California Regional Water Quality Control Board
North Coast Region

MONITORING AND REPORTING PROGRAM ORDER NO. R1-2015-0019

for

WEAVERVILLE CLASS III SOLID WASTE DISPOSAL SITE AND WEAVERVILLE INERT CELL SOLID WASTE DISPOSAL SITE WDID No. 1A80193OTRI

Trinity County

The Discharger shall maintain water quality monitoring systems that are appropriate for detection monitoring and corrective action, and that comply with California Code of Regulations, title 27, subchapter 3, chapter 3, subdivision 1, division 2, title 27, , and any other applicable provisions therein.

Compliance with this Monitoring and Reporting Program (MRP), and with the companion Standard Provisions and Reporting Requirements, is ordered by Waste Discharge Requirements (WDRs) Order No. R1-2015-0019, and under the authority of Water Code, section 13267(b). Failure to comply with this MRP, or with the General Monitoring and Reporting Requirements, constitutes non-compliance with the WDRs and with Division 7 of the California Water Code, which can result in the imposition of civil monetary liability.

The Weaverville Class III Solid Waste Disposal Site (SWDS) shall be monitored for leak detection and corrective action because groundwater contamination has been detected and the Class III SWDS is currently in corrective action. Monitoring wells which are known to contain Volatile Organic Compounds or naturally occurring compounds at levels above background shall be monitored as corrective action wells. Other downgradient monitoring locations shall be monitored for leak detection. The Inert Cell SWDS shall be monitored for compliance with taking only wastes that will not impact water quality and to assure the Inert Cell is being maintained to prevent ponding and erosion.

I. REPORTING

The Discharger shall report monitoring data and information as required in this Monitoring and Reporting Program, and as required in the General Monitoring and Reporting Requirements. The Discharger shall submit a copy of the monitoring report in an electronic format, with transmittal letter, text, tables, figures, laboratory analytical data, and appendices in PDF format (one PDF for the entire report). The Discharger is required to upload the full monitoring report into Geotracker, as stipulated by California State law.

The Discharger shall notify the Regional Board staff assigned to facility of the upload via email.

All testing, other than field parameters, shall be performed at a laboratory certified by the California Department of Health Services. Instruments used for field parameters shall be kept in good condition and calibrated according to manufacturer's requirements. Reports which do not comply with the required format will be rejected, and the Discharger shall be deemed to be in noncompliance with the WDRs. Monitoring reports must include, but shall not be limited to the following:

1. Letter of Transmittal:
   A letter transmitting the essential points must accompany each report. The letter must include a discussion of violations caused by the SWDS since submittal of the last such report. If the Discharger has not observed any violations since the last submittal, the Discharger must state this in the transmittal letter. Both the monitoring report and the transmittal letter must be signed as follows: for private facilities, a principal executive officer at the level of vice president or responsible corporate officer; for public agencies, the director of the agency. Upon Water Board Executive Officer approval, the cited signature can be by a California Registered Civil Engineer, or Certified Engineering Geologist, or Professional Geologist who has been given signing authority by the cited signatories. The transmittal letter must contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

2. Compliance Summary:
   The summary shall contain at least a narrative discussion of the monitoring results, including a discussion of compliance with concentration limits, any water quality violations, or other monitoring results of potential significance to water quality and describe any corrective actions taken.

3. Tabular Presentation of Data:
   In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner as to illustrate clearly the compliance with waste discharge requirements or the lack thereof.

4. Graphical Presentation of Data (Annual Report):
   For each Monitoring Point in each medium, submit, in graphical format, the complete history of laboratory analytical data. Graphs must effectively illustrate trends and/or variations in the laboratory analytical data. Each graph must plot a single constituent concentration over time at one (for intra-well comparison) or more (for inter-well comparisons) Monitoring Points in a single medium. Where applicable, include concentration limits along with graphs of constituent

concentrations. When multiple samples are taken, graphs must plot each datum, rather than plotting mean values. Graphs are not required until a minimum of two samples of a given analyte have been taken at a given sampling point or when an analyte at a given sampling point has always been non-detect. The Discharger must also determine horizontal gradients, groundwater flow rate, and flow direction for each respective groundwater body. Present this data on a figure that depicts groundwater contours and flow directions as well as gradient. Include one figure for each water level measuring period in the monitoring report.

5. Corrective Action Summary:

   Discuss significant aspects of any corrective action measures conducted during the Monitoring Period and the status of any ongoing corrective action efforts, including constituent trend analysis.

6. Laboratory Results:

   Summarize and report laboratory results and statements demonstrating compliance with **Part II**. Include results of analyses performed at the Site that are outside of the requirements of this Monitoring and Reporting Program.

   Analytical laboratory results shall be sent to Regional Water Board staff via email to Gina.Morrison@waterboards.ca.gov, within ten business days of when they are submitted to the Discharger. Since the results have not undergone quality assurance and approval by the licensed professional preparing the monitoring reports, these results may be marked preliminary at the licensed professional's discretion.

7. Sampling Summary:

   a. For each Monitoring Point addressed by the report, a description of: 1) the method and time of water level measurement, 2) the method of purging and purge rate and well recovery time, and 3) field parameter readings.

   b. For each Monitoring Point addressed by the report, a description of the type of sampling device used, its placement for sampling, and a description of the sampling procedure (number of samples, field blanks, travel blanks, and duplicate samples taken; the date and time of sampling; the name and qualification of the person actually taking the samples; and description of any anomalies).

8. Leachate Detection:

   A summary of results from leachate detection monitoring and sampling shall be reported in the monitoring report.

9. Standard Observations:

Each monitoring report shall include a summary and certification of completion of all Standard Observations for the waste management unit (WMU), for the perimeter of the WMU, and for the receiving waters. The standard observations shall be performed monthly during the rainy season (October through May), quarterly during the dry season (June through September), and after rainfall events of more than 1.0 inches in 24 hours, and shall include: condition of WMU cover; whether storm water drainage ditches and sedimentation ponds contain liquids; condition of drainage facilities; condition of sedimentation ponds; whether there are any leachate seeps present, including estimates of seep size and flow; presence of odors; evidence of ponding; freeboard in leachate holding facilities; evidence of erosion; inspection of storm water discharge locations for evidence of non-storm water discharges; evidence of floating and suspended material or discoloration or turbidity in the receiving waters; presence of odors in the receiving waters; condition of access roads; other problems which could affect compliance with the waste discharge requirements; and weather conditions during the observations and the precipitation during the five days preceding the observations, which were made during the Monitoring Period.

10. Map(s):

The base map for the Monitoring Report must consist of a current aerial photograph or include relative topographical features, along with Monitoring Points and features of the Site.

A. REQUIRED REPORTS

1. Detection and Corrective Action Monitoring Report

Monitoring Reports (MRs) shall be prepared and submitted to the Regional Water Board semi-annually by the end of the month following the sampling period. Groundwater, spring, and leachate sampling shall occur in September and March of each year or as close to those months as possible depending on runoff. Surface water, storm water, and unsaturated zone monitoring (both discrete vapor sampling and landfill gas sampling) shall be sampled as described and reported in the appropriate semi-annual report. Monthly waste volume reports from the Inert Cell shall be included in the appropriate semi-annual report. The reports shall include the results of all monitoring programs listed herein. The established monitoring and reporting period is as follows:

SEMI-ANNUAL	PERIOD NO.	REPORTING DATE
January through June	1	July 31
July through December	2	January 31 (Annual Report date)

2. Annual Monitoring and Corrective Action Summary Report

An Annual Report, which summarizes the monitoring results for the prior four quarters, shall be submitted to the Regional Water Board by January 31, annually. The Annual Report may be combined with the semi-annual report that is also due January 31. The Annual Report shall contain both tabular and graphical summaries of the detection and, if applicable, corrective action monitoring data and a discussion of the progress toward re-establishment of compliance with WDRs and the Water Quality Protection Standard (WQPS).

The Annual Report shall contain proof of adequate assurances of financial responsibility for closure, post-closure maintenance, and corrective action for all known or reasonably foreseeable releases from a WMU at the facility in accordance with California Code of Regulations, title 27, sections 20380(b), 20950(f), 22210, 22211, 22212, 22220, 22221, and 22222 and include annual accounting for inflation.

By January 15, 2020, 2025, and every five years thereafter, for the term of this MRP, the Discharger shall provide as part of the Annual Monitoring Report an updated post-closure costs and corrective action cost estimate to the Regional Water Board for review. The Discharger shall demonstrate to CalRecycle and report to the Regional Water Board that it has established an acceptable financial assurance mechanism described in California Code of Regulations, title 27, section 22228 in at least the amount of the cost estimate approved by the Executive Officer. The Executive Officer may delete the requirement of submitting updated cost estimates, with the exception of inflation adjustments, upon finding that the need for further corrective action is unlikely and that post-closure costs are likely to remain constant.

In accordance with California Code of Regulations, title 27, section 20340(d), any leachate collection and removal system shall be tested annually to demonstrate proper operation. Results shall be compared with earlier tests made under comparable conditions. The results shall be submitted with the Annual Report. Given that the current leachate collection system is sealed and cannot directly receive the introduction of test liquids, documentation and comparison of monthly leachate flow volumes is an acceptable means to ensure that the leachate collection system is operating.

The Annual Report shall include a map showing any areas of differential settlement noted by visual observation, highlighting areas of repeat or severe differential settlement. This map shall be made by or under the direction of a professional civil engineer or registered geologist.

3. Surface Water and Storm Water Sampling Report

Surface water and storm water monitoring shall be sampled as described and reported in the appropriate semi-annual report.

The report shall include a narrative discussion of water quality sampling and any seep detection and response, including notations of any water quality violations, tabular summaries of the water quality data for the sampling locations. Tabular summaries shall include notations to clearly identify specific analytical results that indicate an exceedance of water quality standards for naturally occurring compounds; an exceedance of detection limits for all man-made compounds; or any other violation of the Site's WDR prohibition to discharge to surface water, surface water drainage systems, or groundwater; or both. Any of these conditions is a violation of the WDRs. Any detection of a man-made compound in the SWDS drainage or surface water is a potential discharge violation. To determine if the SWDS has contributed to the discharge for naturally occurring compounds, data shall be compared to results from the background sampling locations SW-1 and SW-3. Any discharge of a naturally occurring compound at a level statistically greater than background is a violation. The calculation of background shall include consideration of variations that occur due to rainfall.

Records from daily rainfall measurements shall be included in the reports in tabular form. In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner as to clearly illustrate compliance, or lack thereof, with the WDRs. Each report shall contain copies of the field sampling log, chain of custody, including the date and time of sample collection, the name of the person collecting the samples, the signed lab sheets including QA/QC, daily field logs, and leachate seep inspection logs. These reports shall be prepared by, or under the direction of, a professional civil engineer, or registered geologist, and shall be signed and stamped by this professional.

4. Water Quality Protection Standard Report

As noted above, any changes to the water quality protection standard are to be included in the Annual Report.

5. Five Year Iso-Settlement Map

The Discharger shall produce an iso-settlement map by January 2016 of the Phase I Closure Area; then of the entire Class III SWDS footprint, starting in January 2022, and every five years thereafter, until the Executive Officer has determined that differential settlement is unlikely to be of such magnitude as to impair either the Unit's containment features (e.g., final cover) or the free drainage of surface flow. The map shall be submitted to the Regional Water Board with the Annual Report for that year.

The iso-settlement maps shall accurately depict the estimated total change in elevation of the final cover's low-hydraulic-conductivity layer for any portion of the Class III SWDS footprint closed by the time of mapping. The iso-settlement map shall show the total lowering of the surface elevation of the final cover, relative to the baseline topographic map submitted in the original Closure Report for that phase of closure, and shall indicate all areas where visually noticeable differential settlement may have been obscured by grading operations. The map shall be drawn to the same scale and contour interval as the topographic map in the Closure Report for that phase of closure, but showing the current topography of the final cover, and featuring overprinted isopleths indicating the total settlement to date. Land surveying rather than aerial surveying may be substituted to produce the iso-settlement map [Cal. Code Regs., tit. 27, § 21090(e) (2)]. This map shall be made by, or under the direction of, a professional civil engineer or certified engineering geologist and shall be stamped and signed.

6. Annual Erosion Control Report

By October 15, annually, the Discharger shall submit a report to the Executive Officer describing any measures taken to comply with erosion control requirements. This shall include a description of any erosion control measures implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities. The Executive Officer may delete the requirement for submitting annual erosion control reports upon finding that no erosion control work is necessary prior to the return of winter rains.

7. Emergency Response Plan

The Joint Technical Document included the most current emergency response plan for the facility, dated April 2010. The emergency response plan shall be updated by October 1, 2017, January 15, 2020, and at a minimum every five years thereafter; or after key personnel changes or if during its implementation problems were found.

8. Constituents of Concern (COCs)

The Discharger shall submit reports of the results of groundwater, springs, surface water, and leachate sample test results for the Constituents of Concern every 5 years, or more frequently if required. The monitoring for COC Report shall alternate between fall and spring seasons. The COC monitoring results shall be submitted with, or reported in, the MR for the period the sampling took place.

9. Notification of Release and Re-test

For any WMU, if the results of a detection monitoring program shows that there is a measurably significant increase in an indicator parameter or waste constituents over the WQPS at or beyond the points of compliance (i.e., measurably significant evidence of an exceedance or release), the Discharger shall:

a. immediately notify the Regional Water Board by telephone or fax of the exceedance,

b. within seven days of the initial findings, follow up with written notification (or acknowledgment of the Regional Water Board's finding),

c. within 30 days of the initial finding, re-sample for the constituent(s) or parameter(s) at the point where the standard was exceeded, and

d. within 60 days of the initial finding, submit the results of the re-sampling and statistical analysis, indicating whether or not an exceedance or release was confirmed by the re-test.

10. Detection of a Release

Immediately following detection of a release, or after completion of the retest, the Dischargers:

a. Shall immediately sample all Monitoring Points in the affected medium at the WMUs and determine the concentration of all COCs. Because this COC scan does not involve statistical testing, the Discharger need collect and analyze only a single water sample from each Monitoring Point in the affected medium. The Regional Water Board can approve an appropriate subset of Monitoring Points to be sampled for all COCs, based upon the hydrogeologic conditions at the Unit. [Cal. Code Regs., title 27, section 20420(k)(1)]

b. Within 90 days of determining measurably significant evidence of release, submit an amended ROWD to establish an evaluation monitoring program, in accordance with California Code of Regulations, title 27, section 20420(k)(5).

c. Within 180 days of verifying measurably significant evidence of a release from a WMU, submit an engineering feasibility study for a corrective action program. The corrective action program shall, at a minimum, meet the requirements of California Code of Regulations, title 27, section 20430. [Cal. Code Regs., title 27, section 20420(k)(6)]

11. Responding to a Release Discovery

Upon verifying a measurably significant evidence of a release from a WMU according to California Code of Regulations, title 27, section 20420(j) and Section I.A.7 and I.A.8 of this MRP, the Discharger shall follow the procedures and timeline described in California Code of Regulations, title 27, section 20420(k).

12. Closure Reports

A closure report for each construction season of closure activities and a full closure report once final closure is achieved shall be prepared and certified by the Construction Quality Assurance (CQA) Officer and submitted, under penalty of perjury, to the Regional Water Board and other appropriate agencies in accordance with California Code of Regulations, title 27, sections 20324(c), 20324(d), and 21880. The CQA officer must be a registered civil engineer or a certified engineering geologist licensed in the State of California. The reports, at a minimum, shall include the certificate of closure; daily summary reports; material acceptance reports; photo logs of closure activities; final CQA documentation; laboratory testing results; field testing results; and an as-built topographic map of the capped area (for each construction season then for the completed project), prepared at a scale of one-inch to 100 feet, with a contour interval of two feet.

During times of active closure construction or any periods of repair to the waste containment, drainage, or monitoring facilities, legible copies of the daily CQA field notes and summary reports shall be submitted to the Regional Water Board via facsimile at (707) 523-0135 or via email to Gina.Morrison@waterboards.ca.gov by noon the following weekday. The facsimile or email shall be addressed to the Regional Water Board, Land Disposal Unit, and include the name of the staff person assigned to the Site.

II. MONITORING PROGRAMS

A. ROUTINE MAINTENANCE

The Site shall be inspected monthly in the winter (October through May), quarterly during the summer (June through September), and after rainfall events of more than

1.0 inches in 24 hours. At a minimum, the integrity of the WMU, drainage structures, leachate collection system, landfill gas system, and any potential erosion areas shall be inspected. The inspections shall also meet the requirements of the postclosure inspections. Inspection logs, problem areas, special occurrences, and corrective actions taken shall be included in the semi-annual monitoring reports**.** The Discharger may request a reduction in inspection frequency after the site has stabilized.

B. CONSTITUENTS OF CONCERN

Except as otherwise indicated in this Order, the Discharger shall monitor each medium of the Site for applicable Constituents of Concern (per State Water Resources Control Board Resolution 93-62). The monitoring locations, analytical methods, and frequencies of analysis are as follows:

1. Monitoring Locations

a. Leachate – Samples will be taken from the leachate sump located upline of the storage tanks; and from LFG-1 and LFG-2, if present.

b. Groundwater –Monitoring wells MW-1, MW-2, MW-3, MW-4B, MW-5, MW -6, MW-8, MW-9, GP-10 shallow, GP-13 shallow, GP-14, and the new deep aquifer well(s), once they are installed.

c. Surface Water/Storm Water – SW-1, SW-2, SW-3, and SW-4, per Table IIIC.

d. Unsaturated Zone – The deepest gas probe free of groundwater at GP-13, the shallow gas probe in GP-10 for VOC monitoring by TO-15, LFG-1, and LFG-2.

2. Monitoring Schedule

Groundwater monitoring wells shall be sampled for COCs in the fall 2017, spring of 2022, and every five years thereafter alternating between seasons.

C. LEACHATE MONITORING

Samples will be taken from the leachate sump located upline of the storage tanks; and LFG-1 and LFG-2, if present. Leachate had been previously sampled semi-annually for the Weaverville Sanitation District (District) for disposal. The District currently does not require this sampling, but may request sampling at any time.

If leachate surfaces and is being discharged to surface waters, the discharger shall immediately sample the leachate and report this to Regional Water Board staff. The volume of leachate collected each month since the previous monitoring report shall be reported in accordance with California Code of Regulations, title 27, section

20340(h). Results from the sump sample, any District sampling, leachate collection volume, and any leachate seeps shall be reported in the semi-annual MRs.

D. DETECTION AND CORRECTIVE ACTION MONITORING

For each monitoring medium, samples from all Monitoring Points assigned to detection monitoring or corrective action monitoring shall be collected and tested per Tables III.D. and III.E. for the Monitoring Parameters listed in this Program.

For any given monitored medium, a sufficient number of samples shall be taken from all Monitoring Points to satisfy the data analysis requirements for a given Reporting Period, and shall be taken in a manner that ensures sample independence to the greatest extent feasible.

Statistical analyses shall be performed as soon as the monitoring data are available. Intra-well statistical data analyses shall be performed for both aquifers due to the lack of appropriate background monitoring capabilities. Concentration limits for man-made chemicals shall be set at method detection limits (MDLs) for individual analytes. Concentration limits for naturally occurring compounds are determined statistically for groundwater and surface water monitoring programs using the Tolerance Interval method or other appropriate statistical method as approved by the Executive Officer (EO).

E. GROUNDWATER ELEVATION MONITORING

The groundwater surface elevation (in feet and hundredths, M.S.L.) in all wells shall be measured on a quarterly basis for each monitored groundwater body and used to determine the velocity and direction of groundwater flow. Monitoring shall include the times of expected highest and lowest elevations of the water level for the respective groundwater body. Groundwater elevations for all upgradient and downgradient wells for a given groundwater body shall be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater gradient and direction. This information shall be included in the monitoring reports.

F. UNSATURATED ZONE MONITORING

Since the liners at the Class III SWDS do not have pan lysimeters, the existing landfill gas monitoring wells will be used for unsaturated zone monitoring. In addition to the landfill gas monitoring required by CalRecycle, the shallow probe in GP-10, the deepest probe free of groundwater at GP-13, LFG-1, and LFG-2 will be analyzed for VOC vapors using TO-15 in fall 2015 and spring 2016 during regular probe sampling. These samples will be used to determine sampling frequency, which must be at least every five years thereafter.

G. INERT CELL MONITORING

The Inert Cell is the only portion of the SWDS still accepting waste. Volumes of waste placed in this cell each month shall be recorded along with any issues, such as improper disposal and its resolution. This information shall be reported in the semi-annual reports. The total waste capacity remaining shall be reported annually in the annual monitoring report. Annually prior to September 1st, the Inert Cell shall be inspected for grading condition for prevention of ponding and erosion control. The results of this inspection and any work performed shall be reported in the annual erosion control report.

III. MONITORING

A. GENERAL

The Discharger shall perform Detection Monitoring and Corrective Action Monitoring (per Cal. Code Regs., title 27, sections 20420 and 20430) on all media potentially affected by a release, including surface water and groundwater, and the unsaturated zone. For any given monitored medium, a sufficient number of samples shall be taken from all Monitoring Points and Background Monitoring Points to satisfy the data analysis requirements for a given Reporting Period, and samples shall be collected in a manner that ensures sample independence to the greatest extent feasible. All monitoring shall be conducted in accordance with a Sample Collection and Analysis Plan, which includes quality assurance/quality control standards, that is acceptable to the EO.

The Discharger shall use a Regional Water Board-approved statistical (or non-statistical) procedure to determine whether there has been a measurably significant increase in a constituent over the water quality protection standard, as set forth in California Code of Regulations, title 27, section 20415(e)(5).

Method detection limits and practical quantitation limits shall be reported. All peaks shall be reported, including those that cannot be quantified and/or specifically identified.

The Discharger may, with approval of the EO, use alternative analytical test methods, including new US EPA approved methods, provided the methods have method detection limits equal to or lower than those for the analytical methods specified in this Monitoring and Reporting Program.

B. UNSATURATED ZONE

1. Monitoring Locations

Monitoring points for the unsaturated zone are Gas Probes GP-1AS, GP-2AS, GP-8, GP-10S, GP-11S, GP-12S, GP-12D, GP-13S, GP-13D, GP-14, LFG-1, and LFG-2. These gas probes will be used for perimeter landfill-gas monitoring and monitoring of the waste mass (LFG-1 and LFG-2). The shallow probe in GP-10, the deepest probe free of groundwater at GP-13, LFG-1, and LFG-2 will be used for discrete VOC monitoring by TO-15. Attachment B shows the unsaturated zone monitoring points for Weaverville Class III SWDS.

2. Monitoring Schedule

The shallow probe in GP-10, the deepest probe free of groundwater at GP-13, LFG-1, and LFG-2 will be analyzed for VOC vapors using TO-15 in fall 2015 and spring 2016 during regular probe sampling. These samples will be used to determine future discrete sampling frequency, which must be at least once every five years. Regular perimeter landfill-gas sampling will be conducted as required by CalRecycle. These reports shall be submitted to the Regional Water Board.

The results for the discrete vapor monitoring shall be reported to the Regional Water Board in the semi-annual monitoring reports. Landfill-gas monitoring reports as required by CalRecycle may be submitted as a stand-alone report or as part of the semi-annual monitoring reports.

TABLE III.A.
UNSATURATED ZONE DETECTION MONITORING PROGRAM

Parameter	Units	Frequency
Laboratory Monitoring Parameters		
VOCs by US EPA Method TO-15	ug/cm^3	Fall 2015, Spring 2016 and a minimum of every 5 years thereafter
Methane	%	Semi-annual

C. LEACHATE SAMPLING

1. Monitoring Locations

a. Leachate – Samples will be taken from the leachate sump located upline of the storage tanks once per rainy season (September through June). The sump shall be sampled as soon as adequate precipitation occurs for leachate to discharge from the landfill's leachate collection system. The sump shall be checked for flow after each storm event (over 1-inch of precipitation in a week) until a sample is obtained. LFG-1 and LFG-2 shall be checked for the presence of leachate every other month starting in September and ending in June until a sample has been obtained for the season or the end of the rainy season; and if leachate is present a leachate sample shall be obtained. Any samples taken for the District for disposal shall also be reported.

b. Seeps - If new seeps are detected the discharger shall immediately sample the seepage and test for field parameters and monitoring parameters listed in Table IIIB. and continue to sample seepage and report test results at frequencies listed in Table IIIB., thereafter. If the seep has been determined to contain leachate, steps shall be taken to abate the discharge.

2. Monitoring Schedule

The parameters and frequency of leachate and seep monitoring is as follows:

TABLE III.B.
LEACHATE MONITORING PROGRAM

Parameter	Units	Frequency[1]
Field Parameters		
pH	pH units	Once per Rainy Season[2]
Specific Conductance	Mhos/cm	Once per Rainy Season[2]
Temperature	°C	Once per Rainy Season[2]
Total Flow (for entire leachate collection system)	Gallons/Month	Monthly
Monitoring Parameters		
Chloride	ug/l	Once per Rainy Season[2]

Parameter	**Units**	**Frequency[1]**
Sodium	ug/l	Once per Rainy Season[2]
Potassium	ug/l	Once per Rainy Season[2]
Calcium	ug/l	Once per Rainy Season[2]
Sulfate	ug/l	Once per Rainy Season[2]
Magnesium	ug/l	Once per Rainy Season[2]
Dissolved Iron	ug/l	Once per Rainy Season[2]
Fluoride	ug/l	Once per Rainy Season[2]
Title 26 Metals[3]	ug/l	Once per Rainy Season[2]
Nitrate	mg/l	Once per Rainy Season[2]
Bicarbonate/carbonate Alkalinity as $CaCO^3$	mg/l	Once per Rainy Season[2]
Chemical Oxygen Demand	mg/l	Once per Rainy Season[2]
Total Dissolved Solids (TDS)	mg/l	Once per Rainy Season[2]
VOCs including oxygenates (low level)	ug/l	Once per Rainy Season[2]
Constituents of Concern (See Attachment 1)		
Inorganics (dissolved)	mg/l	Five years
VOCs (low level)	ug/l	Five years
Semi-VOCs	ug/l	Five years
Chlorophenoxy Herbicides	ug/l	Five years
Organophosphorus Pesticides	ug/l	Five years
Polychlorinated Biphenyls	ug/l	Five years
Organochlorine Pesticides	ug/l	Five years

Note 1: Samples will be taken once per rainy season, per Section C. 1. a.

Note 2: Rainy season is September through June and once is for each leachate sampling location.

Note 3: Title 26 Metals are antimony, arsenic, barium, beryllium, boron, cadmium, cobalt, copper, lead, mercury, nickel, selenium, silver, thallium, total chromium, vanadium, and zinc. Metals analyses are for dissolved concentrations.

D. SURFACE WATER AND STORM WATER

1. Monitoring Locations

Monitoring points SW-2 and SW-4 are downgradient; and SW-1 and SW-3 are upgradient of the Class III SWDS. The downgradient storm water sampling points act as points of compliance for both storm water and surface water. The surface water and storm water monitoring points for Weaverville SWDS are shown in Attachments B and C. Rainfall shall be measured at the Weaverville Airport, which is near the SWDS.

2. Monitoring Schedule (Sampling and Laboratory Analysis)

Samples shall be collected at surface water and storm water monitoring points and analyzed in accordance with the schedule presented in the following table:

TABLE III.C.

SURFACE WATER AND STORM MONITORING PROGRAM

Parameter	Units	Frequency
Field Parameters		
pH	pH units	Twice per Season
Specific Conductance	Mhos/cm	Twice per Season
Turbidity	turbidity units	Twice per Season
Temperature	°C	Twice per Season
Rainfall	inches	Daily
Monitoring Parameters		
Chloride	ug/l	Twice per Season
Sodium	ug/l	Twice per Season
Potassium	ug/l	Twice per Season
Total Iron	ug/l	Twice per Season
Sulfate	ug/l	Twice per Season
Total Suspended Solids (TDS)	mg/l	Twice per Season
Total Dissolved Solids (TDS)	mg/l	Twice per Season
Oil and Grease	mg/l	Twice per Season
Total Petroleum as Gasoline	ug/l	Twice per Season
Total Petroleum as Diesel	ug/l	Twice per Season
Total Petroleum as Motor Oil	ug/l	Twice per Season

Parameter	Units	Frequency
Constituents of Concern (See Attachment 1)		
Inorganics (dissolved)	mg/l	After a release[1]
VOCs (low level)	ug/l	After a release[1]
Semi-VOCs	ug/l	After a release[1]
Chlorophenoxy Herbicides	ug/l	After a release[1]
Organophosphorus Pesticides	ug/l	After a release[1]
Polychlorinated Biphenyls	ug/l	After a release[1]
Organochlorine Pesticides	ug/l	After a release[1]

Note 1: Sampling shall take place during the next flow event after a verified measurably significant release. Verification shall be determined according to California Code of Regulations, title 27, section 20420(j).

E. GROUNDWATER

The groundwater surface elevation (in feet and hundredths, M.S.L.) in all wells shall be measured on a quarterly basis and used to determine the velocity and direction of groundwater flow, in compliance with California Code of Regulations, title 27. The amount of siltation in all wells shall be measured as needed and during pump maintenance. Siltation information shall be used to make recommendations for well maintenance or replacement. Additional monitoring wells shall be added to the program as needed. Samples shall be collected from wells at the frequency and for the parameters specified below.

1. Monitoring Locations

Monitoring points included in the current groundwater monitoring system consist of one detection monitoring wells (MW-9), three corrective action wells (MW-3, MW-5, and MW-6), and four background wells (MW-1, MW-2, MW-4B, and MW-8). Sampling will determine whether GP-10 shallow, GP-13 shallow and GP-14 are corrective action or detection monitoring wells.

The groundwater monitoring points for Weaverville SWDS, shown in Attachments B and C, are as follows:

Shallow Aquifer (terrace deposits) Monitoring Wells:	MW-1, MW-5, MW-6, MW-8, MW-9, GP-10 shallow, GP-13 shallow, and GP-14
Deep Aquifer (Weaverville Formation) Monitoring Wells:	MW-2, MW-3, MW-4B, and new well(s)
Drinking Water Well Closest to SWDS:	Brinson Well

Sampling at the above-listed groundwater monitoring locations shall occur on the following schedule:

TABLE III.D.
GROUNDWATER DETECTION AND CORRECTIVE ACTION MONITORING PROGRAM SAMPLING FREQUENCY

Semi-annual:	MW-1, MW-2, MW-3, MW-4B, MW-5, MW-6, MW-8, MW-9, GP-10 shallow, GP-13 shallow, GP-14, and new well(s)
Five Year COC	MW-1, MW-2, MW-3, MW-4B, MW-5, MW-6, MW-8, MW-9, GP-10 shallow, GP-13 shallow, GP-14, and new well(s)
Five Year Field Parameters and VOCs Only	Brinson Well

2. Monitoring Schedule

The analytes and frequency of groundwater monitoring are as follows:

TABLE III.E.
GROUNDWATER DETECTION AND CORRECTIVE ACTION MONITORING PROGRAM

Parameter	**Units**	**Frequency**
Field Parameters		
pH	pH units	Semi-Annual
Specific Conductance	Mhos/cm	Semi-Annual
Temperature	^{o}C	Semi-Annual
Groundwater Elevations	Ft./tenths TOC	Quarterly
Turbidity	Turbidity units	Semi-Annual
Siltation in Well Casing	Ft./tenths	As needed and during pump maintenance

Monitoring Parameters

Parameter	**Units**	**Frequency**
Chloride	ug/l	Semi-Annual
Sodium	ug/l	Semi-Annual
Potassium	ug/l	Semi-Annual
Calcium	ug/l	Semi-Annual
Sulfate	ug/l	Semi-Annual
Magnesium	ug/l	Semi-Annual
Dissolved Iron	ug/l	Semi-Annual
Fluoride	ug/l	Semi-Annual
Nitrate	mg/l	Semi-Annual
Bicarbonate/carbonate Alkalinity as $CaCO^3$	mg/l	Semi-Annual
Chemical Oxygen Demand	mg/l	Semi-Annual
Total Dissolved Solids (TDS)	mg/l	Semi-Annual
VOCs including oxygenates (low level)	ug/l	Semi-Annual
Constituents of Concern Full Scan (See Attachment 1)		
Inorganics (dissolved)[1]	mg/l	Five years
VOCs (low level)	ug/l	Five years
Semi-VOCs	ug/l	Five years
Chlorophenoxy Herbicides	ug/l	Five years
Organophosphorus Pesticides	ug/l	Five years
Polychlorinated Biphenyls	ug/l	Five years
Organochlorine Pesticides	ug/l	Five years

Note 1: Metals analyses are for dissolved concentrations.

IV. WATER QUALITY PROTECTION STANDARD

The Water Quality Protection Standard (Standard) consists of the following elements:

a. Constituents of Concern;

b. Concentration Limits;

c. Monitoring Points;

d. Points of Compliance; and

e. Compliance Period.

Each of these is described as follows:

A. Constituents of Concern

The Constituents of Concern (COCs), as required under California Code of Regulations, title 27, section 20395, shall include all constituent groups identified in Attachment 1. The Discharger shall test samples for all COCs every five years or more frequently, as required under the monitoring program.

B. Concentration Limits

The Concentration Limit for any given Constituent of Concern or Monitoring Parameter in a given monitored medium (i.e., the uppermost aquifer) at the Site shall be as follows, and shall be used as the basis of comparison with data from the Monitoring Points in that monitored medium:

a. The background value established in the WDRs by the Regional Water Board for that constituent and medium;

b. The constituent's background value, from the Background Monitoring Points for that monitored medium. Either:

1. The mean (or median, as appropriate) and standard deviation (or other measure of central tendency, as appropriate) of the constituent's background data; or

2. The constituent's MDL, in cases where less than 10 percent of the background samples exceed the constituent's MDL; or

a. A concentration limit greater than background, as approved by the Regional Water Board for use during or after corrective action.

C. Monitoring Points

1. **Unsaturated Zone -** As listed in Section III.B.1.

2. **Surface Water -** As listed in Section III.C.1.

3. **Groundwater -** As listed in Section III.D.1.

D. Points of Compliance

The point of compliance for each waste management unit (WMU) is the vertical surface located at the downgradient limit of the WMU that extends through the uppermost aquifer underlying the WMU.

The wells located closest to the point of compliance at the Weaverville Class III SWDS at this time are MW-5, MW-6, GP-10 shallow, GP-13 shallow, and GP-14.

E. Compliance Period

The Compliance period is the number of years equal to the active life of the Class III SWDS plus the closure period. Each time the Standard is exceeded (i.e., a release is discovered), the Site begins a Compliance Period on the date the Regional Water Board directs the Discharger to begin an Evaluation Monitoring Program. If the Discharger's Corrective Action Program has not achieved compliance with the Standard by the scheduled end of the Compliance Period, the Compliance Period is automatically extended until the Class III SWDS has been in continuous compliance for at least three consecutive years.

The Discharger shall implement the above monitoring program beginning on the effective date of this Order.

Ordered by

Matthias St. John
Executive Officer

June 18, 2015

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