness, Total	ND	1	mg/L							

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-SW	04/16/20 09:24

Anions by EPA Method 300.0 - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AD03156 - NB General Prep										
Blank (AD03156-BLK1)				Prepared & Analyzed: 04/02/20						
Sulfate as SO4	ND	0.50	mg/L							
LCS (AD03156-BS1)				Prepared & Analyzed: 04/02/20						
Sulfate as SO4	8.15	0.50	mg/L	8.00		102	90-110			
Duplicate (AD03156-DUP1)		**Source: 20D0257-05**		Prepared & Analyzed: 04/02/20						
Sulfate as SO4	1.46	0.50	mg/L		1.54			4.80	20	
MRL Check (AD03156-MRL1)				Prepared & Analyzed: 04/02/20						
Sulfate as SO4	1.80	0.50	mg/L	1.60		112	60-140			
Matrix Spike (AD03156-MS1)		**Source: 20D0254-01**		Prepared & Analyzed: 04/02/20						
Sulfate as SO4	15.2	0.50	mg/L	8.00	7.16	101	80-120			
Matrix Spike Dup (AD03156-MSD1)		**Source: 20D0254-01**		Prepared & Analyzed: 04/02/20						
Sulfate as SO4	15.3	0.50	mg/L	8.00	7.16	101	80-120	0.420	20	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: Bottle Rock Monitoring-SW	04/16/20 09:24

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
T-14	Residual chlorine, dissolved oxygen, sulfite, and pH must be analyzed in the field to meet the EPA specified 15 minute hold time.
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
REC	Recovery
RPD	Relative Percent Difference

Alpha Analytical Laboratories Inc.
www.alpha-labs.com
WATERS, SEDIMENTS, SOLIDS

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North Bay Laboratory (2303)
110 Liberty Street, Petaluma CA 94952

Bay Area Laboratory (2728)
262 Rickenbacker Circle, Livermore CA 94551

Central Valley Laboratory (2922)
9090 Union Park Way #113, Elk Grove CA 95624

San Diego Service Center
2722 Loker Ave West, Ste A, Carlsbad CA 92010

Chain of Custody - Work Order

Reports and Invoices delivered by email in PDF format

Lab No 20D0257 Pg ____ of ____

Report to	Invoice to (if different)	Project Information
Company: Bottle Rock Power	Contact:	Project ID: Bottle Rock Monitoring-SW
Attn: ~~Jay Hepper~~ Richard Lacy	Email address:	Project No:
Address: PO Box 326, Cobb, CA 95426	Address:	PO Number:
Phone/Fax: ~~707-529-3799~~ 707-987-2532	Phone/Fax:	
Email Address:		

Signature below authorizes work under terms stated on reverse side.

TAT: Standard 10 days ⊘ | RUSH: 5 days ○ | 48 hours ○ | Other: ____days ○ | Preapproval required

TEMP °C: Ukiah | Livermore | Elk Grove | Petaluma 2.0 | Carlsbad

Field Sampler - Printed Name & Signature:

Sample Identification	Sampling Date	Sampling Time	Container: 40ml VOA Vial	Container: Plastic	Container: Glass	Container: Sleeve	Container: Other	Preservative: HCl	Preservative: HNO3	Preservative: H2SO4	Preservative: Other	Preservative: None	Matrix: Drinking Water	Matrix: Wastewater	Matrix: Soil	Matrix: Other	Total Number of Containers per Sample ID
SW6	4/2/20	7:00AM		3	2												
SW 7	4/2/20	7:15		3	2												
SW 8	4/2/20	7:30		3	2												
SW 9	4/2/20	7:40		3	2												
SW 10	4/2/20	7:50		3	2												

Analysis Request

ALK, Ph, ec	Turbidity & TSS	Hardness, SO4	B, Cu, Fe & Pb	Mn, Na & Zn	Diss. Oxygen	Bac-T		Field pH	Field TDS ppm	
X	X	X	X	X	X	X				

Notes / DDW Source Codes

Relinquished by	Received by	Date	Time
Richard Lacy	[signature]	4/2/20	1155

DDW Write On EDT Transmission? ○ Yes ○ No

State **System** Number: _____

If "Y" please enter the Source Number(s) in the column above

CA Geotracker EDF Report? ○ Yes ○ No

Global ID: Sampling Company Log Code:

EDF to (Email Address):

Travel and Site Time: | Mileage: | Misc. Supplies:

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10 July 2020

Bottle Rock Power
Attn: Jay Hepper
4010 Stone Way North, Suite 400
Seattle, WA 98103
RE: Surface Water
Work Order: 20F3118

Enclosed are the results of analyses for samples received by the laboratory on 06/26/20 12:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette Poplin

Jeanette L. Poplin For Stephen F. McWeeney
Lab Manager

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	07/10/20 14:52

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | T: 925-828-6226 | F: 925-828-6309 | ELAP# 2728
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | T: 916-686-5190 | F: 916-686-5192 | ELAP# 2922
North Bay: 110 Liberty Street | Petaluma, CA 94952 | T: 707-769-3128 | F: 707-769-8093 | ELAP# 2303
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | T: 760-930-2555 | F: 760-930-2510 | ELAP# 3055

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW6	20F3118-01	Water	06/26/20 07:00	06/26/20 12:15
SW7	20F3118-02	Water	06/26/20 08:30	06/26/20 12:15
SW8	20F3118-03	Water	06/26/20 07:30	06/26/20 12:15
SW9	20F3118-04	Water	06/26/20 09:00	06/26/20 12:15
SW10	20F3118-05	Water	06/26/20 08:00	06/26/20 12:15

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	07/10/20 14:52

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW6 (20F3118-01)			**Sample Type: Water**			**Sampled: 06/26/20 07:00**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:23	2303	EPA 200.7	
Boron	ND	mg/L	0.10	1	AF04498	06/30/20 08:53	06/30/20 16:23	2303	EPA 200.7	
Calcium	**6.8**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:23	2303	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AF04498	06/30/20 08:53	06/30/20 16:23	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:23	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AF04498	06/30/20 08:53	06/30/20 16:23	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:23	2303	EPA 200.7	
Magnesium	**3.5**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:23	2303	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:23	2303	EPA 200.7	
Mercury	ND	ug/L	0.50	1	AF04500	06/30/20 09:00	07/07/20 16:06	2303	EPA 245.1	
Sodium	**4.9**	**mg/L**	**0.20**	1	AF04498	06/30/20 08:53	06/30/20 16:23	2303	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:23	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AF04498	06/30/20 08:53	06/30/20 16:23	2303	EPA 200.7	
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**8.3**	**mg/L**	**0.20**	1	AF03561	06/26/20 14:00	06/26/20 14:02	2303	SM4500-O G	T-14
pH	**7.90**	**pH Units**	**1.00**	1	AF04317	06/26/20 13:31	06/26/20 15:18	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**130**	**umhos/cm**	**10**	1	AF04317	06/26/20 13:31	06/26/20 15:18	2303	SM2510B	
Total Alkalinity as CaCO3	**72**	**mg/L**	**5.0**	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Total Suspended Solids	**2.3**	**mg/L**	**1.0**	1	AF04494	06/30/20 13:30	07/01/20 10:45	1551	SM2540D	
Turbidity	**2.1**	**NTU**	**0.25**	1	AF03568	06/26/20 15:00	06/26/20 16:23	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**72**	**mg/L**	**5.0**	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Hardness, Total	**31**	**mg/L**	**1**	1	AF04498	06/30/20 08:53	06/30/20 16:23	2303	SM2340B	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	07/10/20 14:52

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW6 (20F3118-01)		**Sample Type: Water**				**Sampled: 06/26/20 07:00**				
Anions by EPA Method 300.0										
Sulfate as SO4	**0.76**	**mg/L**	**0.50**	1	AF04423	06/26/20 13:44	06/26/20 14:59	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	>2419.6	MPN/100mL	1.0	1	AF04426	06/26/20 15:00	06/27/20 16:15	2303	SM9223B	
E. Coli	**520**	**MPN/100mL**	**1.0**	1	AF04426	06/26/20 15:00	06/27/20 16:15	2303	SM9223B	
SW7 (20F3118-02)		**Sample Type: Water**				**Sampled: 06/26/20 08:30**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:26	2303	EPA 200.7	
Boron	**0.38**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:26	2303	EPA 200.7	
Calcium	**13**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:26	2303	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AF04498	06/30/20 08:53	06/30/20 16:26	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:26	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AF04498	06/30/20 08:53	06/30/20 16:26	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:26	2303	EPA 200.7	
Magnesium	**40**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:26	2303	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:26	2303	EPA 200.7	
Mercury	ND	ug/L	0.50	1	AF04500	06/30/20 09:00	07/07/20 16:40	2303	EPA 245.1	
Sodium	**7.8**	**mg/L**	**0.20**	1	AF04498	06/30/20 08:53	06/30/20 16:26	2303	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:26	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AF04498	06/30/20 08:53	06/30/20 16:26	2303	EPA 200.7	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	07/10/20 14:52

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW7 (20F3118-02)		**Sample Type: Water**				**Sampled: 06/26/20 08:30**				
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**5.6**	**mg/L**	**0.20**	1	AF03561	06/26/20 14:00	06/26/20 14:02	2303	SM4500-O G	T-14
pH	**7.40**	**pH Units**	**1.00**	1	AF04317	06/26/20 13:31	06/26/20 15:18	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**300**	**umhos/cm**	**10**	1	AF04317	06/26/20 13:31	06/26/20 15:18	2303	SM2510B	
Total Alkalinity as CaCO3	**140**	**mg/L**	**5.0**	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AF04494	06/30/20 13:30	07/01/20 10:45	1551	SM2540D	
Turbidity	ND	NTU	0.25	1	AF03568	06/26/20 15:00	06/26/20 16:23	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**140**	**mg/L**	**5.0**	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Hardness, Total	**197**	**mg/L**	**1**	1	AF04498	06/30/20 08:53	06/30/20 16:26	2303	SM2340B	
Anions by EPA Method 300.0										
Sulfate as SO4	**9.5**	**mg/L**	**0.50**	1	AF04423	06/26/20 13:44	06/26/20 15:17	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**410**	**MPN/100mL**	**1.0**	1	AF04426	06/26/20 15:00	06/27/20 16:15	2303	SM9223B	
E. Coli	**19**	**MPN/100mL**	**1.0**	1	AF04426	06/26/20 15:00	06/27/20 16:15	2303	SM9223B	
SW8 (20F3118-03)		**Sample Type: Water**				**Sampled: 06/26/20 07:30**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:36	2303	EPA 200.7	
Boron	ND	mg/L	0.10	1	AF04498	06/30/20 08:53	06/30/20 16:36	2303	EPA 200.7	
Calcium	**6.9**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:36	2303	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AF04498	06/30/20 08:53	06/30/20 16:36	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:36	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AF04498	06/30/20 08:53	06/30/20 16:36	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:36	2303	EPA 200.7	
Magnesium	**3.6**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:36	2303	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:36	2303	EPA 200.7	
Mercury	ND	ug/L	0.50	1	AF04500	06/30/20 09:00	07/07/20 16:43	2303	EPA 245.1	
Sodium	**4.9**	**mg/L**	**0.20**	1	AF04498	06/30/20 08:53	06/30/20 16:36	2303	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:36	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AF04498	06/30/20 08:53	06/30/20 16:36	2303	EPA 200.7	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	07/10/20 14:52

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW8 (20F3118-03)		**Sample Type: Water**				**Sampled: 06/26/20 07:30**				
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**7.6**	**mg/L**	**0.20**	1	AF03561	06/26/20 14:00	06/26/20 14:02	2303	SM4500-O G	T-14
pH	**7.54**	**pH Units**	**1.00**	1	AF04317	06/26/20 13:31	06/26/20 15:18	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**90**	**umhos/cm**	**10**	1	AF04317	06/26/20 13:31	06/26/20 15:18	2303	SM2510B	
Total Alkalinity as CaCO3	**41**	**mg/L**	**5.0**	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AF04494	06/30/20 13:30	07/01/20 10:45	1551	SM2540D	
Turbidity	**0.32**	**NTU**	**0.25**	1	AF03568	06/26/20 15:00	06/26/20 16:23	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**41**	**mg/L**	**5.0**	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Hardness, Total	**32**	**mg/L**	**1**	1	AF04498	06/30/20 08:53	06/30/20 16:36	2303	SM2340B	
Anions by EPA Method 300.0										
Sulfate as SO4	**1.6**	**mg/L**	**0.50**	1	AF04423	06/26/20 13:44	06/26/20 15:34	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**1600**	**MPN/100mL**	**1.0**	1	AF04426	06/26/20 15:00	06/27/20 16:15	2303	SM9223B	
E. Coli	**330**	**MPN/100mL**	**1.0**	1	AF04426	06/26/20 15:00	06/27/20 16:15	2303	SM9223B	
SW9 (20F3118-04)		**Sample Type: Water**				**Sampled: 06/26/20 09:00**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:39	2303	EPA 200.7	
Boron	ND	mg/L	0.10	1	AF04498	06/30/20 08:53	06/30/20 16:39	2303	EPA 200.7	
Calcium	**6.8**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:39	2303	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AF04498	06/30/20 08:53	06/30/20 16:39	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:39	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AF04498	06/30/20 08:53	06/30/20 16:39	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:39	2303	EPA 200.7	
Magnesium	**3.5**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:39	2303	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:39	2303	EPA 200.7	
Mercury	ND	ug/L	0.50	1	AF04500	06/30/20 09:00	07/07/20 16:46	2303	EPA 245.1	
Sodium	**4.8**	**mg/L**	**0.20**	1	AF04498	06/30/20 08:53	06/30/20 16:39	2303	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:39	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AF04498	06/30/20 08:53	06/30/20 16:39	2303	EPA 200.7	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	07/10/20 14:52

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW9 (20F3118-04)		**Sample Type: Water**				**Sampled: 06/26/20 09:00**				
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**7.4**	**mg/L**	**0.20**	1	AF03561	06/26/20 14:00	06/26/20 14:02	2303	SM4500-O G	T-14
pH	**7.48**	**pH Units**	**1.00**	1	AF04317	06/26/20 13:31	06/26/20 15:18	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**91**	**umhos/cm**	**10**	1	AF04317	06/26/20 13:31	06/26/20 15:18	2303	SM2510B	
Total Alkalinity as CaCO3	**40**	**mg/L**	**5.0**	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AF04494	06/30/20 13:30	07/01/20 10:45	1551	SM2540D	
Turbidity	**0.38**	**NTU**	**0.25**	1	AF03568	06/26/20 15:00	06/26/20 16:23	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**40**	**mg/L**	**5.0**	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Hardness, Total	**31**	**mg/L**	**1**	1	AF04498	06/30/20 08:53	06/30/20 16:39	2303	SM2340B	
Anions by EPA Method 300.0										
Sulfate as SO4	**1.5**	**mg/L**	**0.50**	1	AF04423	06/26/20 13:44	06/26/20 15:52	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**1600**	**MPN/100mL**	**1.0**	1	AF04426	06/26/20 15:00	06/27/20 16:15	2303	SM9223B	
E. Coli	**230**	**MPN/100mL**	**1.0**	1	AF04426	06/26/20 15:00	06/27/20 16:15	2303	SM9223B	
SW10 (20F3118-05)		**Sample Type: Water**				**Sampled: 06/26/20 08:00**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:42	2303	EPA 200.7	
Boron	ND	mg/L	0.10	1	AF04498	06/30/20 08:53	06/30/20 16:42	2303	EPA 200.7	
Calcium	**6.8**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:42	2303	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AF04498	06/30/20 08:53	06/30/20 16:42	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:42	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AF04498	06/30/20 08:53	06/30/20 16:42	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:42	2303	EPA 200.7	
Magnesium	**3.5**	**mg/L**	**0.10**	1	AF04498	06/30/20 08:53	06/30/20 16:42	2303	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:42	2303	EPA 200.7	
Mercury	ND	ug/L	0.50	1	AF04500	06/30/20 09:00	07/07/20 16:48	2303	EPA 245.1	
Sodium	**4.8**	**mg/L**	**0.20**	1	AF04498	06/30/20 08:53	06/30/20 16:42	2303	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AF04498	06/30/20 08:53	06/30/20 16:42	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AF04498	06/30/20 08:53	06/30/20 16:42	2303	EPA 200.7	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	07/10/20 14:52

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW10 (20F3118-05)		**Sample Type: Water**				**Sampled: 06/26/20 08:00**				
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**7.4**	**mg/L**	**0.20**	1	AF03561	06/26/20 14:00	06/26/20 14:02	2303	SM4500-O G	T-14
pH	**7.73**	**pH Units**	**1.00**	1	AF04317	06/26/20 13:31	06/26/20 15:18	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**130**	**umhos/cm**	**10**	1	AF04317	06/26/20 13:31	06/26/20 15:18	2303	SM2510B	
Total Alkalinity as CaCO3	**66**	**mg/L**	**5.0**	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Total Suspended Solids	**2.1**	**mg/L**	**1.0**	1	AF04494	06/30/20 13:30	07/01/20 10:45	1551	SM2540D	
Turbidity	**1.8**	**NTU**	**0.25**	1	AF03568	06/26/20 15:00	06/26/20 16:23	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**66**	**mg/L**	**5.0**	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AG03150	07/01/20 14:05	07/01/20 14:55	2303	SM2320B	
Hardness, Total	**32**	**mg/L**	**1**	1	AF04498	06/30/20 08:53	06/30/20 16:42	2303	SM2340B	
Anions by EPA Method 300.0										
Sulfate as SO4	**0.73**	**mg/L**	**0.50**	1	AF04423	06/26/20 13:44	06/26/20 16:10	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	>2419.6	MPN/100mL	1.0	1	AF04426	06/26/20 15:00	06/27/20 16:15	2303	SM9223B	
E. Coli	**460**	**MPN/100mL**	**1.0**	1	AF04426	06/26/20 15:00	06/27/20 16:15	2303	SM9223B	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	07/10/20 14:52

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF04498 - NB EPA 200 series										
Blank (AF04498-BLK1)				Prepared & Analyzed: 06/30/20						
Arsenic	ND	0.020	mg/L							
Boron	ND	0.10	mg/L							
Calcium	0.440	0.10	mg/L							QB-01
Chromium	ND	0.010	mg/L							
Copper	ND	0.020	mg/L							
Iron	ND	0.10	mg/L							
Lead	ND	0.020	mg/L							
Magnesium	ND	0.10	mg/L							
Manganese	ND	0.020	mg/L							
Sodium	ND	0.20	mg/L							
Vanadium	ND	0.020	mg/L							
Zinc	ND	0.050	mg/L							
LCS (AF04498-BS1)				Prepared & Analyzed: 06/30/20						
Arsenic	0.520	0.020	mg/L	0.500		104	85-115			
Boron	0.499	0.10	mg/L	0.500		99.8	85-115			
Calcium	0.608	0.10	mg/L	0.500		122	85-115			QL-03
Chromium	0.513	0.010	mg/L	0.500		103	85-115			
Copper	0.517	0.020	mg/L	0.500		103	85-115			
Iron	0.528	0.10	mg/L	0.500		106	85-115			
Lead	0.513	0.020	mg/L	0.500		103	85-115			
Magnesium	0.509	0.10	mg/L	0.500		102	85-115			
Manganese	0.520	0.020	mg/L	0.500		104	85-115			
Sodium	0.513	0.20	mg/L	0.500		103	85-115			
Vanadium	0.492	0.020	mg/L	0.500		98.4	85-115			
Zinc	0.521	0.050	mg/L	0.500		104	85-115			
LCS Dup (AF04498-BSD1)				Prepared & Analyzed: 06/30/20						
Arsenic	0.515	0.020	mg/L	0.500		103	85-115	0.986	20	
Boron	0.500	0.10	mg/L	0.500		100	85-115	0.320	20	
Calcium	0.608	0.10	mg/L	0.500		122	85-115	0.0329	20	QL-03
Chromium	0.514	0.010	mg/L	0.500		103	85-115	0.0584	20	
Copper	0.518	0.020	mg/L	0.500		104	85-115	0.116	20	
Iron	0.529	0.10	mg/L	0.500		106	85-115	0.265	20	
Lead	0.516	0.020	mg/L	0.500		103	85-115	0.428	20	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	07/10/20 14:52

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF04498 - NB EPA 200 series										
LCS Dup (AF04498-BSD1)				Prepared & Analyzed: 06/30/20						
Magnesium	0.510	0.10	mg/L	0.500		102	85-115	0.0589	20	
Manganese	0.520	0.020	mg/L	0.500		104	85-115	0.0962	20	
Sodium	0.514	0.20	mg/L	0.500		103	85-115	0.117	20	
Vanadium	0.493	0.020	mg/L	0.500		98.6	85-115	0.162	20	
Zinc	0.523	0.050	mg/L	0.500		105	85-115	0.364	20	
Duplicate (AF04498-DUP1)		**Source: 20F3118-05**		Prepared & Analyzed: 06/30/20						
Arsenic	ND	0.020	mg/L		ND				20	
Boron	ND	0.10	mg/L		ND			2.17	20	
Calcium	6.73	0.10	mg/L		6.83			1.36	20	
Chromium	ND	0.010	mg/L		ND				20	
Copper	ND	0.020	mg/L		ND				20	
Iron	ND	0.10	mg/L		ND			1.37	20	
Lead	ND	0.020	mg/L		ND				20	
Magnesium	3.48	0.10	mg/L		3.55			1.96	20	
Manganese	ND	0.020	mg/L		ND				20	
Sodium	4.82	0.20	mg/L		4.85			0.677	20	
Vanadium	ND	0.020	mg/L		ND				20	
Zinc	ND	0.050	mg/L		ND				20	
Matrix Spike (AF04498-MS1)		**Source: 20F3118-01**		Prepared & Analyzed: 06/30/20						
Arsenic	0.530	0.020	mg/L	0.500	ND	106	70-130			
Boron	0.586	0.10	mg/L	0.500	ND	104	70-130			
Chromium	0.522	0.010	mg/L	0.500	ND	104	70-130			
Copper	0.525	0.020	mg/L	0.500	ND	105	70-130			
Iron	0.584	0.10	mg/L	0.500	ND	117	70-130			
Lead	0.519	0.020	mg/L	0.500	ND	104	70-130			
Manganese	0.534	0.020	mg/L	0.500	ND	107	70-130			
Sodium	5.40	0.20	mg/L	0.500	4.88	104	70-130			
Vanadium	0.509	0.020	mg/L	0.500	ND	102	70-130			
Zinc	0.534	0.050	mg/L	0.500	ND	107	70-130			

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	07/10/20 14:52

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF04498 - NB EPA 200 series										
Matrix Spike Dup (AF04498-MSD1)		**Source: 20F3118-01**		Prepared & Analyzed: 06/30/20						
Arsenic	0.528	0.020	mg/L	0.500	ND	106	70-130	0.321	20	
Boron	0.588	0.10	mg/L	0.500	ND	105	70-130	0.222	20	
Chromium	0.523	0.010	mg/L	0.500	ND	105	70-130	0.172	20	
Copper	0.526	0.020	mg/L	0.500	ND	105	70-130	0.190	20	
Iron	0.588	0.10	mg/L	0.500	ND	118	70-130	0.512	20	
Lead	0.518	0.020	mg/L	0.500	ND	104	70-130	0.231	20	
Manganese	0.535	0.020	mg/L	0.500	ND	107	70-130	0.131	20	
Sodium	5.41	0.20	mg/L	0.500	4.88	105	70-130	0.0315	20	
Vanadium	0.510	0.020	mg/L	0.500	ND	102	70-130	0.0982	20	
Zinc	0.535	0.050	mg/L	0.500	ND	107	70-130	0.0561	20	
Batch AF04500 - NB EPA 245.1 Hg										
Blank (AF04500-BLK1)				Prepared: 06/30/20 Analyzed: 07/07/20						
Mercury	ND	0.50	ug/L							
LCS (AF04500-BS1)				Prepared: 06/30/20 Analyzed: 07/07/20						
Mercury	7.48	0.50	ug/L	7.50		99.7	85-115			
LCS Dup (AF04500-BSD1)				Prepared: 06/30/20 Analyzed: 07/07/20						
Mercury	7.25	0.50	ug/L	7.50		96.7	85-115	3.06	20	
MRL Check (AF04500-MRL1)				Prepared: 06/30/20 Analyzed: 07/07/20						
Mercury	2.42	0.50	ug/L	2.50		96.8	0-200			
Matrix Spike (AF04500-MS1)		**Source: 20F2854-01**		Prepared: 06/30/20 Analyzed: 07/07/20						
Mercury	8.02	0.50	ug/L	7.50	ND	106	70-130			

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	07/10/20 14:52

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF03568 - NB General Prep										
Blank (AF03568-BLK1)				Prepared & Analyzed: 06/10/20						
Turbidity	ND	0.25	NTU							
Duplicate (AF03568-DUP1)		**Source: 20F1435-01**		Prepared & Analyzed: 06/10/20						
Turbidity	12.6	0.25	NTU		12.6			0.00	20	
Batch AF04317 - NB General Prep										
Duplicate (AF04317-DUP1)		**Source: 20F3050-01**		Prepared & Analyzed: 06/25/20						
pH	7.24	1.00	pH Units		7.24			0.00	20	
Specific Conductance (EC)	330	10	umhos/cm		325			1.53	5	
Batch AF04494 - General Preparation										
Blank (AF04494-BLK1)				Prepared: 06/30/20 Analyzed: 07/01/20						
Total Suspended Solids	ND	1.0	mg/L							
Duplicate (AF04494-DUP1)		**Source: 20F3186-01**		Prepared: 06/30/20 Analyzed: 07/01/20						
Total Suspended Solids	29.3	1.0	mg/L		29.9			2.02	30	
Duplicate (AF04494-DUP2)		**Source: 20F3285-01**		Prepared: 06/30/20 Analyzed: 07/01/20						
Total Suspended Solids	255	1.0	mg/L		259			1.43	30	
Batch AF04498 - NB EPA 200 series										
Blank (AF04498-BLK1)				Prepared & Analyzed: 06/30/20						
Hardness, Total	ND	1	mg/L							

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	07/10/20 14:52

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF04498 - NB EPA 200 series										
Duplicate (AF04498-DUP1)		**Source: 20F3118-05**		Prepared & Analyzed: 06/30/20						
Hardness, Total	31	1	mg/L		32			1.64	20	
Batch AG03150 - NB General Prep										
LCS (AG03150-BS1)				Prepared & Analyzed: 07/01/20						
Total Alkalinity as CaCO3	240	5.0	mg/L	250		96.1	80-120			
Duplicate (AG03150-DUP1)		**Source: 20F3306-01**		Prepared & Analyzed: 07/01/20						
Total Alkalinity as CaCO3	146	5.0	mg/L		142			3.22	20	
Bicarbonate Alkalinity as CaCO3	146	5.0	mg/L		142			3.23	20	
Carbonate Alkalinity as CaCO3	ND	5.0	mg/L		ND				20	
Hydroxide Alkalinity as CaCO3	ND	5.0	mg/L		ND				20	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	07/10/20 14:52

Anions by EPA Method 300.0 - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AF04423 - NB General Prep										
Blank (AF04423-BLK1)				Prepared: 06/26/20 Analyzed: 06/27/20						
Sulfate as SO4	ND	0.50	mg/L							
LCS (AF04423-BS1)				Prepared: 06/26/20 Analyzed: 06/27/20						
Sulfate as SO4	7.53	0.50	mg/L	8.00		94.1	90-110			
Duplicate (AF04423-DUP1)		**Source: 20F3129-01**		Prepared: 06/26/20 Analyzed: 06/27/20						
Sulfate as SO4	ND	0.50	mg/L		ND				20	
MRL Check (AF04423-MRL1)				Prepared: 06/26/20 Analyzed: 06/27/20						
Sulfate as SO4	1.72	0.50	mg/L	1.60		108	60-140			
Matrix Spike (AF04423-MS1)		**Source: 20F3129-01**		Prepared: 06/26/20 Analyzed: 06/27/20						
Sulfate as SO4	7.85	0.50	mg/L	8.00	ND	98.1	80-120			
Matrix Spike (AF04423-MS2)		**Source: 20F3121-01**		Prepared: 06/26/20 Analyzed: 06/27/20						
Sulfate as SO4	122	0.50	mg/L	8.00	115	85.2	80-120			
Matrix Spike Dup (AF04423-MSD1)		**Source: 20F3129-01**		Prepared: 06/26/20 Analyzed: 06/27/20						
Sulfate as SO4	7.88	0.50	mg/L	8.00	ND	98.5	80-120	0.394	20	

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Bottle Rock Power	Project Manager: Jay Hepper	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	07/10/20 14:52

Notes and Definitions

>2419.6 >2419.6

QB-01 The method blank contains analyte at a concentration above the MRL; however, the analyte in all associated samples was either ND or greater than 10X the blank concentration.

QL-03 Although the LCS/LCSD recovery for this analyte is outside of in-house developed control limits, it is within the EPA recommended range of 70-130%.

T-14 Residual chlorine, dissolved oxygen, sulfite, and pH must be analyzed in the field to meet the EPA specified 15 minute hold time.

ND Analyte NOT DETECTED at or above the reporting limit

dry Sample results reported on a dry weight basis

REC Recovery

RPD Relative Percent Difference

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WATERS, SEDIMENTS, SOLIDS

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707.468.5267 (fax)
clientservices@alpha-labs.com

North Bay Laboratory (2303)
110 Liberty Street, Petaluma CA 94952

Bay Area Laboratory (2728)
262 Rickenbacker Circle, Livermore CA 94551

Central Valley Laboratory (2922)
9090 Union Park Way #113, Elk Grove CA 95624

San Diego Service Center
2722 Loker Ave West, Ste A, Carlsbad CA 92010

Chain of Custody - Work Order

Reports and Invoices delivered by email in PDF format

Lab No 20F3118 Pg ____ of ____

Report to	Invoice to (if different)	Project Information
Company: Bottle Rock Power	Contact:	Project ID: Bottle Rock Monitoring-SW
Attn: ~~Jay Hepper~~ Richard Lacy	Email address:	Project No:
Address: PO Box 326, Cobb, CA 95426	Address:	PO Number:
Phone/Fax: 707-529-3799	Phone/Fax:	
Email Address:		

Signature below authorizes work under terms stated on reverse side.

Field Sampler - Printed Name & Signature:

Sample Identification	Sampling Date	Sampling Time	Container: 40ml VOA Vial	Container: Plastic	Container: Glass	Container: Sleeve	Container: Other	Preservative: HCl	Preservative: HNO3	Preservative: H2SO4	Preservative: Other	Preservative: None	Matrix: Drinking Water	Matrix: Wastewater	Matrix: Soil	Matrix: Other	Total Number of Containers per Sample ID	ALK, Ph, ec	Turbidity & TSS	Hardness, SO4	B, Cu, Fe & Pb	Mn, Na & Zn	Diss. Oxygen	Bac-T	As, Cr, V, Hg	Field pH	Field TDS ppm	Notes / DDW Source Codes
SW6	6/26	7:00		X	X												6	X	X	X	X	X	X	X	X			
SW7	6/26	8:20		X	X												6	↓	↓	↓	↓	↓	↓	↓	↓			
SW8	6/26	7:30		X	X												6	↓	↓	↓	↓	↓	↓	↓	↓			
SW9	6/26	9:00		X	X												6	↓	↓	↓	↓	↓	↓	↓	↓			
SW10	6/26	8:00		X	X												6	↓	↓	↓	↓	↓	↓	↓	↓			

TAT
Standard 10 days ⊘
RUSH:
○ 5 days
○ 48 hours
○ Other: ____days
○ Preapproval required

TEMP °C
Ukiah
Livermore
Elk Grove
Petaluma 5.4
Carlsbad

Relinquished by	Received by	Date	Time
Richard Lacy	[illegible]	6/26/20	1145

DDW Write On EDT Transmission? ○ Yes ○ No

State System Number: _____

If "Y" please enter the Source Number(s) in the column above

CA Geotracker EDF Report? ○ Yes ○ No

Global ID: Sampling Company Log Code:

EDF to (Email Address):

Travel and Site Time:	Mileage:	Misc. Supplies:

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21 October 2020

Bottle Rock Power
Attn: M. Moore
4010 Stone Way North, Suite 400
Seattle, WA 98103
RE: Surface Water
Work Order: 20J1443

Enclosed are the results of analyses for samples received by the laboratory on 10/12/20 13:43. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanette Poplin

Jeanette L. Poplin For Stephen F. McWeeney
Lab Manager

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:59

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | T: 925-828-6226 | F: 925-828-6309 | ELAP# 2728
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | T: 916-686-5190 | F: 916-686-5192 | ELAP# 2922
North Bay: 110 Liberty Street | Petaluma, CA 94952 | T: 707-769-3128 | F: 707-769-8093 | ELAP# 2303
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | T: 760-930-2555 | F: 760-930-2510 | ELAP# 3055

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW-6	20J1443-01	Water	10/12/20 11:00	10/12/20 13:43
SW-7	20J1443-02	Water	10/12/20 10:39	10/12/20 13:43
SW-8	20J1443-03	Water	10/12/20 10:43	10/12/20 13:43
SW-9	20J1443-04	Water	10/12/20 10:16	10/12/20 13:43
SW-10	20J1443-05	Water	10/12/20 10:32	10/12/20 13:43

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:59

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-6 (20J1443-01)			**Sample Type: Water**			**Sampled: 10/12/20 11:00**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:26	2303	EPA 200.7	
Boron	ND	mg/L	0.10	1	AJ03715	10/13/20 13:38	10/14/20 10:26	2303	EPA 200.7	
Calcium	ND	mg/L	5.0	1	AJ03715	10/13/20 13:38	10/14/20 10:26	2303	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AJ03715	10/13/20 13:38	10/14/20 10:26	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:26	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AJ03715	10/13/20 13:38	10/14/20 10:26	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:26	2303	EPA 200.7	
Magnesium	**2.7**	**mg/L**	**0.50**	1	AJ03715	10/13/20 13:38	10/14/20 10:26	2303	EPA 200.7	
Manganese	**0.029**	**mg/L**	**0.020**	1	AJ03715	10/13/20 13:38	10/14/20 10:26	2303	EPA 200.7	
Mercury	ND	ug/L	0.50	1	AJ03727	10/13/20 15:54	10/14/20 14:27	2303	EPA 245.1	
Sodium	ND	mg/L	5.0	1	AJ03715	10/13/20 13:38	10/14/20 10:26	2303	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:26	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AJ03715	10/13/20 13:38	10/14/20 10:26	2303	EPA 200.7	
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**9.0**	**mg/L**	**0.20**	1	AJ03671	10/12/20 15:00	10/12/20 16:20	2303	SM4500-O G	T-14
pH	**7.40**	**pH Units**	**1.00**	1	AJ03396	10/12/20 15:00	10/12/20 16:15	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**74**	**umhos/cm**	**10**	1	AJ03396	10/12/20 15:00	10/12/20 16:15	2303	SM2510B	
Total Alkalinity as CaCO3	**23**	**mg/L**	**5.0**	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AJ03739	10/14/20 09:00	10/14/20 17:00	1551	SM2540D	
Turbidity	**0.29**	**NTU**	**0.25**	1	AJ03545	10/13/20 08:00	10/13/20 09:22	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**23**	**mg/L**	**5.0**	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Hardness, Total	**22**	**mg/L**	**1**	1	AJ03715	10/13/20 13:38	10/14/20 10:26	2303	SM2340B	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:59

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-6 (20J1443-01)			**Sample Type: Water**			**Sampled: 10/12/20 11:00**				
Anions by EPA Method 300.0										
Sulfate as SO4	**1.2**	**mg/L**	**0.50**	1	AJ03661	10/12/20 15:27	10/12/20 18:25	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**870**	**MPN/100mL**	**1.0**	1	AJ03672	10/12/20 16:20	10/13/20 16:40	2303	SM9223B	
E. Coli	**41**	**MPN/100mL**	**1.0**	1	AJ03672	10/12/20 16:20	10/13/20 16:40	2303	SM9223B	
SW-7 (20J1443-02)			**Sample Type: Water**			**Sampled: 10/12/20 10:39**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:29	2303	EPA 200.7	
Boron	ND	mg/L	0.10	1	AJ03715	10/13/20 13:38	10/14/20 10:29	2303	EPA 200.7	
Calcium	**7.3**	**mg/L**	**5.0**	1	AJ03715	10/13/20 13:38	10/14/20 10:29	2303	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AJ03715	10/13/20 13:38	10/14/20 10:29	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:29	2303	EPA 200.7	
Iron	**0.10**	**mg/L**	**0.10**	1	AJ03715	10/13/20 13:38	10/14/20 10:29	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:29	2303	EPA 200.7	
Magnesium	**5.7**	**mg/L**	**0.50**	1	AJ03715	10/13/20 13:38	10/14/20 10:29	2303	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:29	2303	EPA 200.7	
Mercury	ND	ug/L	0.50	1	AJ03727	10/13/20 15:54	10/14/20 14:29	2303	EPA 245.1	
Sodium	**5.9**	**mg/L**	**5.0**	1	AJ03715	10/13/20 13:38	10/14/20 10:29	2303	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:29	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AJ03715	10/13/20 13:38	10/14/20 10:29	2303	EPA 200.7	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:59

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-7 (20J1443-02)		**Sample Type: Water**				**Sampled: 10/12/20 10:39**				
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**9.0**	**mg/L**	**0.20**	1	AJ03671	10/12/20 15:00	10/12/20 16:20	2303	SM4500-O G	T-14
pH	**7.51**	**pH Units**	**1.00**	1	AJ03396	10/12/20 15:00	10/12/20 16:15	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**120**	**umhos/cm**	**10**	1	AJ03396	10/12/20 15:00	10/12/20 16:15	2303	SM2510B	
Total Alkalinity as CaCO3	**59**	**mg/L**	**5.0**	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AJ03739	10/14/20 09:00	10/14/20 17:00	1551	SM2540D	
Turbidity	**0.86**	**NTU**	**0.25**	1	AJ03545	10/13/20 08:00	10/13/20 09:22	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**58**	**mg/L**	**5.0**	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Hardness, Total	**42**	**mg/L**	**1**	1	AJ03715	10/13/20 13:38	10/14/20 10:29	2303	SM2340B	
Anions by EPA Method 300.0										
Sulfate as SO4	**0.71**	**mg/L**	**0.50**	1	AJ03661	10/12/20 15:27	10/12/20 18:42	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**1300**	**MPN/100mL**	**1.0**	1	AJ03672	10/12/20 16:20	10/13/20 16:40	2303	SM9223B	
E. Coli	**130**	**MPN/100mL**	**1.0**	1	AJ03672	10/12/20 16:20	10/13/20 16:40	2303	SM9223B	
SW-8 (20J1443-03)		**Sample Type: Water**				**Sampled: 10/12/20 10:43**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:32	2303	EPA 200.7	
Boron	ND	mg/L	0.10	1	AJ03715	10/13/20 13:38	10/14/20 10:32	2303	EPA 200.7	
Calcium	**7.8**	**mg/L**	**5.0**	1	AJ03715	10/13/20 13:38	10/14/20 10:32	2303	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AJ03715	10/13/20 13:38	10/14/20 10:32	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:32	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AJ03715	10/13/20 13:38	10/14/20 10:32	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:32	2303	EPA 200.7	
Magnesium	**6.1**	**mg/L**	**0.50**	1	AJ03715	10/13/20 13:38	10/14/20 10:32	2303	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:32	2303	EPA 200.7	
Mercury	ND	ug/L	0.50	1	AJ03727	10/13/20 15:54	10/14/20 14:32	2303	EPA 245.1	
Sodium	**6.3**	**mg/L**	**5.0**	1	AJ03715	10/13/20 13:38	10/14/20 10:32	2303	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:32	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AJ03715	10/13/20 13:38	10/14/20 10:32	2303	EPA 200.7	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:59

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-8 (20J1443-03)		**Sample Type: Water**				**Sampled: 10/12/20 10:43**				
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**9.0**	**mg/L**	**0.20**	1	AJ03671	10/12/20 15:00	10/12/20 16:20	2303	SM4500-O G	T-14
pH	**7.55**	**pH Units**	**1.00**	1	AJ03396	10/12/20 15:00	10/12/20 16:15	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**120**	**umhos/cm**	**10**	1	AJ03396	10/12/20 15:00	10/12/20 16:15	2303	SM2510B	
Total Alkalinity as CaCO3	**58**	**mg/L**	**5.0**	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AJ03739	10/14/20 09:00	10/14/20 17:00	1551	SM2540D	
Turbidity	**0.87**	**NTU**	**0.25**	1	AJ03545	10/13/20 08:00	10/13/20 09:22	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**58**	**mg/L**	**5.0**	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Hardness, Total	**45**	**mg/L**	**1**	1	AJ03715	10/13/20 13:38	10/14/20 10:32	2303	SM2340B	
Anions by EPA Method 300.0										
Sulfate as SO4	**0.74**	**mg/L**	**0.50**	1	AJ03661	10/12/20 15:27	10/12/20 19:00	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**1700**	**MPN/100mL**	**1.0**	1	AJ03672	10/12/20 16:20	10/13/20 16:40	2303	SM9223B	
E. Coli	**150**	**MPN/100mL**	**1.0**	1	AJ03672	10/12/20 16:20	10/13/20 16:40	2303	SM9223B	
SW-9 (20J1443-04)		**Sample Type: Water**				**Sampled: 10/12/20 10:16**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:35	2303	EPA 200.7	
Boron	ND	mg/L	0.10	1	AJ03715	10/13/20 13:38	10/14/20 10:35	2303	EPA 200.7	
Calcium	ND	mg/L	5.0	1	AJ03715	10/13/20 13:38	10/14/20 10:35	2303	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AJ03715	10/13/20 13:38	10/14/20 10:35	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:35	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AJ03715	10/13/20 13:38	10/14/20 10:35	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:35	2303	EPA 200.7	
Magnesium	**2.6**	**mg/L**	**0.50**	1	AJ03715	10/13/20 13:38	10/14/20 10:35	2303	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:35	2303	EPA 200.7	
Mercury	ND	ug/L	0.50	1	AJ03727	10/13/20 15:54	10/14/20 14:35	2303	EPA 245.1	
Sodium	ND	mg/L	5.0	1	AJ03715	10/13/20 13:38	10/14/20 10:35	2303	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:35	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AJ03715	10/13/20 13:38	10/14/20 10:35	2303	EPA 200.7	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:59

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-9 (20J1443-04)		**Sample Type: Water**				**Sampled: 10/12/20 10:16**				
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**9.3**	**mg/L**	**0.20**	1	AJ03671	10/12/20 15:00	10/12/20 16:20	2303	SM4500-O G	T-14
pH	**7.18**	**pH Units**	**1.00**	1	AJ03396	10/12/20 15:00	10/12/20 16:15	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**72**	**umhos/cm**	**10**	1	AJ03396	10/12/20 15:00	10/12/20 16:15	2303	SM2510B	
Total Alkalinity as CaCO3	**31**	**mg/L**	**5.0**	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AJ03739	10/14/20 09:00	10/14/20 17:00	1551	SM2540D	
Turbidity	ND	NTU	0.25	1	AJ03545	10/13/20 08:00	10/13/20 09:22	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**31**	**mg/L**	**5.0**	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Hardness, Total	**21**	**mg/L**	**1**	1	AJ03715	10/13/20 13:38	10/14/20 10:35	2303	SM2340B	
Anions by EPA Method 300.0										
Sulfate as SO4	**1.3**	**mg/L**	**0.50**	1	AJ03661	10/12/20 15:27	10/12/20 19:18	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**920**	**MPN/100mL**	**1.0**	1	AJ03672	10/12/20 16:20	10/13/20 16:40	2303	SM9223B	
E. Coli	**34**	**MPN/100mL**	**1.0**	1	AJ03672	10/12/20 16:20	10/13/20 16:40	2303	SM9223B	
SW-10 (20J1443-05)		**Sample Type: Water**				**Sampled: 10/12/20 10:32**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:38	2303	EPA 200.7	
Boron	ND	mg/L	0.10	1	AJ03715	10/13/20 13:38	10/14/20 10:38	2303	EPA 200.7	
Calcium	**8.0**	**mg/L**	**5.0**	1	AJ03715	10/13/20 13:38	10/14/20 10:38	2303	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AJ03715	10/13/20 13:38	10/14/20 10:38	2303	EPA 200.7	
Copper	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:38	2303	EPA 200.7	
Iron	ND	mg/L	0.10	1	AJ03715	10/13/20 13:38	10/14/20 10:38	2303	EPA 200.7	
Lead	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:38	2303	EPA 200.7	
Magnesium	**6.2**	**mg/L**	**0.50**	1	AJ03715	10/13/20 13:38	10/14/20 10:38	2303	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:38	2303	EPA 200.7	
Mercury	ND	ug/L	0.50	1	AJ03727	10/13/20 15:54	10/14/20 14:37	2303	EPA 245.1	
Sodium	**6.4**	**mg/L**	**5.0**	1	AJ03715	10/13/20 13:38	10/14/20 10:38	2303	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AJ03715	10/13/20 13:38	10/14/20 10:38	2303	EPA 200.7	
Zinc	ND	mg/L	0.050	1	AJ03715	10/13/20 13:38	10/14/20 10:38	2303	EPA 200.7	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:59

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-10 (20J1443-05)		**Sample Type: Water**				**Sampled: 10/12/20 10:32**				
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**9.5**	**mg/L**	**0.20**	1	AJ03671	10/12/20 15:00	10/12/20 16:20	2303	SM4500-O G	T-14
pH	**7.55**	**pH Units**	**1.00**	1	AJ03396	10/12/20 15:00	10/12/20 16:15	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**120**	**umhos/cm**	**10**	1	AJ03396	10/12/20 15:00	10/12/20 16:15	2303	SM2510B	
Total Alkalinity as CaCO3	**58**	**mg/L**	**5.0**	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Total Suspended Solids	**1.3**	**mg/L**	**1.0**	1	AJ03739	10/14/20 09:00	10/14/20 17:00	1551	SM2540D	
Turbidity	**0.91**	**NTU**	**0.25**	1	AJ03545	10/13/20 08:00	10/13/20 09:22	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**58**	**mg/L**	**5.0**	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AJ03259	10/16/20 08:00	10/16/20 11:00	2303	SM2320B	
Hardness, Total	**45**	**mg/L**	**1**	1	AJ03715	10/13/20 13:38	10/14/20 10:38	2303	SM2340B	
Anions by EPA Method 300.0										
Sulfate as SO4	**0.76**	**mg/L**	**0.50**	1	AJ03661	10/12/20 15:27	10/12/20 19:36	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**1600**	**MPN/100mL**	**1.0**	1	AJ03672	10/12/20 16:20	10/13/20 16:40	2303	SM9223B	
E. Coli	**83**	**MPN/100mL**	**1.0**	1	AJ03672	10/12/20 16:20	10/13/20 16:40	2303	SM9223B	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:59

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AJ03715 - NB EPA 200 series Direct Analysis										
Blank (AJ03715-BLK1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Arsenic	ND	0.020	mg/L							
Boron	ND	0.10	mg/L							
Calcium	ND	5.0	mg/L							
Chromium	ND	0.010	mg/L							
Copper	ND	0.020	mg/L							
Iron	ND	0.10	mg/L							
Lead	ND	0.020	mg/L							
Magnesium	ND	0.50	mg/L							
Manganese	ND	0.020	mg/L							
Sodium	ND	5.0	mg/L							
Vanadium	ND	0.020	mg/L							
Zinc	ND	0.050	mg/L							
LCS (AJ03715-BS1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Arsenic	0.540	0.020	mg/L	0.500		108	85-115			
Boron	0.540	0.10	mg/L	0.500		108	85-115			
Calcium	27.8	5.0	mg/L	25.5		109	85-115			
Chromium	0.542	0.010	mg/L	0.500		108	85-115			
Copper	0.518	0.020	mg/L	0.500		104	85-115			
Iron	0.549	0.10	mg/L	0.500		110	85-115			
Lead	0.552	0.020	mg/L	0.500		110	85-115			
Magnesium	27.6	0.50	mg/L	25.5		108	85-115			
Manganese	0.543	0.020	mg/L	0.500		109	85-115			
Sodium	26.7	5.0	mg/L	25.5		105	85-115			
Vanadium	0.535	0.020	mg/L	0.500		107	85-115			
Zinc	0.584	0.050	mg/L	0.500		117	85-115			QL-03
LCS Dup (AJ03715-BSD1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Arsenic	0.514	0.020	mg/L	0.500		103	85-115	4.86	20	
Boron	0.513	0.10	mg/L	0.500		103	85-115	5.14	20	
Calcium	26.0	5.0	mg/L	25.5		102	85-115	6.60	20	
Chromium	0.515	0.010	mg/L	0.500		103	85-115	5.09	20	
Copper	0.495	0.020	mg/L	0.500		99.1	85-115	4.48	20	
Iron	0.538	0.10	mg/L	0.500		108	85-115	1.97	20	
Lead	0.526	0.020	mg/L	0.500		105	85-115	4.86	20	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:59

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AJ03715 - NB EPA 200 series Direct Analysis										
LCS Dup (AJ03715-BSD1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Magnesium	25.6	0.50	mg/L	25.5		101	85-115	7.22	20	
Manganese	0.519	0.020	mg/L	0.500		104	85-115	4.50	20	
Sodium	24.9	5.0	mg/L	25.5		97.5	85-115	7.09	20	
Vanadium	0.508	0.020	mg/L	0.500		102	85-115	5.12	20	
Zinc	0.558	0.050	mg/L	0.500		112	85-115	4.50	20	
Duplicate (AJ03715-DUP1)		**Source: 20J1448-01**		Prepared: 10/13/20 Analyzed: 10/14/20						
Arsenic	ND	0.020	mg/L		ND				20	
Boron	0.928	0.10	mg/L		0.898			3.38	20	
Calcium	10.9	5.0	mg/L		10.5			3.87	20	
Chromium	ND	0.010	mg/L		ND				20	
Copper	ND	0.020	mg/L		ND				20	
Iron	0.305	0.10	mg/L		0.296			2.93	20	
Lead	ND	0.020	mg/L		ND				20	
Magnesium	2.35	0.50	mg/L		2.25			4.41	20	
Manganese	0.0231	0.020	mg/L		0.0224			3.08	20	
Sodium	66.0	5.0	mg/L		63.7			3.69	20	
Vanadium	ND	0.020	mg/L		ND				20	
Zinc	ND	0.050	mg/L		ND				20	
Matrix Spike (AJ03715-MS1)		**Source: 20J1443-01**		Prepared: 10/13/20 Analyzed: 10/14/20						
Arsenic	0.525	0.020	mg/L	0.500	ND	105	70-130			
Boron	0.581	0.10	mg/L	0.500	ND	116	70-130			
Chromium	0.524	0.010	mg/L	0.500	ND	105	70-130			
Copper	0.504	0.020	mg/L	0.500	ND	101	70-130			
Iron	0.564	0.10	mg/L	0.500	ND	113	70-130			
Lead	0.533	0.020	mg/L	0.500	ND	107	70-130			
Manganese	0.528	0.020	mg/L	0.500	0.0290	99.8	70-130			
Sodium	30.8	5.0	mg/L	25.5	ND	102	70-130			
Vanadium	0.515	0.020	mg/L	0.500	ND	103	70-130			
Zinc	0.546	0.050	mg/L	0.500	ND	109	70-130			

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:59

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AJ03715 - NB EPA 200 series Direct Analysis										
Matrix Spike Dup (AJ03715-MSD1)		**Source: 20J1443-01**		Prepared: 10/13/20 Analyzed: 10/14/20						
Arsenic	0.525	0.020	mg/L	0.500	ND	105	70-130	0.0381	20	
Boron	0.582	0.10	mg/L	0.500	ND	116	70-130	0.241	20	
Chromium	0.526	0.010	mg/L	0.500	ND	105	70-130	0.248	20	
Copper	0.506	0.020	mg/L	0.500	ND	101	70-130	0.277	20	
Iron	0.565	0.10	mg/L	0.500	ND	113	70-130	0.230	20	
Lead	0.533	0.020	mg/L	0.500	ND	107	70-130	0.0375	20	
Manganese	0.530	0.020	mg/L	0.500	0.0290	100	70-130	0.303	20	
Sodium	31.0	5.0	mg/L	25.5	ND	103	70-130	0.598	20	
Vanadium	0.517	0.020	mg/L	0.500	ND	103	70-130	0.330	20	
Zinc	0.547	0.050	mg/L	0.500	ND	109	70-130	0.183	20	
Batch AJ03727 - NB EPA 245.1 Hg										
Blank (AJ03727-BLK1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Mercury	ND	0.50	ug/L							
LCS (AJ03727-BS1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Mercury	7.40	0.50	ug/L	7.50		98.7	85-115			
LCS Dup (AJ03727-BSD1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Mercury	7.22	0.50	ug/L	7.50		96.3	85-115	2.39	20	
Matrix Spike (AJ03727-MS1)		**Source: 20J1443-01**		Prepared: 10/13/20 Analyzed: 10/14/20						
Mercury	7.42	0.50	ug/L	7.50	ND	99.0	70-130			

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:59

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AJ03259 - NB General Prep										
Blank (AJ03259-BLK1)				Prepared & Analyzed: 10/05/20						
Total Alkalinity as CaCO3	ND	5.0	mg/L							
Bicarbonate Alkalinity as CaCO3	ND	5.0	mg/L							
Carbonate Alkalinity as CaCO3	ND	5.0	mg/L							
Hydroxide Alkalinity as CaCO3	ND	5.0	mg/L							
LCS (AJ03259-BS1)				Prepared & Analyzed: 10/05/20						
Total Alkalinity as CaCO3	999	5.0	mg/L	1000		99.9	80-120			
Duplicate (AJ03259-DUP1)		**Source: 20J0250-01**		Prepared & Analyzed: 10/05/20						
Total Alkalinity as CaCO3	266	5.0	mg/L		268			0.895	20	
Bicarbonate Alkalinity as CaCO3	263	5.0	mg/L		265			0.920	20	
Carbonate Alkalinity as CaCO3	ND	5.0	mg/L		ND			1.01	20	
Hydroxide Alkalinity as CaCO3	ND	5.0	mg/L		ND				20	
Batch AJ03396 - NB General Prep										
Duplicate (AJ03396-DUP1)		**Source: 20J0854-01**		Prepared & Analyzed: 10/07/20						
pH	8.00	1.00	pH Units		8.00			0.00	20	
Specific Conductance (EC)	669	10	umhos/cm		672			0.447	5	
Batch AJ03715 - NB EPA 200 series Direct Analysis										
Blank (AJ03715-BLK1)				Prepared: 10/13/20 Analyzed: 10/14/20						
Hardness, Total	3	1	mg/L							QB-01
Duplicate (AJ03715-DUP1)		**Source: 20J1448-01**		Prepared: 10/13/20 Analyzed: 10/14/20						
Hardness, Total	37	1	mg/L		36			4.01	20	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:59

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AJ03739 - General Preparation										
Blank (AJ03739-BLK1)				Prepared & Analyzed: 10/14/20						
Total Suspended Solids	ND	1.0	mg/L							
Duplicate (AJ03739-DUP1)	**Source: 20J1665-01**			Prepared & Analyzed: 10/14/20						
Total Suspended Solids	126	1.0	mg/L		116			7.87	30	
Duplicate (AJ03739-DUP2)	**Source: 20J1674-01**			Prepared & Analyzed: 10/14/20						
Total Suspended Solids	241	1.0	mg/L		229			5.28	30	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:59

Anions by EPA Method 300.0 - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AJ03661 - NB General Prep										
Blank (AJ03661-BLK1)				Prepared & Analyzed: 10/12/20						
Sulfate as SO4	ND	0.50	mg/L							
LCS (AJ03661-BS1)				Prepared & Analyzed: 10/12/20						
Sulfate as SO4	7.85	0.50	mg/L	8.00		98.1	90-110			
Duplicate (AJ03661-DUP1)	**Source: 20J1448-01**			Prepared & Analyzed: 10/12/20						
Sulfate as SO4	0.534	0.50	mg/L		ND			7.38	20	
MRL Check (AJ03661-MRL1)				Prepared & Analyzed: 10/12/20						
Sulfate as SO4	1.77	0.50	mg/L	1.60		110	60-140			
Matrix Spike (AJ03661-MS1)	**Source: 20J1448-01**			Prepared & Analyzed: 10/12/20						
Sulfate as SO4	7.36	0.50	mg/L	8.00	ND	85.8	80-120			
Matrix Spike Dup (AJ03661-MSD1)	**Source: 20J1448-01**			Prepared & Analyzed: 10/12/20						
Sulfate as SO4	7.28	0.50	mg/L	8.00	ND	84.8	80-120	1.11	20	

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Bottle Rock Power	Project Manager: M. Moore	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	10/21/20 10:59

Notes and Definitions

QB-01	The method blank contains analyte at a concentration above the MRL; however, the analyte in all associated samples was either ND or greater than 10X the blank concentration.
QL-03	Although the LCS/LCSD recovery for this analyte is outside of in-house developed control limits, it is within the EPA recommended range of 70-130%.
T-14	Residual chlorine, dissolved oxygen, sulfite, and pH must be analyzed in the field to meet the EPA specified 15 minute hold time.
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
REC	Recovery
RPD	Relative Percent Difference

Alpha Analytical Laboratories Inc.
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WATERS, SEDIMENTS, SOLIDS

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North Bay Laboratory (2303)
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Bay Area Laboratory (2728)
262 Rickenbacker Circle, Livermore CA 94551

Central Valley Laboratory (2922)
9090 Union Park Way #113, Elk Grove CA 95624

San Diego Service Center
2722 Loker Ave West, Ste A, Carlsbad CA 92010

Chain of Custody - Work Order

Reports and Invoices delivered by email in PDF format

Lab No 20J1443 Pg ____ of ____

Report to	Invoice to (if different)	Project Information
Company: Bottle Rock Power	Contact:	Project ID: Bottle Rock Monitoring-SW
Attn: ~~Jay Hepper~~ Richard Lacy	Email address:	Project No:
Address: PO Box 326, Cobb, CA 95426	Address:	PO Number:
Phone/Fax: 707-529-3799	Phone/Fax:	
Email Address:		

Signature below authorizes work under terms stated on reverse side.

Field Sampler - Printed Name & Signature: Richard Lacy

Sample Identification	Sampling Date	Sampling Time	Container: 40ml VOA Vial	Container: Plastic	Container: Glass	Container: Sleeve	Container: Other	Preservative: HCl	Preservative: HNO3	Preservative: H2SO4	Preservative: Other	Preservative: None	Matrix: Drinking Water	Matrix: Wastewater	Matrix: Soil	Matrix: Other	Total Number of Containers per Sample ID	ALK, Ph, ec	Turbidity & TSS	Hardness, SO4	B, Cu, Fe & Pb	Mn, Na & Zn	Diss. Oxygen	Bac-T	As, Cr, V, Hg	Field pH	Field TDS ppm	Notes / DDW Source Codes
SW 6	10/12/20	11:00		X	X												5	X	X	X	X	X	X	X	X			
SW 7	10/12/20	10:39		X	X												5											
SW 8	10/12/20	10:43		X	X												5											
SW 9	10/12/20	10:16		X	X												5											
SW 10	10/12/20	10:32		X	X												5							D				

TAT
Standard 10 days ○
RUSH: 5 days ○ 48 hours ○ Other: ___days ○ Preapproval required

TEMP °C
Ukiah
Livermore
Elk Grove
Petaluma 10.8
Carlsbad

Relinquished by	Received by	Date	Time
Richard Lacy	C Jamison	10/12/20	1:43 PM

DDW Write On EDT Transmission? ○ Yes ○ No
State System Number: _____
If "Y" please enter the Source Number(s) in the column above

CA Geotracker EDF Report? ○ Yes ○ No
Global ID: Sampling Company Log Code:
EDF to (Email Address):

Travel and Site Time:	Mileage:	Misc. Supplies:

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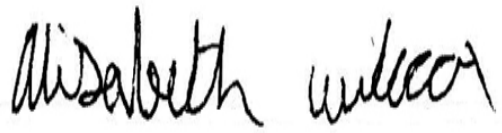
12 January 2021

Bottle Rock Power
Attn: Terra Rogers
4010 Stone Way North, Suite 400
Seattle, WA 98103
RE: Surface Water
Work Order: 20L3284

Enclosed are the results of analyses for samples received by the laboratory on 12/28/20 12:04. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Alisabeth J. Wilcox For Stephen F. McWeeney
Lab Manager

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | T: 925-828-6226 | F: 925-828-6309 | ELAP# 2728
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | T: 916-686-5190 | F: 916-686-5192 | ELAP# 2922
North Bay: 110 Liberty Street | Petaluma, CA 94952 | T: 707-769-3128 | F: 707-769-8093 | ELAP# 2303
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | T: 760-930-2555 | F: 760-930-2510 | ELAP# 3055

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW-6	20L3284-01	Water	12/28/20 10:40	12/28/20 12:04
SW-7	20L3284-02	Water	12/28/20 09:20	12/28/20 12:04
SW-8	20L3284-03	Water	12/28/20 09:15	12/28/20 12:04
SW-9	20L3284-04	Water	12/28/20 09:01	12/28/20 12:04
SW-10	20L3284-05	Water	12/28/20 09:10	12/28/20 12:04

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Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-6 (20L3284-01)			**Sample Type: Water**			**Sampled: 12/28/20 10:40**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.010	1	AL04571	12/31/20 11:40	01/07/21 14:27	1551	EPA 200.7	
Boron	ND	mg/L	0.20	1	AL04571	12/31/20 11:40	01/07/21 14:27	1551	EPA 200.7	
Calcium	**8.4**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:27	1551	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AL04571	12/31/20 11:40	01/07/21 14:27	1551	EPA 200.7	
Copper	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:27	1551	EPA 200.7	
Iron	ND	mg/L	0.10	1	AL04571	12/31/20 11:40	01/07/21 14:27	1551	EPA 200.7	
Lead	ND	mg/L	0.050	1	AL04571	12/31/20 11:40	01/07/21 14:27	1551	EPA 200.7	
Magnesium	**4.1**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:27	1551	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:27	1551	EPA 200.7	
Mercury	ND	ug/L	0.20	1	AA13364	01/06/21 06:17	01/06/21 13:58	1551	EPA 245.1	
Sodium	**5.0**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:27	1551	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:27	1551	EPA 200.7	
Zinc	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:27	1551	EPA 200.7	
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**9.8**	**mg/L**	**0.20**	1	AL04531	12/28/20 14:59	12/28/20 15:00	2303	SM4500-O G	T-14
pH	**7.43**	**pH Units**	**1.00**	1	AL03587	12/28/20 13:31	12/28/20 15:19	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**110**	**umhos/cm**	**10**	1	AL03587	12/28/20 13:31	12/28/20 15:19	2303	SM2510B	
Total Alkalinity as CaCO3	**45**	**mg/L**	**5.0**	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Total Suspended Solids	**1.1**	**mg/L**	**1.0**	1	AL04665	12/30/20 09:00	01/06/21 07:40	1551	SM2540D	
Turbidity	**0.28**	**NTU**	**0.25**	1	AL04555	12/29/20 09:34	12/29/20 09:51	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**45**	**mg/L**	**5.0**	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Hardness, Total	**38**	**mg/L**	**5**	1	AL04571	12/31/20 11:40	01/07/21 14:27	1551	SM2340B	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-6 (20L3284-01)			**Sample Type: Water**			**Sampled: 12/28/20 10:40**				
Anions by EPA Method 300.0										
Sulfate as SO4	**4.1**	**mg/L**	**0.50**	1	AL04465	12/28/20 13:00	12/28/20 14:27	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**250**	**MPN/100mL**	**1.0**	1	AL04534	12/28/20 15:25	12/29/20 15:30	2303	SM9223B	
E. Coli	**200**	**MPN/100mL**	**1.0**	1	AL04534	12/28/20 15:25	12/29/20 15:30	2303	SM9223B	
SW-7 (20L3284-02)			**Sample Type: Water**			**Sampled: 12/28/20 09:20**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.010	1	AL04571	12/31/20 11:40	01/07/21 14:11	1551	EPA 200.7	
Boron	ND	mg/L	0.20	1	AL04571	12/31/20 11:40	01/07/21 14:11	1551	EPA 200.7	
Calcium	**8.5**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:11	1551	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AL04571	12/31/20 11:40	01/07/21 14:11	1551	EPA 200.7	
Copper	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:11	1551	EPA 200.7	
Iron	ND	mg/L	0.10	1	AL04571	12/31/20 11:40	01/07/21 14:11	1551	EPA 200.7	
Lead	ND	mg/L	0.050	1	AL04571	12/31/20 11:40	01/07/21 14:11	1551	EPA 200.7	
Magnesium	**4.2**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:11	1551	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:11	1551	EPA 200.7	
Mercury	ND	ug/L	0.20	1	AA13364	01/06/21 06:17	01/06/21 14:01	1551	EPA 245.1	
Sodium	**5.2**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:11	1551	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:11	1551	EPA 200.7	
Zinc	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:11	1551	EPA 200.7	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-7 (20L3284-02)		**Sample Type: Water**				**Sampled: 12/28/20 09:20**				
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**9.9**	**mg/L**	**0.20**	1	AL04531	12/28/20 14:59	12/28/20 15:00	2303	SM4500-O G	T-14
pH	**7.48**	**pH Units**	**1.00**	1	AL03587	12/28/20 13:31	12/28/20 15:19	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**110**	**umhos/cm**	**10**	1	AL03587	12/28/20 13:31	12/28/20 15:19	2303	SM2510B	
Total Alkalinity as CaCO3	**46**	**mg/L**	**5.0**	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AL04665	12/30/20 09:00	01/06/21 07:40	1551	SM2540D	
Turbidity	**0.26**	**NTU**	**0.25**	1	AL04555	12/29/20 09:34	12/29/20 09:51	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**46**	**mg/L**	**5.0**	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Hardness, Total	**39**	**mg/L**	**5**	1	AL04571	12/31/20 11:40	01/07/21 14:11	1551	SM2340B	
Anions by EPA Method 300.0										
Sulfate as SO4	**4.1**	**mg/L**	**0.50**	1	AL04465	12/28/20 13:00	12/28/20 14:44	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**290**	**MPN/100mL**	**1.0**	1	AL04534	12/28/20 15:25	12/29/20 15:30	2303	SM9223B	
E. Coli	**170**	**MPN/100mL**	**1.0**	1	AL04534	12/28/20 15:25	12/29/20 15:30	2303	SM9223B	
SW-8 (20L3284-03)		**Sample Type: Water**				**Sampled: 12/28/20 09:15**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.010	1	AL04571	12/31/20 11:40	01/07/21 14:31	1551	EPA 200.7	
Boron	ND	mg/L	0.20	1	AL04571	12/31/20 11:40	01/07/21 14:31	1551	EPA 200.7	
Calcium	**8.5**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:31	1551	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AL04571	12/31/20 11:40	01/07/21 14:31	1551	EPA 200.7	
Copper	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:31	1551	EPA 200.7	
Iron	ND	mg/L	0.10	1	AL04571	12/31/20 11:40	01/07/21 14:31	1551	EPA 200.7	
Lead	ND	mg/L	0.050	1	AL04571	12/31/20 11:40	01/07/21 14:31	1551	EPA 200.7	
Magnesium	**4.1**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:31	1551	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:31	1551	EPA 200.7	
Mercury	ND	ug/L	0.20	1	AA13364	01/06/21 06:17	01/06/21 14:03	1551	EPA 245.1	
Sodium	**5.1**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:31	1551	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:31	1551	EPA 200.7	
Zinc	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:31	1551	EPA 200.7	

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4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-8 (20L3284-03)		**Sample Type: Water**				**Sampled: 12/28/20 09:15**				
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**10**	**mg/L**	**0.20**	1	AL04531	12/28/20 14:59	12/28/20 15:00	2303	SM4500-O G	T-14
pH	**7.47**	**pH Units**	**1.00**	1	AL03587	12/28/20 13:31	12/28/20 15:19	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**110**	**umhos/cm**	**10**	1	AL03587	12/28/20 13:31	12/28/20 15:19	2303	SM2510B	
Total Alkalinity as CaCO3	**47**	**mg/L**	**5.0**	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AL04665	12/30/20 09:00	01/06/21 07:40	1551	SM2540D	
Turbidity	**0.26**	**NTU**	**0.25**	1	AL04555	12/29/20 09:34	12/29/20 09:51	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**47**	**mg/L**	**5.0**	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Hardness, Total	**38**	**mg/L**	**5**	1	AL04571	12/31/20 11:40	01/07/21 14:31	1551	SM2340B	
Anions by EPA Method 300.0										
Sulfate as SO4	**4.2**	**mg/L**	**0.50**	1	AL04465	12/28/20 13:00	12/28/20 15:02	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**310**	**MPN/100mL**	**1.0**	1	AL04534	12/28/20 15:25	12/29/20 15:30	2303	SM9223B	
E. Coli	**130**	**MPN/100mL**	**1.0**	1	AL04534	12/28/20 15:25	12/29/20 15:30	2303	SM9223B	
SW-9 (20L3284-04)		**Sample Type: Water**				**Sampled: 12/28/20 09:01**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.010	1	AL04571	12/31/20 11:40	01/07/21 14:36	1551	EPA 200.7	
Boron	ND	mg/L	0.20	1	AL04571	12/31/20 11:40	01/07/21 14:36	1551	EPA 200.7	
Calcium	**8.4**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:36	1551	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AL04571	12/31/20 11:40	01/07/21 14:36	1551	EPA 200.7	
Copper	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:36	1551	EPA 200.7	
Iron	ND	mg/L	0.10	1	AL04571	12/31/20 11:40	01/07/21 14:36	1551	EPA 200.7	
Lead	ND	mg/L	0.050	1	AL04571	12/31/20 11:40	01/07/21 14:36	1551	EPA 200.7	
Magnesium	**4.2**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:36	1551	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:36	1551	EPA 200.7	
Mercury	ND	ug/L	0.20	1	AA13364	01/06/21 06:17	01/06/21 14:11	1551	EPA 245.1	
Sodium	**5.0**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:36	1551	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:36	1551	EPA 200.7	
Zinc	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:36	1551	EPA 200.7	

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4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-9 (20L3284-04)		**Sample Type: Water**				**Sampled: 12/28/20 09:01**				
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**10**	**mg/L**	**0.20**	1	AL04531	12/28/20 14:59	12/28/20 15:00	2303	SM4500-O G	T-14
pH	**7.39**	**pH Units**	**1.00**	1	AL03587	12/28/20 13:31	12/28/20 15:19	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**110**	**umhos/cm**	**10**	1	AL03587	12/28/20 13:31	12/28/20 15:19	2303	SM2510B	
Total Alkalinity as CaCO3	**47**	**mg/L**	**5.0**	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AL04665	12/30/20 09:00	01/06/21 07:40	1551	SM2540D	
Turbidity	**0.32**	**NTU**	**0.25**	1	AL04555	12/29/20 09:34	12/29/20 09:51	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**47**	**mg/L**	**5.0**	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Hardness, Total	**38**	**mg/L**	**5**	1	AL04571	12/31/20 11:40	01/07/21 14:36	1551	SM2340B	
Anions by EPA Method 300.0										
Sulfate as SO4	**4.1**	**mg/L**	**0.50**	1	AL04465	12/28/20 13:00	12/28/20 15:20	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**370**	**MPN/100mL**	**1.0**	1	AL04534	12/28/20 15:25	12/29/20 15:30	2303	SM9223B	
E. Coli	**160**	**MPN/100mL**	**1.0**	1	AL04534	12/28/20 15:25	12/29/20 15:30	2303	SM9223B	
SW-10 (20L3284-05)		**Sample Type: Water**				**Sampled: 12/28/20 09:10**				
Metals by EPA 200 Series Methods										
Arsenic	ND	mg/L	0.010	1	AL04571	12/31/20 11:40	01/07/21 14:40	1551	EPA 200.7	
Boron	ND	mg/L	0.20	1	AL04571	12/31/20 11:40	01/07/21 14:40	1551	EPA 200.7	
Calcium	**8.3**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:40	1551	EPA 200.7	
Chromium	ND	mg/L	0.010	1	AL04571	12/31/20 11:40	01/07/21 14:40	1551	EPA 200.7	
Copper	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:40	1551	EPA 200.7	
Iron	ND	mg/L	0.10	1	AL04571	12/31/20 11:40	01/07/21 14:40	1551	EPA 200.7	
Lead	ND	mg/L	0.050	1	AL04571	12/31/20 11:40	01/07/21 14:40	1551	EPA 200.7	
Magnesium	**4.1**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:40	1551	EPA 200.7	
Manganese	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:40	1551	EPA 200.7	
Mercury	ND	ug/L	0.20	1	AA13364	01/06/21 06:17	01/06/21 14:14	1551	EPA 245.1	
Sodium	**4.9**	**mg/L**	**1.0**	1	AL04571	12/31/20 11:40	01/07/21 14:40	1551	EPA 200.7	
Vanadium	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:40	1551	EPA 200.7	
Zinc	ND	mg/L	0.020	1	AL04571	12/31/20 11:40	01/07/21 14:40	1551	EPA 200.7	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

	Result		Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
SW-10 (20L3284-05)	**Sample Type: Water**					**Sampled: 12/28/20 09:10**				
Conventional Chemistry Parameters by APHA/EPA Methods										
Dissolved Oxygen	**10**	**mg/L**	**0.20**	1	AL04531	12/28/20 14:59	12/28/20 15:00	2303	SM4500-O G	T-14
pH	**7.32**	**pH Units**	**1.00**	1	AL03587	12/28/20 13:31	12/28/20 15:19	2303	SM4500-H+ B	T-14
Specific Conductance (EC)	**110**	**umhos/cm**	**10**	1	AL03587	12/28/20 13:31	12/28/20 15:19	2303	SM2510B	
Total Alkalinity as CaCO3	**48**	**mg/L**	**5.0**	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Total Suspended Solids	ND	mg/L	1.0	1	AL04665	12/30/20 09:00	01/06/21 07:40	1551	SM2540D	
Turbidity	**0.33**	**NTU**	**0.25**	1	AL04555	12/29/20 09:34	12/29/20 09:51	2303	SM2130B	
Bicarbonate Alkalinity as CaCO3	**47**	**mg/L**	**5.0**	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AA13422	01/06/21 08:00	01/06/21 12:00	2303	SM2320B	
Hardness, Total	**38**	**mg/L**	**5**	1	AL04571	12/31/20 11:40	01/07/21 14:40	1551	SM2340B	
Anions by EPA Method 300.0										
Sulfate as SO4	**4.2**	**mg/L**	**0.50**	1	AL04465	12/28/20 13:00	12/28/20 15:38	2303	EPA 300.0	
Microbiological Parameters by APHA Standard Methods										
Total Coliforms	**250**	**MPN/100mL**	**1.0**	1	AL04534	12/28/20 15:25	12/29/20 15:30	2303	SM9223B	
E. Coli	**180**	**MPN/100mL**	**1.0**	1	AL04534	12/28/20 15:25	12/29/20 15:30	2303	SM9223B	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AA13364 - EPA 245.1 Hg Water										
Blank (AA13364-BLK1)				Prepared & Analyzed: 01/06/21						
Mercury	ND	0.20	ug/L							
LCS (AA13364-BS1)				Prepared & Analyzed: 01/06/21						
Mercury	2.26	0.20	ug/L	2.50		90.2	85-115			
Duplicate (AA13364-DUP1)		**Source: 20L2746-01**		Prepared & Analyzed: 01/06/21						
Mercury	ND	0.20	ug/L		ND				20	
Matrix Spike (AA13364-MS1)		**Source: 20L2746-01**		Prepared & Analyzed: 01/06/21						
Mercury	2.32	0.20	ug/L	2.50	ND	92.6	70-130			
Matrix Spike (AA13364-MS2)		**Source: 20L2790-01**		Prepared & Analyzed: 01/06/21						
Mercury	2.45	0.20	ug/L	2.50	ND	97.9	70-130			
Matrix Spike Dup (AA13364-MSD1)		**Source: 20L2746-01**		Prepared & Analyzed: 01/06/21						
Mercury	2.29	0.20	ug/L	2.50	ND	91.8	70-130	0.911	20	
Batch AL04571 - Metals Digest										
Blank (AL04571-BLK1)				Prepared: 12/31/20 Analyzed: 01/07/21						
Arsenic	ND	0.010	mg/L							
Boron	ND	0.20	mg/L							
Calcium	ND	1.0	mg/L							
Chromium	ND	0.010	mg/L							
Copper	ND	0.020	mg/L							
Iron	ND	0.10	mg/L							
Lead	ND	0.050	mg/L							
Magnesium	ND	1.0	mg/L							
Manganese	ND	0.020	mg/L							
Sodium	ND	1.0	mg/L							
Vanadium	ND	0.020	mg/L							
Zinc	ND	0.020	mg/L							

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL04571 - Metals Digest										
LCS (AL04571-BS1)				Prepared: 12/31/20 Analyzed: 01/07/21						
Arsenic	0.204	0.010	mg/L	0.200		102	85-115			
Boron	0.420	0.20	mg/L	0.400		105	85-115			
Calcium	7.37	1.0	mg/L	8.00		92.1	85-115			
Chromium	0.201	0.010	mg/L	0.200		100	85-115			
Copper	0.212	0.020	mg/L	0.200		106	85-115			
Iron	1.83	0.10	mg/L	2.00		91.4	85-115			
Lead	0.188	0.050	mg/L	0.200		94.2	85-115			
Magnesium	7.28	1.0	mg/L	8.00		91.0	85-115			
Manganese	0.196	0.020	mg/L	0.200		97.9	85-115			
Sodium	7.54	1.0	mg/L	8.00		94.2	85-115			
Vanadium	0.199	0.020	mg/L	0.200		99.6	85-115			
Zinc	0.195	0.020	mg/L	0.200		97.6	85-115			
Duplicate (AL04571-DUP1)		**Source: 20L3284-02**		Prepared: 12/31/20 Analyzed: 01/07/21						
Arsenic	ND	0.010	mg/L		ND				20	
Boron	ND	0.20	mg/L		ND			5.23	20	
Calcium	8.32	1.0	mg/L		8.52			2.31	20	
Chromium	ND	0.010	mg/L		ND				20	
Copper	ND	0.020	mg/L		ND				20	
Iron	ND	0.10	mg/L		ND				20	
Lead	ND	0.050	mg/L		ND				20	
Magnesium	4.01	1.0	mg/L		4.19			4.52	20	
Manganese	ND	0.020	mg/L		ND				20	
Sodium	5.10	1.0	mg/L		5.18			1.59	20	
Vanadium	ND	0.020	mg/L		ND				20	
Zinc	ND	0.020	mg/L		ND				20	
Matrix Spike (AL04571-MS1)		**Source: 20L3284-02**		Prepared: 12/31/20 Analyzed: 01/07/21						
Arsenic	0.211	0.010	mg/L	0.200	ND	105	70-130			
Boron	0.466	0.20	mg/L	0.400	ND	98.6	70-130			
Calcium	16.4	1.0	mg/L	8.00	8.52	98.5	70-130			
Chromium	0.202	0.010	mg/L	0.200	ND	101	70-130			
Copper	0.216	0.020	mg/L	0.200	ND	108	70-130			
Iron	1.88	0.10	mg/L	2.00	ND	94.1	70-130			
Lead	0.190	0.050	mg/L	0.200	ND	95.2	70-130			
Magnesium	11.6	1.0	mg/L	8.00	4.19	93.0	70-130			

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Metals by EPA 200 Series Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL04571 - Metals Digest										
Matrix Spike (AL04571-MS1)	**Source: 20L3284-02**			Prepared: 12/31/20 Analyzed: 01/07/21						
Manganese	0.208	0.020	mg/L	0.200	ND	104	70-130			
Sodium	12.1	1.0	mg/L	8.00	5.18	86.4	70-130			
Vanadium	0.200	0.020	mg/L	0.200	ND	100	70-130			
Zinc	0.198	0.020	mg/L	0.200	ND	99.1	70-130			
Matrix Spike (AL04571-MS2)	**Source: 20L3275-01**			Prepared: 12/31/20 Analyzed: 01/07/21						
Arsenic	0.201	0.010	mg/L	0.200	ND	100	70-130			
Boron	0.431	0.20	mg/L	0.400	ND	108	70-130			
Calcium	45.5	1.0	mg/L	8.00	37.4	101	70-130			
Chromium	0.197	0.010	mg/L	0.200	ND	98.3	70-130			
Copper	0.211	0.020	mg/L	0.200	ND	106	70-130			
Iron	2.62	0.10	mg/L	2.00	0.843	88.7	70-130			
Lead	0.182	0.050	mg/L	0.200	ND	90.9	70-130			
Magnesium	20.7	1.0	mg/L	8.00	12.8	99.2	70-130			
Manganese	0.540	0.020	mg/L	0.200	0.346	96.9	70-130			
Sodium	15.3	1.0	mg/L	8.00	7.88	92.4	70-130			
Vanadium	0.199	0.020	mg/L	0.200	ND	99.6	70-130			
Zinc	0.185	0.020	mg/L	0.200	ND	92.6	70-130			
Matrix Spike Dup (AL04571-MSD1)	**Source: 20L3284-02**			Prepared: 12/31/20 Analyzed: 01/07/21						
Arsenic	0.203	0.010	mg/L	0.200	ND	102	70-130	3.68	20	
Boron	0.456	0.20	mg/L	0.400	ND	96.0	70-130	2.30	20	
Calcium	16.2	1.0	mg/L	8.00	8.52	95.7	70-130	1.37	20	
Chromium	0.200	0.010	mg/L	0.200	ND	99.9	70-130	1.17	20	
Copper	0.213	0.020	mg/L	0.200	ND	107	70-130	1.12	20	
Iron	1.86	0.10	mg/L	2.00	ND	93.2	70-130	1.01	20	
Lead	0.186	0.050	mg/L	0.200	ND	93.1	70-130	2.17	20	
Magnesium	11.5	1.0	mg/L	8.00	4.19	91.1	70-130	1.26	20	
Manganese	0.201	0.020	mg/L	0.200	ND	100	70-130	3.34	20	
Sodium	12.0	1.0	mg/L	8.00	5.18	85.8	70-130	0.445	20	
Vanadium	0.199	0.020	mg/L	0.200	ND	99.6	70-130	0.422	20	
Zinc	0.193	0.020	mg/L	0.200	ND	96.7	70-130	2.46	20	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AA13422 - NB General Prep										
Blank (AA13422-BLK1)				Prepared & Analyzed: 01/06/21						
Total Alkalinity as CaCO3	ND	5.0	mg/L							
Bicarbonate Alkalinity as CaCO3	ND	5.0	mg/L							
Carbonate Alkalinity as CaCO3	ND	5.0	mg/L							
Hydroxide Alkalinity as CaCO3	ND	5.0	mg/L							
LCS (AA13422-BS1)				Prepared & Analyzed: 01/06/21						
Total Alkalinity as CaCO3	1000	5.0	mg/L	1000		100	80-120			
Duplicate (AA13422-DUP1)		**Source: 20L3285-01**		Prepared & Analyzed: 01/06/21						
Total Alkalinity as CaCO3	185	5.0	mg/L		187			0.753	20	
Bicarbonate Alkalinity as CaCO3	184	5.0	mg/L		185			0.759	20	
Carbonate Alkalinity as CaCO3	ND	5.0	mg/L		ND			0.727	20	
Hydroxide Alkalinity as CaCO3	ND	5.0	mg/L		ND				20	
Batch AL03587 - NB General Prep										
Duplicate (AL03587-DUP1)		**Source: 20L1701-01**		Prepared & Analyzed: 12/10/20						
pH	7.36	1.00	pH Units		7.35			0.136	20	
Specific Conductance (EC)	421	10	umhos/cm		426			1.18	5	
Batch AL04555 - NB General Prep										
Blank (AL04555-BLK1)				Prepared & Analyzed: 12/29/20						
Turbidity	ND	0.25	NTU							
Duplicate (AL04555-DUP1)		**Source: 20L3284-01**		Prepared & Analyzed: 12/29/20						
Turbidity	0.290	0.25	NTU		0.280			3.51	20	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL04571 - Metals Digest										
Blank (AL04571-BLK1)				Prepared: 12/31/20 Analyzed: 01/07/21						
Hardness, Total	ND	5	mg/L							
Duplicate (AL04571-DUP1)		**Source: 20L3284-02**		Prepared: 12/31/20 Analyzed: 01/07/21						
Hardness, Total	37	5	mg/L		39			3.29	20	
Batch AL04665 - General Preparation										
Blank (AL04665-BLK1)				Prepared: 12/30/20 Analyzed: 01/06/21						
Total Suspended Solids	ND	1.0	mg/L							
Duplicate (AL04665-DUP1)		**Source: 20L3428-01**		Prepared: 12/30/20 Analyzed: 01/06/21						
Total Suspended Solids	98.3	1.0	mg/L		103			4.67	30	
Duplicate (AL04665-DUP2)		**Source: 20L3441-01**		Prepared: 12/30/20 Analyzed: 01/06/21						
Total Suspended Solids	45.1	1.0	mg/L		45.0			0.222	30	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Anions by EPA Method 300.0 - Quality Control

Analyte(s)	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch AL04465 - NB General Prep										
Blank (AL04465-BLK1)				Prepared & Analyzed: 12/28/20						
Sulfate as SO4	ND	0.50	mg/L							
LCS (AL04465-BS1)				Prepared & Analyzed: 12/28/20						
Sulfate as SO4	7.21	0.50	mg/L	8.00		90.1	90-110			
Duplicate (AL04465-DUP1)		Source: 20L3243-02		Prepared & Analyzed: 12/28/20						
Sulfate as SO4	24.1	0.50	mg/L		23.8			1.01	20	
MRL Check (AL04465-MRL1)				Prepared & Analyzed: 12/28/20						
Sulfate as SO4	1.58	0.50	mg/L	1.60		98.9	60-140			
Matrix Spike (AL04465-MS1)		Source: 20L3243-02		Prepared & Analyzed: 12/28/20						
Sulfate as SO4	31.8	0.50	mg/L	8.00	23.8	99.8	80-120			
Matrix Spike (AL04465-MS2)		Source: 20L3284-01		Prepared & Analyzed: 12/28/20						
Sulfate as SO4	11.3	0.50	mg/L	8.00	4.12	90.3	80-120			
Matrix Spike Dup (AL04465-MSD1)		Source: 20L3243-02		Prepared & Analyzed: 12/28/20						
Sulfate as SO4	32.0	0.50	mg/L	8.00	23.8	102	80-120	0.511	20	

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Bottle Rock Power	Project Manager: Terra Rogers	
4010 Stone Way North, Suite 400	Project: Surface Water	Reported:
Seattle, WA 98103	Project Number: [none]	01/12/21 16:48

Notes and Definitions

T-14	Residual chlorine, dissolved oxygen, sulfite, and pH must be analyzed in the field to meet the EPA specified 15 minute hold time.
ND	Analyte NOT DETECTED at or above the reporting limit
dry	Sample results reported on a dry weight basis
REC	Recovery
RPD	Relative Percent Difference

Alpha Analytical Laboratories Inc.
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WATERS, SEDIMENTS, SOLIDS

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Central Valley Laboratory (2922)
9090 Union Park Way #113, Elk Grove CA 95624

San Diego Service Center
2722 Loker Ave West, Ste A, Carlsbad CA 92010

Chain of Custody - Work Order

Reports and Invoices delivered by email in PDF format

Lab No 20L3284 Pg ____ of ____

Report to	Invoice to (if different)	Project Information
Company: Bottle Rock Power	Contact:	Project ID: Bottle Rock Monitoring-SW
Attn: ~~Jay Hopper~~	Email address:	Project No:
Address: PO Box 326 Cobb, CA 95426	Address:	PO Number:
Phone/Fax: 707-529-3799	Phone/Fax:	
Email Address:		

Signature below authorizes work under terms stated on reverse side.

TAT: Standard 10 days ○ | RUSH: 5 days ○ / 48 hours ○ / Other: ____days ○ / Preapproval required

TEMP °C: Ukiah | Livermore | Elk Grove | Petaluma 5.3 | Carlsbad

Field Sampler - Printed Name & Signature: Richard Lacy Richard Lacy

Sample Identification	Sampling Date	Sampling Time	Container: 40ml VOA Vial	Container: Plastic	Container: Glass	Container: Sleeve	Container: Other	Preservative: HCl	Preservative: HNO3	Preservative: H2SO4	Preservative: Other	Preservative: None	Matrix: Drinking Water	Matrix: Wastewater	Matrix: Soil	Matrix: Other	Total Number of Containers per Sample ID	ALK, Ph, ec	Turbidity & TSS	Hardness, SO4	B, Cu, Fe & Pb	Mn, Na & Zn	Diss. Oxygen	Bac-T	As, Cr, V, Hg	Field pH	Field TDS ppm	Notes / DDW Source Codes
SW-6	12/28/20	10:40		X	X												5	X	X	X	X	X	X	X	X			
S-W-7	12/28/20	9:25		X	X												5	X	X	X	X	X	X	X	X			
SW-8	12/28/20	9:15		X	X												5	X	X	X	X	X	X	X	X			
SW-9	12/28/20	9:01		X	X												5	X	X	X	X	X	X	X	X			
SW-10	12/28/20	9:10		X	X												5	X	X	X	X	X	X	X	X			

Relinquished by	Received by	Date	Time
Richard Lacy	[signature]	12/28/20	1204

DDW Write On EDT Transmission? ○ Yes ○ No

State System Number: _____

If "Y" please enter the Source Number(s) in the column above

CA Geotracker EDF Report? ○ Yes ○ No

Global ID: Sampling Company Log Code:

EDF to (Email Address):

Travel and Site Time:	Mileage:	Misc. Supplies:

BIOLOGICAL RESOURCE MONITORING BOTTLE ROCK GEOTHERMAL FACILITY

The Geysers, Lake County, California

Prepared for:

AltaRock Energy, Inc.
4010 Stone Way North, Suite 400
Seattle, WA 98103
Contact: Mr. Michael Moore
Phone: (206) 729-2400

Prepared by:

Synthesis Planning
442 San Marin Drive
Novato, California 94945
Contact: Mr. Cord Hute
Phone: (415) 328-7923

November 2020

TABLE OF CONTENTS

1.0 Introduction

This report presents the results of Synthesis Planning's (Synthesis) 2020 biological resource monitoring at the Bottle Rock geothermal facility at The Geysers in Lake County, California. This monitoring program has been in effect for the past several years and is done in compliance with California Energy Commission (CEC) and other conditions related to operating and maintaining the facility. Minor adjustments and modifications to the original program have been incorporated over time (monitoring for 2010, 2012, 2014, 2016, 2018, and 2020 was based on the current [December 13, 2006] CEC Conditions of Certification).

Specifically, we conducted surveys of nesting birds in 103 installed nest boxes during the spring and early summer months of 2020 as per previous years' protocol, with the exception that Bottle Rock employee's cleaned and maintained the nest boxes during the years 2012, 2013, 2014, 2016, 2018, and 2020 where a biologist conducted this activity during previous years. We also set up portable blinds at two (2) wildlife guzzler locations and recorded all wildlife use of the guzzlers at varying times of the day at each visit from July through the beginning of October. During July, September, and October, both guzzlers were surveyed at dawn and during the morning hours. We had to shift the normal August and September surveys to a month later due to increased fire activity this year and extremely unhealthy smoke conditions. All wildlife observations were recorded during the three (3) visits.

2.0 Nest Box Utilization

The nest boxes were checked once during April and twice during May. During the initial visits on April 21st and 22nd, the box trees were located, and new tags were installed if the original tags were missing or damaged. All of the 103 boxes were located during the first, second, and third rounds of surveys conducted during April and May. General bird behavior was observed near the boxes, and boxes with noticeable activity were checked for occupancy. In April and May, a thorough inspection of each known box occurred and the numbers of eggs and/or nestlings were recorded as well as the occupying species when possible. All boxes were checked visually by opening the hinged lids of each box to inspect the interior on each survey.

Eggs were observed in 1 (nest box # 76) of the 12 active nests during our 2020 surveys, and all of the nests with eggs hatched and young were fledged. Past experience on the leasehold has shown that species in the study area often continue nesting through July and later (Zander and Associates 2010), and more nests could have been utilized and more juvenile birds fledged after completion of our surveys.

The 2020 nesting season had a relatively low occupancy rate since monitoring began in 1982 (see Table 1), and was higher than in 2012 and 2016, but lower

than in 2018. A total of 12 (11.7%) nest boxes were found to be occupied during surveys (see Table 2). This represents a decrease of in occupancy of 40% compared to 2018, and an increase in occupancy of 20.0 % compared to 2016, and a significant decrease in occupancy compared to 2010 (2010 had 59 % occupancy). Western bluebird (*Sialia mexicana)* (three [3] of the occupied nests) and ash-throated flycatcher (*Myiachus cinerascens)* (one [1] of the occupied nests) were the only species specifically identified using the nest boxes during the 2020 surveys (a total of 12 nests were occupied during surveys). In comparison, the, 2010 surveys season had the highest nest box occupancy rate since monitoring began (Zander 2010). We were not able to identify the avian species using the remaining 8 active nest boxes during our 2020 surveys. As stated previously, eggs were observed in one (1) of the active nests during our 2020 surveys, and young birds fledged from this single nest site.

Past surveys have found nest boxes containing nest material but the occupying species could not be identified. At times a pair will start building a nest and suddenly decide to nest elsewhere or fall victim to a predator before the nest is completed. Some species will also build more than one nest while using only one (Finch 1993).

Temperature and precipitation can also heavily influence the survival of permanent residents, including western bluebirds. More individuals and greater number of species often follow mild winters. Although the winter and spring were relatively mild again in 2020, precipitation remained very low by historical standards, and in drought conditions. Fewer individuals and species were found in the nest boxes in 2020 than 2009, 2010, and 2012.

The nest boxes have been in place since 2006 with some put up in 2003 and presumably the local avifauna is continuing to know where the available nest boxes are located. Similar to our 2012, 2014, 2016, and 2018 surveys, the edge of the tree line and meadow areas had the most bird activity and most active nests were observed along or very close to this edge. Little to no nesting activity was observed in the nest boxes located in the denser interior areas within the tree stands, away from suitable foraging habitat. However, these areas were noticeably active with woodpeckers, the majority of which were acorn woodpeckers (*Melanerpes formicivorus*) and pileated woodpeckers (*Dryocopus pileatus*).

Suitable nesting habitat is available for many types of birds with foraging options near nesting sites. The site contains forested areas with several mixed aged species of hardwoods and conifers, with well-developed understories. There is suitable nesting habitat for cavity-nesting birds, which are likely utilizing decayed areas in the mature oaks throughout the site and mature ponderosa pine and Douglas-fir trees (*Pseudotsuga menziesii*) provide suitable nesting habitat for raptor species. Observations of nesting birds were focused within the boxes, but

Table 1

Nest Box Utilization on the Francisco Lease: 1982-2020
Number of Nests

Year																																				
Species	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2014	2016	2018	2020
Ash-throated Flycatcher	0	0	0	1	2	0	1	0	0	2	3	4	1	0	2	2	1	1	1	NS	0	2	NS	NS	0	0	0	0	0	NS	0	0	0	0	1
Chestnut-backed Chickadee	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	NS	1	0	NS	NS	3	0	0	0	0	NS	0	0	0	1	0
European Starling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	1	0	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
House Wren	1	1	4	6	6	2	2	2	1	4	3	3	3	1	3	1	1	3	1	NS	0	0	NS	NS	2	2	2	0	3	NS	0	0	0	0	0
Oak Titmouse	2	3	2	4	1	1	1	2	1	3	1	1	5	1	2	0	2	0	2	NS	4	1	NS	NS	2	0	0	0	0	NS	0	0	0	0	0
Pacific Chorus Frog	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	NS	0	0	NS	NS	0	0	0	0		NS	0	0	0	0	0
Peromyscus mouse	0	0	0	0	0	0	0	3	0	0	1	0	2	0	2	4	3	0	0	NS	2	0	NS	NS	0	0	1	0	2	NS	0	0	0	0	0
Pygmy Nuthatch	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	NS	0	0	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
Tree Swallow	4	2	0	0	0	0	1	0	0	0	0	0	0	0	1	2	1	0	1	NS	0	0	NS	NS	1	0	0	0	1	NS	0	2	2	0	0
Violet Green Swallow	0	7	11	19	13	8	0	2	5	3	1	2	2	3	0	0	2	1	1	NS	3	0	NS	NS	2	2	2	5	6	NS	1	0	0	0	0
Western Bluebird	1	3	3	3	5	8	10	5	7	1	4	4	4	1	2	2	3	5	6	NS	2	7	NS	NS	7	11	9	17	17	NS	7	4	5	1	3
Western Gray Squirrel	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4	NS	2	0	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
White-breasted Nuthatch	0	1	3	4	4	1	1	3	2	2	2	3	1	2	2	2	3	2	3	NS	1	2	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
Wood Rat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	1	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
Unknown	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	1	0	NS	NS	1	3	11	18	32	NS	1	0	3	18	8
Number of Nests	8	17	23	37	31	20	17	17	16	11	16	17	18	19	14	13	16	13	20	NS	17	13	NS	NS	18	18	25	40	61	NS	9	6	10	20	12

ND = No Data
NS = No Survey
Data: Actual Number of Nests
Number of Species Using Nest Boxes = 14

when an obvious nest was spotted, its presence was noted. No active nest sites were observed in a tree in the immediate vicinity of any nest boxes.

Table 2
2020 Nest Box Results

Species	Occupied	Fledged
Western bluebird	3	0
Ash-throated flycatcher	1	1
Unknown	8	0
Total	**12**	**1**

Although nest boxes with larger openings have been installed to attract ash-throated flycatchers, only one (1) active nest box was observed this season, although unknown flycatcher species (*Empidonax* spp.) were observed foraging on the site. 24 nests occupied by ash-throated flycatchers have been recorded since 1982, and only one (1) has been observed since 2003. Barn owl (*Tyto alba)* and western screech owl (*Megascops kennicottii)* nest boxes were installed in locations where sightings of both species, including a great-horned owl (*Bubo virginianus),* have been recorded in past years; however, both owl nest boxes continue to be empty during surveys in 2020.

Birds will avoid boxes that have wasp nests in them. In 2008 wasp nests were discovered in 28% of the nesting boxes on the site. These nests were cleaned out when encountered and the underside of the box lids sprayed with a residual insecticide (Permanone) that will not harm birds but will discourage the wasps from utilizing the nest boxes. In 2010 only 1.6% of the nest boxes had wasp nests. Wasp nests were found in three (3) nest boxes during the 2012 surveys (2.91%). This steady drop in wasp nests between 2008 and 2012 was likely due to the Permanone treatment of the boxes in 2008. During the 2016 survey season, wasp nests were discovered in 12% of the nesting boxes on the site. During the 2018 survey season, wasp nests were discovered in 15% of the nesting boxes on the site. During the 2020 survey season, wasp nests were discovered in 18% of the nesting boxes on the site.

3.0 Wildlife Water Basin/Guzzler Use

Monitoring of wildlife use at two installed watering basins (“guzzlers”) in the Francisco lease was completed in 2002, 2003, 2006, 2007, 2008, 2009, 2010, 2012, 2014, 2016, 2018, and 2020. No monitoring was conducted in 2004 and 2005 because the status of the lease ownership was still unresolved. The current arrangement has one guzzler in a meadow/forest ecotone (“Meadow Guzzler”) and one in the traditional chaparral location (“Chaparral Guzzler”) and represents a broader cross section of available habitats on the lease. The entire guzzler counts since 2002 have been conducted under this configuration. The original placement of the guzzlers in 1982 served two different leases, the Francisco

lease and the Coleman lease. Only the Francisco lease is currently being utilized. A total of 51 different wildlife species have been recorded on the guzzler counts since 1987 (see Table 3).

Wildlife was recorded at both guzzler locations during all three (3) survey dates during July, September, and October. The second and third surveys (originally scheduled for August and September) had to be shifted to later dates (September and October) due to a series of wildland fires that created heavy smoke conditions at the survey sites. Both guzzler locations were operational throughout the 2020 survey season. Eight (8) different wildlife species were observed at the Chaparral Guzzler and accounted for 32 individuals of the total 47 observed during the survey dates. The Meadow Guzzler accounted for four (4) different wildlife species and 15 individuals. Most animal populations can habituate to human activity as long as it remains in a predictable location. That adjustment may still be occurring on the Bottle Rock site but is not necessarily a desirable goal. Providing wildlife with these supplemental water facilities especially early in the summer during the dry season may discourage wildlife to seek new water sources, away from human activity. An adequate water supply is available throughout most of the year in the seasonal creeks that meander through the site. Water was observed in these creeks in April and began drying up by May. The water is likely available longer during years with heavier rainfall.

Wildlife species were only observed at both guzzlers during the 2014, 2016, 2018, and 2020 surveys. 47 individuals representing 8 species were observed at the guzzlers during the 2020 surveys.

Both guzzlers have wildlife trails leading to the guzzlers, so presumably more species are using the guzzlers than indicated by the surveys.

The 2020 numbers continue to be depressed over previous years. As stated previously, only 8 species represented by 47 individuals were recorded in 2020. The average combined guzzler use increased less than 0.2 % in 2020 when compared to 2020. The Habitat Utilization Index (HUI, see discussion below) value for the Meadow Guzzler was 2.7, and 4.9 for the Chaparral Guzzler (see Table 4).

The species diversity index used in earlier reports (see 2009 report) was abandoned as a comparative index in 2010. As an index it is difficult to interpret and it is sensitive to both the evenness and the richness of a collection of species in a given community. However, evenness of species counts in any given community is rarely achieved yet the concept has received widespread use in spite of these difficulties. For example, using the Shannon-Wiener index on a count that has 10 species and 10 individuals of each species will result in a higher index value (H'=3.32) than a count for 10 species with a count of 91 individuals and the other nine species with only one individual each (H'=0.72) in spite of the fact that both species and number totals are the same. Counts of

animal populations very rarely result in data where each species counted results in the same or similar numbers. The significance of evenness in count data seems unrealistic and perhaps vague. From this point on only the Habitat Utilization Index will be used.

Habitat Utilization Index (HUI) is defined as:

HUI= √Total Number of Individuals x Total Number Species.

Its value is useful in comparing indexes between years. Only data since 2002 are available for comparison with previous years.

The Chaparral Guzzler HUI was 4.9 while the Meadow Guzzler HUI was 2.7 for the 2020 survey season (see Table 4).

4.0 Conclusions

Nest box utilization fluctuates each season, and is influenced by weather and other factors not always well understood by biologists. The anticipated trend expressed in previous survey reports indicated a trend toward greater diversity in species nest box utilization. However, this theory did not occur during the 2014, 2016, 2018, or 2020 nesting season. Although several avian species that will utilize nest boxes have been observed in the habitats around the plant, the lack of occupancy in the nest boxes may be related to the high quality and abundant natural nesting habitat that these species are likely utilizing. While some avian species may use the nesting boxes during any given nesting season, it is the opinion of Synthesis Planning that most individual nesting avian pairs are more likely to use the native nesting habitat adjacent to the nesting boxes and further away from geothermal energy production facilities, especially given the abundance of this native habitat in the general vicinity of the site. In addition, now that the power plant has been idle for more than a three (3) years, avian species may be utilizing native habitat over more of the site than in previous survey years.

The 2020 guzzler numbers continue to be depressed over previous years. As stated previously, only 8 species represented by 47 individuals were recorded in 2020.

Table 3
Wildlife Use of the Francisco Lease Watering Basins 1987-2018

	Year																														
Species	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2014**	**2016**	**2018**	**2020**
Acorn Woodpecker	0	0	0	0	0	0	0.17	0	0	0	0	0	0	0.04	NS	0.58	0.04	NS	NS	0.04	0	0.53	0	0	NS	0	0	0	0	1.53
American Crow	0	0	0	0	0	0	0.17	0	0	0	0	0	0	0	NS	0	0	NS	NS	0	0	0.04	0	0	NS	0	0	0	0	0
American Robin	0	0	0	0	0	0	0.17	0	0	0	0	0	0	0	NS	0	0.7	NS	NS	1.04	4.9	3.25	3.91	0	NS	0.22	0	0	0	0
Bewick's Wren	0	0	0	0	0	0	0	0	0.04	0.03	0.04	0	0	0	NS	0	0.04	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
Black Phoebe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
Blackheaded Grosbeak	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	0	0	0	0.04	0	NS	0	0	0	0	0
Black-tailed Deer	0.09	0.4	0	0.09	0.2	0.3	0.29	0.15	0	0	0	0	0	0	NS	0	0.04	NS	NS	0.04	0.13	0	0	0	NS	0	0.25	0.25	0.24	0.24
Black-tailed Jackrabbit	0	0	0	0.05	0	0	0	0	0.04	0	0	0	0	0	NS	0	0	NS	NS	0	0	0.04	0	0.08	NS	0	0	0	0	0.08
Black-throated Gray Warbler	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	0	0.29	0.21	0	0.08	NS	0	0	0	0	0
Brewer's Blackbird	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	0.04	0	0	0	0	NS	0	0	0	0	0
Brush Rabbit	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0.04	NS	0.04	0	NS	NS	0	0	0.13	0.04	0	NS	0	0.42	0.42	0.43	0
Bushtit	0.14	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
California Ground Squirrel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	0.08	0.29	0	0.2	0.13	NS	0	0	0	0	0
California Quail	0	0	0	0	0	0	0	0	0.99	0.47	1.39	0.29	0.14	0.88	NS	0.29	1.83	NS	NS	4.2	3	9.3	4.5	0.13	NS	0	0.17	0.17	0.19	0.29
California Thrasher	0.5	0.15	0.65	0.55	0.55	1.5	0.29	1.55	0.57	0.98	0.75	0.38	0.83	0.88	NS	0	0	NS	NS	0	0	0	0	0	NS	0	0.42	0.45	0.43	0.43
California Towhee	0.54	0.35	0.39	0.18	0.35	0.3	0.38	1.17	0.28	0.68	0.6	0.37	0.13	0.27	NS	0.7	0.16	NS	NS	0.5	0.5	0.58	0.63	0.13	NS	0.17	0	0	0	0
Cassin's Vireo	0	0	0	0	0	0.17	0	0	0	0	0	0	0	0.04	NS	0	0	NS	NS	0	0	0.08	0	0	NS	0	0.25	0.25	0.25	0.25
Chipping Sparrow	0	0	0	0	0	0.17	0	0	0	0	0	0	0	0.04	NS	0	0	NS	NS	0	0	0.04	0	0.04	NS	0	0	0	0	0
Common Raven	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	0.08	0	0	0	0.04	NS	0	0	0	0	0
Coyote	0	0	0	0	0	0	0	0.04	0	0	0	0	0	0	NS	0	0	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
Dark-eyed Junco	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0.21	0.04	NS	NS	0.38	7	1.5	1.75	0.38	NS	0.33	0	0	0	0.25
Dog	0	0	0	0	0	0	0	0	0.08	0	0	0	0	0	NS	0	0	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
Fox Sparrow	0	0	0	0	0	0	0	0.15	0	0.24	0	0.14	0	0	NS	0	0	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
Golden-crowned Sparrow	0	0	0	0	0	0	0	1.32	0	0.75	0	0	0	0	NS	0	0	NS	NS	0.33	0	0.08	0	0	NS	0	0	0	0	0
Gray Fox	0	0	0	0	0	0	0	0	0	0	0.04	0	0	0	NS	0	0	NS	NS	0	0	0.43	0	0	NS	0	0	0	0	0
Golden-crowned Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
Gray Fox	0	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
Hermit Thrush	0	0.25	0	0	0	0	0	0	0	0.1	0	0.33	0	0	NS	0	0.04	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
House Finch	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0.21	NS	NS	NS	0.04	0	0	0	0	NS	0	0	0	0	0
Lesser Goldfinch	0	0.2	0	0	0	0	0	0	0	0	0	0	0.38	NS	0.13	0.54	NS	NS	NS	7.3	6.6	10.3	2.45	0.83	NS	1	0	0	0	0
Mountain Quail	0	0	0	0	0	0.04	0	0.53	0.03	0	0	0	0.27	NS	0	0	NS	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
Mourning Dove	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	NS	0	0.21	0.08	0.66	0.17	NS	0	0	0	0	0
Nashville Warbler	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	NS	0	0.04	0	0	0	NS	0	0	0	0	0
Northern Flicker	0	0	0	0.05	0	0	0.08	0.11	0	0	0	0	0	NS	0.13	0.04	NS	NS	NS	0	0	1.3	0.16	0	NS	0	0	0	0	0
Oak Titmouse	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0.04	NS	NS	NS	0.13	0	0.25	0	0	NS	0.67	0	0	0	0
Orange-crowned Warbler	0	0	0	0	0	0	0	0	0	0	0	0.04	0	NS	0	0	NS	NS	NS	0	0.12	0	0.04	0	NS	0	0	0	0	0
Pygmy Nuthatch	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	NS	0	0	0	0.08	0	NS	0	0	0	0	0
Sage Sparrow	0	0	0	0	0	0	0	0.26	0	0	0	0	0	NS	0	0	NS	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
Scrub Jay	0.86	0.9	0.39	0.59	0.9	0.5	0.58	1.09	0.37	0.47	0.53	1.54	0.46	NS	0.46	0.33	NS	NS	NS	0.42	0.21	0.63	0.75	0	NS	0.33	0	0	0	0.25
Sonoma Chipmunk	0.4	0.2	0.17	0.27	0.2	0.3	0.46	0.75	0.47	0.24	0.56	0.69	0.46	NS	0.33	0.16	NS	NS	NS	0	0.04	0	0.25	0	NS	0.06	0	0	0	0
Spotted Towhee	0	0	0.21	0.18	0.2	0.4	0.13	0.23	0.24	0.54	0.3	0.47	0.35	NS	0	0	NS	NS	NS	0	0.33	0.04	0.13	0	NS	0	0	0	0	0
Starling	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	NS	0	0.3	1	0.17	0.67	NS	0	0	0	0	0
Stellar's Jay	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	NS	0	0	0	0.04	0	NS	0.39	0	0	0	0
Western Bluebird	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0.08	NS	NS	NS	0.46	0.38	0.08	1	0	NS	0	0	0	0	0
Western Tanager	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	NS	0	1.13	0.38	0.25	0.29	NS	0	0	0	0	0
Western Terrestrial Garter Snake	0	0	0	0	0	0	0.04	0	0	0	0	0	0	NS	0	0	NS	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
White-breasted Nuthatch	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	NS	0	0	0	0.08	0.04	NS	0	0	0	0	0
White-crowned Sparrow	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0.04	0	NS	NS	NS	0	0	0.04	0	0	NS	0	0	0	0	0
Wild Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	1.04	NS	NS	NS	0.08	0.83	0	0.25	0.13	NS	0	0	0	0	0
Wilson's Warbler	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	NS	0	0	0.17	0	0	NS	0	0	0	0	0
Wrentit	1.45	1	2.26	0.05	2.7	1.6	0.5	2.08	0.91	2.85	1.02	2.08	1.23	NS	0	0	NS	NS	NS	0	0	0	0	0	NS	0	0	0	0	0
Yellow Warbler	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	NS	0	0	0	0.08	0	NS	0	0	0	0	0
Yellow-rumped Warbler	0	0	0	0	0	0	0	0	0	0	0	0	0	NS	0	0	NS	NS	NS	0	0	0.04	0	0	NS	0	0	0	0	0
Total	3.98	3.45	4.07	2.01	5.15	5.04	2.96	9.47	3.98	7.45	5.23	4.9	5.34	NS	3.2	5.75	NS	NS	NS	16.16	26.21	32.4	12.81	2.98	NS	3.17	3.26	3.29	3.29	3.32

NS=No Survey
Total Species Count =51
Total Species Count 2020=8
Elapsed Time=33 years

Table 4
Bottle Rock Guzzler Counts

Habitat Utilization*	2002	2003	2006	2007	2008	2009	2010	2012	2014	2016	2018	2020
Meadow Guzzler	12.4	30.8	57.3	96.3	96.0	77.0	27.9	2.7	2.5	2.6	2.5	2.7
Chaparral Guzzler	18.5	19.9	22.6	16.0	58.7	35.8	1.7	0.0	4.8	4.9	4.8	4.9

*HUI+ Habitat Utilization Index-see text.
No monitoring conducted in 2004, 2005, 2011.

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Photographs
2020 Bottle Rock Monitoring

Nest box # 76 with ash-throated flycatcher eggs.

Box with active nest building taking place.