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**North Coast Regional Water Quality Control Board**

California Regional Water Quality Control Board  
North Coast Region

Revised Monitoring and Reporting Program  
Order No R1-2018-0003

for

Sonoma West Holdings, Incorporated  
Wastewater Treatment Facility, Plant No. 2

NPDES No. CA0023655  
WDID No. 1B812020SON

Sonoma County

This Revised Monitoring and Reporting Program (MRP) rescinds and replaces the MRP included within Order No. R1-2018-0003 (Order) adopted by the North Coast Regional Water Quality Control Board (Regional Water Board) on May 17, 2018. In the Response to Comments document, dated April 18, 2018, the Regional Water Board concurred with comments from Sonoma West Holdings, Inc. (Permittee) requesting to remove requirements to conduct groundwater monitoring at locations RGW-006 and RGW-007. However, since this change was inadvertently not reflected in the adopted Order, Regional Water Board staff has revised the MRP for the Order to correct this oversight. This Revised MRP rescinds and replaces the MRP contained within Order No R1-2018-0003 which became effective August 1, 2018.

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## ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (40 C.F.R. § 122.48) requires that all NPDES permits specify monitoring and reporting requirements. California Water Code section 13383 also authorizes the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement federal and California regulations.

### I. GENERAL MONITORING PROVISIONS

- A. Wastewater Monitoring Provision.** Composite samples may be taken by a proportional sampling device approved by the Executive Officer or by grab samples composited in proportion to flow. In compositing grab samples, the sampling interval shall not exceed 1 hour.
- B. Supplemental Monitoring Provision.** If the Permittee monitors any pollutant more frequently than required by this Order, using test procedures approved by 40 C.F.R. part 136 or as specified in this Order, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the monthly and annual discharge monitoring reports.
- C. Laboratory Certification.** Laboratories analyzing monitoring samples shall be certified by the State Water Resources Control Board (State Water Board) in accordance with the provisions of Water Code section 13176, and must include quality assurance / quality control data with their analytical reports.
- D. Instrumentation and Calibration Provision.** All monitoring instruments and devices used by the Permittee to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated no less than the manufacturer's recommended intervals or one year intervals, (whichever comes first) to ensure continued accuracy of the devices.
- E. Minimum Levels (ML) and Reporting Levels (RL).** Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 C.F.R. 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*. All analyses shall be conducted using the lowest practical quantitation limit achievable using U.S. EPA approved methods. For the purposes of the NPDES program, when more than one test procedure is approved under 40 C.F.R., part 136 for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv). Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analysis for toxics listed by the California Toxics Rule (CTR) shall also adhere to guidance and requirements contained in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005) (SIP). However, there may be situations when analytical methods are published with MLs that are more sensitive than the MLs for analytical methods listed in the SIP. For instance, U.S. EPA Method 1631E for mercury is not currently listed in SIP Appendix 4, but it is published with an ML of 0.5 ng/L that makes it a sufficiently sensitive analytical method. Similarly, U.S. EPA Method 245.7 for mercury is published with an ML of 5 ng/L.

**F. Discharge Monitoring Report Quality Assurance (DMR-QA) Study.** The Permittee shall ensure that the results of the DMR-QA Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

State Water Resources Control Board  
 Quality Assurance Program Officer  
 Office of Information Management and Analysis  
 1001 I Street, Sacramento, CA 95814

**II. MONITORING LOCATIONS**

The Permittee shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

**Table E-1 Monitoring Station Locations**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Location where all waste tributary to the process wastewater treatment system is present, and preceding any phase of treatment.
001	EFF-001	Location where representative samples of the process wastewater effluent, to be discharged from Lake Davis to Barlow Creek, can be collected at a point after treatment and before contact with the receiving water.
002	STG-001	Process wastewater stored in Lake Davis prior to land application.
	LND-001	Process wastewater that does not get stored in Lake Davis prior to land application.
003	REC-001	Location where representative samples of reclaimed domestic wastewater to be land applied at Bench No.1 can be collected after treatment and before being applied to land.
--	STW-001	Location where a representative sample of bench storm water runoff, to be discharged to Barlow Creek, can be sampled after the first 1" of rain.
--	RSW-001U	In Barlow Creek upstream of the discharge point and any inputs from the bench storm water runoff.
--	RSW-001D	In Barlow Creek in the immediate area downstream of Discharge Point 001.
--	RGW-001	Groundwater monitoring well located in the southeastern portion of the bermed section of Bench No.1, representing up gradient groundwater quality.
--	RGW-002	Groundwater monitoring well, representing groundwater quality within the influence of the land disposal system.
--	RGW-003	Groundwater monitoring well, located in the northeast corner of Bench No. 7, representing up gradient groundwater quality that enters the property from the north boundary.
--	RGW-004	Groundwater monitoring well, located in Bench No. 7 near the point where Barlow Creek exits the property, representing groundwater quality within the influence of Bench No. 7.

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	RGW-005	Groundwater monitoring well located in the north portion of the bermed section of Bench No.1, representing groundwater quality within the influence of the recycled water irrigation system.
--	<del>RGW-006</del>	<del>Groundwater monitoring well located at the south corner of Building 1, representing potable water supply well</del>
--	<del>RGW-007</del>	<del>Groundwater monitoring well located north of the Facility, representing potable water supply well (an alternate potable water supply well).</del>

### III. INFLUENT MONITORING REQUIREMENTS

#### A. Monitoring Location INF-001

1. The Permittee shall monitor influent to the process wastewater treatment system at Monitoring Location INF-001 as follows:

**Table E-2. Influent Monitoring – Monitoring Location INF-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Influent Flow <sup>2</sup>	gpd	Meter	Daily	--
Biochemical Oxygen Demand 5-day @ 20°C (BOD <sub>5</sub> )	mg/L	Grab	Weekly	Standard Methods
Total Suspended Solids (TSS)	mg/L	Grab	Monthly	Standard Methods
Total Coliform Bacteria	MPN/100 mL	Grab	Monthly	Standard Methods
<b>Table Notes:</b>				
1. In accordance with the current edition of <i>Standard Methods for Examination of Water and Wastewater</i> (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.				
2. Each quarter, the Permittee shall report the daily average and monthly average flows.				

#### B. Offsite Waste Haulers

1. In accordance with section VI.C.6.f of the Order, the Permittee shall maintain a manifest system which includes, for each truck load of wastewater received; the hauler, the volume and the source/generator of the waste, the date and time the waste load was transferred, and the Permittee’s representative who was present when the waste was received. In its quarterly self-monitoring report (SMR), the Permittee shall report the total volume of wastewater received from each generator who transferred wastewater to the Permittee during the reporting period.
2. For any month when outside wastewater is accepted into the treatment process, a representative of the Permittee shall collect at least one grab sample from each accepted load. The Permittee shall ensure that the grab sample is collected in a manner that results in a sample that is representative of that load. The Permittee shall measure the pH of the grab sample within 15 minutes, label the sample with appropriate identification, and refrigerate it to 4.0 ± 0.5 °C. The sample may be

discarded after 7 days if there is no indication of plant upset that may be attributed to the accepted load.

3. The Permittee shall collect monthly random<sup>1</sup> samples of each offsite load of wastewater and have them analyzed by a certified laboratory in accordance with the following table:

**Table E-3. Influent Monitoring of Offsite Wastewater**

Parameter	Units	Sample Type <sup>1</sup>	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Biochemical Oxygen Demand 5-day @ 20°C (BOD <sub>5</sub> )	mg/L	Grab	Monthly	Standard Methods
pH	s.u.	Grab	Monthly	Standard Methods
Total Suspended Solids (TSS)	mg/L	Grab	Monthly	Standard Methods
Settleable Solids	ml/L	Grab	Monthly	Standard Methods
Total Coliform Bacteria	MPN/100 mL	Grab	Monthly	Standard Methods
<u>Table Notes:</u>				
1. In accordance with the current edition of <i>Standard Methods for Examination of Water and Wastewater</i> (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.				

#### IV. EFFLUENT MONITORING REQUIREMENTS

##### A. Monitoring Location EFF-001

1. The Permittee shall monitor treated process wastewater while discharging from Lake Davis to Barlow Creek, at Monitoring Location EFF-001, as follows:

**Table E-4. Effluent Monitoring – Monitoring Location EFF-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Effluent Flow <sup>2</sup>	mgd	Meter	Daily	--
Dilution Rate <sup>10</sup>	% of stream flow	Calculation	Daily	--
Biochemical Oxygen Demand 5-day @ 20°C (BOD <sub>5</sub> )	mg/L	Grab	Weekly <sup>3</sup>	Standard Methods
pH	s.u.	Grab	Daily <sup>4,5</sup>	Standard Methods
Total Suspended Solids (TSS)	mg/L	Grab	Weekly <sup>3</sup>	Standard Methods
Temperature	°C	Grab	Daily <sup>5</sup>	Standard Methods
Aluminum, Total Recoverable	µg/L	Grab	Weekly <sup>3</sup>	Standard Methods

<sup>1</sup> To select a random sample, the Permittee shall estimate, prior to the beginning of a monthly monitoring period, the number of anticipated wastewater deliveries for the month, and generate a random load number from this total. When the delivery corresponding to the pre-chosen random number is received, the Permittee will collect a representative wastewater sample and have the samples analyzed in accordance with Table E-4 and with standard sample collection and handling procedures.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Ammonia Nitrogen, Total (as N)	mg/L	Grab	Weekly <sup>3</sup>	Standard Methods
Electrical Conductivity @ 25°C	µmhos/cm	Grab	Weekly <sup>3</sup>	Standard Methods
Iron, Total Recoverable	µg/L	Grab	Weekly <sup>3</sup>	Standard Methods
Manganese, Total Recoverable	µg/L	Grab	Weekly <sup>3</sup>	Standard Methods
Methylene Blue Active Substances (MBAS)	mg/L	Grab	Weekly <sup>3</sup>	Standard Methods
Nitrate Nitrogen, Total (as N)	mg/L	Grab	Monthly	Standard Methods
Nitrite Nitrogen, Total (as N)	mg/L	Grab	Monthly	Standard Methods
Phosphorus, Total (as P)	mg/L	Grab	Monthly	Standard Methods
Settleable Solids	mL/L	Grab	Weekly <sup>3</sup>	Standard Methods
Total Coliform Bacteria	MPN/100 mL	Grab	Weekly	Standard Methods
Fecal Coliform Bacteria	MPN/100 mL	Grab	Weekly	Standard Methods
Total Dissolved Solids	mg/L	Grab	Weekly <sup>3</sup>	Standard Methods
Turbidity	NTU	Grab	Weekly <sup>3</sup>	Standard Methods
Copper, Total Recoverable	µg/L	Grab	Weekly <sup>3</sup>	ICPMS (ML 0.5 µg/L) SPGFAA (ML 2 µg/L) <sup>6</sup>
Lead, Total Recoverable	µg/L	Grab	Weekly <sup>3</sup>	ICPMS (ML 0.5 µg/L) <sup>6</sup>
Mercury, Total Recoverable	µg/L	Grab	Weekly <sup>3</sup>	EPA Method 245.7 (ML 0.005 µg/L) EPA Method 1631E (ML 0.0005 µg/L) <sup>6</sup>
Thallium, Total Recoverable	µg/L	Grab	Weekly <sup>3</sup>	ICPMS (ML 1 µg/L) <sup>6</sup>
Zinc, Total Recoverable	µg/L	Grab	Weekly <sup>3</sup>	FAA (ML 20 µg/L) ICP (ML 20 µg/L) ICPMS (ML 1 µg/L) SPGFAA (ML 10 µg/L) <sup>6</sup>
Cyanide, Free (as CN)	µg/L	Grab	Weekly <sup>3</sup>	COLOR (ML 5 µg/L) <sup>6</sup>
CTR Priority Pollutants <sup>7</sup>	µg/L	Grab	Once per permit term <sup>11</sup>	Standard Methods <sup>8</sup>
Acute Toxicity <sup>9</sup>	% Survival, Pass or Fail, and % Effect	Grab	Monthly	See Section V below
Chronic Toxicity <sup>9</sup>	Pass or Fail, and % Effect	Grab	Annually	See Section V below

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
<p><b>Table Notes:</b></p> <ol style="list-style-type: none"> <li>1. In accordance with the current edition of <i>Standard Methods for Examination of Water and Wastewater</i> (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.</li> <li>2. Each quarter, the Permittee shall report the daily average and monthly average flows.</li> <li>3. Accelerated Monitoring (weekly monitoring frequency). If two consecutive weekly test results exceed an effluent limitation, the Permittee shall take two samples each of the two weeks following receipt of the second sample result. During the intervening period, the Permittee shall take steps to identify the cause of the exceedance and take steps to return to compliance.</li> <li>4. Accelerated Monitoring (daily monitoring frequency). If two daily test results exceed an effluent limitation and discharge continues, the Permittee shall increase monitoring frequency to a minimum of twice a day for a week to evaluate whether an exceedance is persisting. If the exceedance is persisting, the Permittee shall take steps to identify the cause of the exceedance and take steps needed to return to compliance. If discharge ceases after the initial discharge event, the permittee does not need to begin accelerated monitoring until discharge resumes again. Once discharge resumes, the sample of effluent shall be collected for accelerated monitoring at the onset of the discharge following the method described above.</li> <li>5. pH and temperature monitoring must coincide with monthly monitoring for ammonia.</li> <li>6. ICPMS = Inductively Coupled Plasma/Mass Spectrometry        SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption        GCMS = Gas Chromatography/Mass Spectrometry        FAA = Flame Atomic Absorption        ICP = Inductively Coupled Plasma        COLOR = Colorimetric</li> <li>7. Those pollutants identified by the California Toxics Rule at 40 C.F.R. section 131.38. The Permittee is not required to sample and analyze for asbestos. Upstream receiving water hardness shall be monitored concurrently with the priority pollutant sample.</li> <li>8. Analytical methods must achieve the lowest minimum level (ML) specified in Appendix 4 of the SIP and, in accordance with section 2.4 of the SIP, the Permittee shall report the ML and MDL for each sample result.</li> <li>9. Whole effluent acute and chronic toxicity shall be monitored in accordance with the requirements of section V of this Monitoring and Reporting Program.</li> <li>10. This Order includes a prohibition of discharges that exceed one percent of the flow of Barlow Creek; the dilution rate is a calculation of the rate of effluent being discharge to Barlow Creek as a percentage of the flow rate of Barlow Creek.</li> <li>11. If no discharge occurs at Discharge Point 001 during the permit term, the Permittee shall monitor the effluent at Monitoring Location EFF-002 during the discharge season (i.e., October 1 through May 14) in the fourth year of the permit term. The monitoring results shall be submitted to the Regional Water Board in accordance with Table E-1.</li> </ol>				

**V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS**

**A. Acute Toxicity Testing**

The Permittee shall conduct acute whole effluent toxicity testing (WET) in accordance with the following acute toxicity testing requirements.

1. **Test Frequency.** The Permittee shall conduct acute WET testing in accordance with the schedule established by this MRP while discharging at Discharge Point 001, as summarized in Table E-4, above.
2. **Discharge In-stream Waste Concentration (IWC) for Acute Toxicity.** The IWC for this discharge is 100 percent effluent.<sup>2</sup>
3. **Sample Volume and Holding Time.** The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected

<sup>2</sup> The acute toxicity test shall be conducted using 100 percent effluent collected at Monitoring Location EFF-001.



to perform the required toxicity test. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.

4. **Freshwater Test Species and Test Methods.** The Permittee shall conduct the following acute toxicity tests in accordance with species and test methods in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (U.S. EPA Report No. EPA-821-R-02-012, 5th edition or subsequent editions). In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.
  - a. A 96-hour static renewal toxicity test with an invertebrate, the water flea, *Ceriodaphnia dubia* (Survival Test Method 2002.0).
  - b. A 96-hour static renewal toxicity test with a vertebrate, the rainbow trout, *Oncorhynchus mykiss* (Survival Test Method 2019.0).
5. **Species Sensitivity Screening.** Species sensitivity screening shall be conducted during this permit's first required sample collection. The Permittee shall collect a single effluent sample and concurrently conduct two acute toxicity tests using the invertebrate and fish species identified in section V.A.4, above. This sample shall also be analyzed for the parameters required for the discharge. The species that exhibits the highest "Percent (%) Effect" at the discharge IWC during species sensitivity screening shall be used for routine acute toxicity monitoring during the permit term.
6. **Quality Assurance and Additional Requirements.** Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual referenced in section V.A.4, above. Additional requirements are specified below.
  - a. The discharge is subject to determination of "Pass" or "Fail" and "Percent (%) Effect" from acute toxicity tests using the Test of Significant Toxicity (TST) approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis ( $H_0$ ) for the TST approach is: Mean discharge IWC response  $\leq 0.80 \times$  Mean control response. A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". The relative "Percent (%) Effect" at the discharge IWC is defined and reported as:  $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100$ .
  - b. If the effluent toxicity test does not meet the minimum effluent test acceptability criteria (TAC) specified in the referenced test method, then the Permittee shall re-sample and re-test within 7 days.
  - c. Dilution water and control water shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.



- e. Statistical program (e.g., TST calculator, CETIS, etc.) output results for each toxicity test.

## B. Chronic Toxicity Testing

The Permittee shall conduct chronic toxicity testing in accordance with the following chronic toxicity testing requirements:

1. **Test Frequency.** The Permittee shall conduct chronic toxicity testing in accordance with the schedule established by this MRP while discharging at Discharge Point 001, as summarized in Table E-5, above.
2. **Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity.** The chronic toxicity IWC for this discharge is 100 percent effluent.<sup>3</sup>
3. **Sample Volume and Holding Time.** The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. All toxicity tests shall be conducted as soon as possible following sample collection. For toxicity tests requiring renewals, a minimum of three grab samples shall be collected. The lapsed time (holding time) from sample collection to first use of each sample must not exceed 36 hours.
4. **Freshwater Test Species and Test Methods.** The Permittee shall conduct the following chronic toxicity tests in accordance with species and test methods in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms* (U.S. EPA Report No. EPA-821-R-02-013, or subsequent editions). In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.
  - a. A 7-day static renewal toxicity test with a vertebrate, the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0).
  - b. A static renewal toxicity test with an invertebrate, the water flea, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0).
  - c. A 96-hour static renewal toxicity test with a plant, the green algae, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0).
5. **Species Sensitivity Screening.** Species sensitivity screening shall be conducted during this permit's first required sample collection. The Permittee shall collect a single effluent sample and concurrently conduct three chronic toxicity tests using the fish, the invertebrate, and the algae species identified in section V.B.4, above. This sample shall also be analyzed for the parameters required for the discharge. The species that exhibits the highest "Percent (%) Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit term.

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<sup>3</sup> The chronic toxicity test shall be conducted using a series of five dilutions and a control. The series shall consist of the following dilutions: 12.5, 25, 50, 75, and 100 percent. Compliance determination will be based on the IWC (100 percent effluent) and a control as further described in Fact Sheet section IV.C.5.c.

6. **Quality Assurance and Additional Requirements.** Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.
- a. The discharge is subject to determination of “Pass” or “Fail” and “Percent (%) Effect” for chronic toxicity tests using the TST approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis ( $H_0$ ) for the TST approach is: Mean discharge IWC response  $0.75 \times$  Mean control response. A test result that rejects this null hypothesis is reported as “Pass”. A test result that does not reject this null hypothesis is reported as “Fail”. The relative “Percent (%) Effect” at the discharge IWC is defined and reported as:  $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100$ .
  - b. If the effluent toxicity test does not meet the minimum effluent or reference toxicant TAC specified in the referenced test method, then the Permittee shall re-sample and re-test within 14 days.
  - c. Dilution water and control water shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.
  - d. Monthly reference toxicant testing is sufficient. All reference toxicant test results should be reviewed and reported.
  - e. The Permittee shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the MRP and the rationale is explained in the Fact Sheet (Attachment F).
  - f. **Ammonia Removal.** Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from bioassay samples. The Permittee must demonstrate the effluent toxicity is caused by ammonia because of increasing test pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following may be steps to demonstrate that the toxicity is caused by ammonia and not other toxicants before the Executive Officer would allow for control of pH in the test.
    - i. There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.
    - ii. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.
    - iii. Conduct graduated pH tests as specified in the toxicity identification evaluation methods. For example, mortality should be higher at pH 8 and lower at pH 6.

- iv. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.

When it has been demonstrated that toxicity is due to ammonia because of increasing test pH, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent.

- 7. **Notification.** The Permittee shall notify the Regional Water Board verbally within 72 hours and in writing within 14 days after the receipt of a result of “Fail” during routine or accelerated monitoring.
- 8. **Accelerated Monitoring Requirements.** The trigger for accelerated monitoring for chronic toxicity is exceeded when a chronic toxicity test, analyzed using the TST approach, results in “Fail” and the “Percent Effect” is  $\geq 0.50$ . Within 24 hours of the time the Permittee becomes aware of a summary result of “Fail”, the Permittee shall implement an accelerated monitoring schedule consisting of four toxicity tests—consisting of 5-effluent concentrations (including the discharge IWC) and a control—conducted at approximately 2 week intervals, over an 8 week period. If each of the accelerated toxicity tests results is “Pass,” the Permittee shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results is “Fail”, the Permittee shall immediately implement the TRE Process conditions set forth in section V.C, below.
- 9. **Reporting**
  - a. **Routine Reporting.** Chronic toxicity monitoring results shall be submitted with the monthly SMR for the month that chronic toxicity monitoring was performed. Routine reporting shall include the following in order to demonstrate compliance with permit requirements:
    - i. WET reports shall include the contracting laboratory’s complete report provided to the Permittee and shall be consistent with the appropriate “Report Preparation and Test Review” sections of the methods manual and this MRP. The WET test reports shall contain a narrative report that includes details about WET test procedures and results, including the following:
      - (a) Receipt and handling of the effluent sample that includes a tabular summary of initial water quality characteristics (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia);
      - (b) The source and make-up of the lab control/diluent water used for the test;
      - (c) Any manipulations done to lab control/diluent and effluent such as filtration, nutrient addition, etc.;
      - (d) Identification of any reference toxicity testing performed;

- (e)** Tabular summary of test results for control water and each effluent dilution and statistics summary to include calculation of the NOEC, T<sub>Uc</sub>, and IC<sub>25</sub>;
- (f)** The toxicity test results for the TST approach, reported as “Pass” or “Fail” and “Percent (%) Effect” at the chronic toxicity IWC for the discharge.
- (g)** Identification of any anomalies or nuances in the test procedures or results;
- (h)** WET test results shall include, at a minimum, for each test:
  - (1)** Sample date(s);
  - (2)** Test initiation date;
  - (3)** Test species;
  - (4)** Determination of “Pass” or “Fail” and “Percent Effect” following the Test of Significant Toxicity hypothesis testing approach in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010). The “Percent Effect” shall be calculated as follows:  
“Percent Effect” (or Effect, in %) = ((Control mean response – IWC mean response) ÷ Control mean response) x 100
  - (5)** End point values for each dilution (e.g., number of young, growth rate, percent survival);
  - (6)** NOEC value(s) in percent effluent;
  - (7)** IC<sub>15</sub>, IC<sub>25</sub>, IC<sub>40</sub>, and IC<sub>50</sub> values (or EC<sub>15</sub>, EC<sub>25</sub>...etc.) in percent effluent;
  - (8)** T<sub>Uc</sub> values (100/NOEC);
  - (9)** Mean percent mortality (±s.d.) after 96 hours in 100 percent effluent (if applicable);
  - (10)** NOEC and LOEC values for reference toxicant test(s);
  - (11)** IC<sub>50</sub> or EC<sub>50</sub> value(s) for reference toxicant test(s);
  - (12)** Available water quality measurements for each test (e.g., pH, DO, temperature, conductivity, hardness, salinity, ammonia);
  - (13)** Statistical methods used to calculate endpoints;
  - (14)** The statistical program (e.g., TST calculator, CETIS, etc.) output results, which includes the calculation of percent minimum significant difference (PMSD); and
  - (15)** Results of applicable reference toxicant data with the statistical output page identifying the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD and

dates tested; the reference toxicant control charts for each endpoint, to include summaries of reference toxicant tests performed by the contracting laboratory; and any information on deviations from standard test procedures or problems encountered in completing the test and how the problems were resolved.

**ii. Compliance Summary.** In addition to the WET report, the Permittee shall submit a compliance summary that includes an updated chronology of chronic toxicity test results expressed in "Pass"/"Fail", NOEC and TUC for tests conducted during the permit term, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency (routine, accelerated, or TRE). Each compliance summary report shall clearly identify whether or not the effluent discharge is below the chronic toxicity monitoring triggers and, in the event that the effluent discharge exceeds a single sample or median chronic toxicity trigger, the status of efforts (e.g., accelerated monitoring, TRE, TIE, etc.) to identify the source of chronic toxicity as required by section V.B.8 of this MRP.

**b. TRE/TIE results.** The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. TRE/TIE results shall be submitted to the Regional Water Board within 60 days of completion.

### **C. Toxicity Reduction Evaluation (TRE) Process**

**1. TRE Work Plan.** The Permittee submitted a TRE Work Plan to the Regional Water Board on February 14, 2011. The Permittee's TRE Work Plan shall be reviewed and updated as necessary in order to remain current and applicable to the discharge and discharge facilities.

The Permittee shall notify the Regional Water Board of this review and submit any revisions of the TRE Work Plan within 90 days of the notification, to be ready to respond to toxicity events. The TRE Work Plan shall describe the steps the Permittee intends to follow if toxicity is detected, and should include at least the following items:

- a.** A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
- b.** A description of the facility's methods of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in the operation of this Facility.
- c.** If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).

**2. Preparation and Implementation of a Detailed TRE Work Plan.** If one of the accelerated toxicity tests described in section V.A.9 (above) does not comply with the three sample median minimum limitation (90 percent survival) or in section V.B.9 (above) results in "Fail", the Permittee shall immediately initiate a TRE using

EPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, 1989) and within 30 days of receipt submit the accelerated monitoring result to the Regional Water Board Executive Officer. The Permittee shall also submit a Detailed TRE Work Plan, which shall follow the generic TRE Work Plan revised as appropriate for the toxicity event described in section V.A.9 or V.B.9 of this MRP. The Detailed TRE Work Plan shall include the following information, and comply with additional conditions set by the Regional Water Board Executive Officer:

- a. Further actions by the Permittee to investigate, identify, and correct causes of toxicity.
  - b. Actions the Permittee will take to mitigate effects of the discharge and prevent the recurrence of toxicity.
  - c. A schedule for these actions, progress reports, and the final report.
3. **TIE Implementation.** The Permittee may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test methods and, as guidance, EPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.
4. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Permittee shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.
5. The Permittee shall conduct routine effluent monitoring for the duration of the TRE process. Additional accelerated monitoring and TRE work plans are not required once a TRE has begun.
6. The Regional Water Board recognizes that toxicity may be episodic and identification of the causes and reduction of sources of toxicity may not be successful in all cases. The TRE may be ended at any stage if monitoring finds there is no longer toxicity.

## VI. LAND DISCHARGE MONITORING REQUIREMENTS – EFF - 002

### A. Monitoring Location STG-001

1. The Permittee shall monitor partially treated process wastewater effluent from Lake Davis (STG-001) that's land applied at Monitoring Location LND-001, as follows:



**Table E-5. Land Discharge Monitoring – Monitoring Location STG-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>1</sup>	Required Analytical Test Method <sup>1</sup>
Effluent Flow <sup>2</sup>	gpd	Meter	Continuous	--
Biochemical Oxygen Demand 5-day @ 20°C (BOD <sub>5</sub> )	mg/L	Grab	Monthly <sup>3,4</sup>	Standard Methods
pH	s.u.	Grab	Monthly <sup>3,4</sup>	Standard Methods
Total Suspended Solids (TSS)	mg/L	Grab	Monthly <sup>3,4</sup>	Standard Methods
Dissolved Oxygen	mg/L	Grab	Monthly <sup>3</sup>	Standard Methods
Settleable Solids	ml/L	Grab	Monthly <sup>3,4</sup>	Standard Methods
Total Coliform Bacteria	MPN/100 mL	Grab	Monthly <sup>3</sup>	Standard Methods
Fecal Coliform Bacteria	MPN/100 mL	Grab	Monthly <sup>3</sup>	Standard Methods
Total Dissolved Solids	mg/L	Grab	Monthly <sup>3,4</sup>	Standard Methods
Water Depth	Feet	--	Weekly <sup>3</sup>	Observation
Pond Freeboard	Feet	--	Weekly <sup>3</sup>	Observation

**Table Notes:**

1. In accordance with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.
2. Each quarter, the Permittee shall report the daily average and monthly average flows.
3. Monitoring for these constituents required when discharging to land.
4. Accelerated monitoring (monthly monitoring frequency). If a test result exceeds an effluent limitation the Permittee shall take two more samples, one within 7 days and one within 14 days following receipt of the initial sample result. During the intervening period, the Permittee shall take steps to identify the cause of the exceedance and take steps needed to return to compliance.

**B. Monitoring Location LND-001**

1. The Permittee shall monitor process wastewater effluent from the third sump that's land applied (Discharge Point 002) at Monitoring Location LND-001, as follows:

**Table E-6. Land Discharge Monitoring – Monitoring Location LND-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Effluent Flow <sup>2</sup>	gpd	Meter	Continuous	--
Biochemical Oxygen Demand 5-day @ 20°C (BOD <sub>5</sub> )	mg/L	Grab	Monthly <sup>6</sup>	Standard Methods
pH	s.u.	Grab	Monthly <sup>6</sup>	Standard Methods
Total Suspended Solids (TSS)	mg/L	Grab	Monthly <sup>6</sup>	Standard Methods
Aluminum, Total Recoverable	µg/L	Grab	Semiannually	Standard Methods

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Chloride	mg/L	Grab	Semiannually	Standard Methods
Electrical Conductivity @ 25°C	µmhos/cm	Grab	Monthly	Standard Methods
Iron, Total Recoverable	µg/L	Grab	Semiannually	Standard Methods
Manganese, Total Recoverable	µg/L	Grab	Semiannually	Standard Methods
Methylene Blue Active Substances (MBAS)	µg/L	Grab	Semiannually	Standard Methods
Settleable Solids	ml/L	Grab	Monthly <sup>6</sup>	Standard Methods
Total Coliform Bacteria	MPN/100 mL	Grab	Semiannually	Standard Methods
Fecal Coliform Bacteria	MPN/100 mL	Grab	Semiannually	Standard Methods
Total Dissolved Solids	mg/L	Grab	Monthly <sup>6</sup>	Standard Methods
Thallium, Total Recoverable	µg/L	Grab	Semiannually	Standard Methods
Title 22 Pollutants <sup>3</sup>	µg/L	Grab	Once per permit term	Standard Methods
CTR Priority Pollutant Metals <sup>4</sup>	µg/L	Grab	Once per permit term <sup>5</sup>	Standard Methods

**Table Notes:**

1. In accordance with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.
2. Each quarter, the Permittee shall report the daily average and monthly average flows.
3. Title 22 Pollutants are those pollutants for which DDW has established Maximum Contaminant Levels (MCLs) at title 22, division 4, chapter 15, article 4, section 64431 (Inorganic Chemicals) and article 5.5, section 64444 (Organic Chemicals) of the CCR.
4. CTR Priority Pollutant Metals include the 14 metals identified by the California Toxics Rule at 40 C.F.R. section 131.38, as follows: antimony, arsenic, beryllium, cadmium, chromium III, chromium VI, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc. The Permittee shall analyze for total recoverable metals. Hardness shall be monitored concurrently with the priority pollutant metals sample.
5. If no discharge occurs at Discharge Point 001 during the permit term, the Permittee shall monitor the effluent at Monitoring Location EFF-002 during the discharge season (i.e., October 1 through May 14) in the fourth year of the permit term. The monitoring results shall be submitted to the Regional Water Board in accordance with Table E-12.
6. Accelerated monitoring (monthly monitoring frequency). If a test result exceeds an effluent limitation the Permittee shall take two more samples, one within 7 days and one within 14 days following receipt of the initial sample result. During the intervening period, the Permittee shall take steps to identify the cause of the exceedance and take steps needed to return to compliance. If discharge ceases after the initial discharge event, the permittee does not need to begin accelerated monitoring until discharge resumes again. Once discharge resumes, the sample of effluent shall be collected for accelerated monitoring at the onset of discharge, and once more within 7 days of the resumed discharge date.”

**VII. RECYCLING MONITORING REQUIREMENTS**

**A. Monitoring Location REC-001**

1. During periods of discharge at Discharge Point 003, the Permittee shall monitor treated domestic wastewater discharged to Bench No. 1 at Monitoring Locations REC-001, as follows:

**Table E-7. Recycling Monitoring – Monitoring Location REC-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Flow <sup>2</sup>	gpd	Meter	Continuous	--
Biochemical Oxygen Demand 5-day @ 20°C (BOD <sub>5</sub> )	mg/L	Grab	Weekly <sup>4</sup>	Standard Methods
pH	s.u.	Grab	Weekly <sup>4</sup>	Standard Methods
Total Suspended Solids (TSS)	mg/L	Grab	Weekly <sup>4</sup>	Standard Methods
Aluminum, Total Recoverable	µg/L	Grab	Semiannually	Standard Methods
Chloride	mg/L	Grab	Semiannually	Standard Methods
Chlorine, Total Residual <sup>3</sup>	µg/L	Grab	Weekly	Standard Methods
Electrical Conductivity @ 25°C	µmhos/cm	Grab	Monthly	Standard Methods
Manganese, Total Recoverable	µg/L	Grab	Semiannually	Standard Methods
Nitrate Nitrogen, Total (as N)	mg/L	Grab	Monthly <sup>5</sup>	Standard Methods
Nitrite Nitrogen, Total (as N)	mg/L	Grab	Semiannually	Standard Methods
Total Coliform Bacteria	MPN/100 mL	Grab	Weekly	Standard Methods
Fecal Coliform Bacteria	MPN/100 mL	Grab	Weekly	Standard Methods
Total Dissolved Solids	MPN/100 mL	Grab	Monthly <sup>5</sup>	Standard Methods

**Table Notes:**

1. In accordance with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.
2. Each quarter, the Permittee shall report the daily average and monthly average flows.
3. Samples shall be collected at a point following disinfection and prior to discharge. All chlorine measurements shall be reported as total chlorine residual.
4. Accelerated monitoring (weekly monitoring frequency). If two consecutive weekly test results exceed an effluent limitation and discharge continues, the Permittee shall take two more samples, one within 7 days and one within 14 days following receipt of the initial sample result. During the intervening period, the Permittee shall take steps to identify the cause of the exceedance and take steps to return to compliance. If discharge ceases after the initial discharge event, the permittee does not need to begin accelerated monitoring until discharge resumes again. Once discharge resumes, the sample of effluent shall be collected for accelerated monitoring at the onset of the discharge. Accelerated monitoring (monthly monitoring frequency). If a test result exceeds an effluent limitation the Permittee shall take two more samples, one within 7 days and one within 14 days following receipt of the initial sample result. During the intervening period, the Permittee shall take steps to identify the cause of the exceedance and take steps needed to return to compliance.

**VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER**

**A. Monitoring Location RSW-001U and RSW-001D**

- The Permittee shall monitor Barlow Creek at Monitoring Locations RSW-001U and RSW-001D during periods of discharge at Discharge Point 001, as follows:

**Table E-8. Receiving Water Monitoring – Monitoring Location RSW-001U and RSW-001D**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Flow <sup>2</sup>	mgd	Gauge or Meter <sup>3</sup>	Daily	--
pH	s.u.	Grab	Monthly <sup>4</sup>	Standard Methods
Dissolved Oxygen	mg/L	Grab	Monthly	Standard Methods
Hardness, Total (as CaCO <sub>3</sub> ) <sup>2</sup>	mg/L	Grab	Monthly	Standard Methods
Temperature	°C	Grab	Monthly <sup>4</sup>	Standard Methods
Turbidity	NTU	Grab	Monthly	Standard Methods
CTR Priority Pollutants <sup>2,5</sup>	µg/L	Grab	Once per permit term <sup>7</sup>	Standard Methods <sup>6</sup>

**Table Notes:**

- In accordance with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.
- Monitoring is required at Monitoring Location RSW-001U only.
- The Permittee shall propose a method of measurement for the receiving water flow **within 30 days** of the effective date of this Order for approval by the Executive Officer.
- pH and temperature monitoring must coincide with monthly effluent monitoring for ammonia.
- Those pollutants identified by the California Toxics Rule at 40 C.F.R. section 131.38. The Permittee is not required to sample and analyze for asbestos. Hardness shall be monitored concurrently with the priority pollutant sample. Monitoring shall occur simultaneously with effluent monitoring for CTR priority pollutants required by section IV.A of this MRP.
- Analytical methods must achieve the lowest minimum level (ML) specified in Appendix 4 of the SIP and, in accordance with section 2.4 of the SIP, the Permittee shall report the ML and MDL for each sample result.
- If no discharge occurs at Discharge Point 001 during the permit term, the Permittee shall monitor the effluent at Monitoring Location EFF-002 during the discharge season (i.e., October 1 through May 14) in the fourth year of the permit term. The monitoring results shall be submitted to the Regional Water Board in accordance with Table E-1.

**B. Groundwater Monitoring – Monitoring Locations RGW-001 through RGW-007~~5~~**

- The Permittee shall monitor groundwater at Monitoring Locations RGW-001, RGW-002, RGW-003, RGW-004, and RGW-005, ~~RGW-006 and RGW-007~~ as follows:

**Table E-9. Groundwater Monitoring Requirements – Monitoring Locations RGW-001 through RGW-005**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>2</sup>
pH	s.u.	Grab/meter	Quarterly <sup>3</sup>	Standard Methods

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>2</sup>
Aluminum, Total Recoverable	µg/L	Grab	Quarterly <sup>3</sup>	Standard Methods
Chloride	mg/L	Grab	Quarterly <sup>3</sup>	Standard Methods
Dissolved Oxygen	mg/L	Grab/meter	Quarterly <sup>3</sup>	Standard Methods
Specific Conductance @ 25°C	µmhos/cm	Grab/meter	Quarterly <sup>3</sup>	Standard Methods
Iron, Total Recoverable	µg/L	Grab	Semiannually <sup>1</sup>	Standard Methods
Manganese, Total Recoverable	µg/L	Grab	Semiannually <sup>1</sup>	Standard Methods
Methylene Blue Active Substances (MBAS)	mg/L	Grab	Quarterly <sup>3</sup>	Standard Methods
Nitrate Nitrogen, Total (as N)	mg/L	Grab	Quarterly <sup>3</sup>	Standard Methods
Nitrite Nitrogen, Total (as N)	mg/L	Grab	Quarterly <sup>3</sup>	Standard Methods
Total Dissolved Solids	mg/L	Grab	Quarterly <sup>3</sup>	Standard Methods
Lead, Total Recoverable	mg/L	Grab	Semiannually <sup>1</sup>	Standard Methods
Zinc, Total Recoverable	mg/L	Grab	Semiannually <sup>1</sup>	Standard Methods
Cyanide, Free	µg/L	Grab	Semiannually <sup>1</sup>	Standard Methods
Groundwater Elevation	relative to mean sea level	--	Quarterly <sup>3</sup>	Observation
<b>Table Notes:</b>				
<ol style="list-style-type: none"> <li>For semiannual monitoring, two sample events shall occur each year – (during the dry season) and (during the wet season).</li> <li>In accordance with the current edition of <i>Standard Methods for Examination of Water and Wastewater</i> (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.</li> <li>For newly added constituents monitoring shall be completed for one year. Adjustments to sampling frequency may be considered after collecting data from one full hydrologic cycle.</li> </ol>				

- By **October 1, 2018**, the Permittee shall submit a Quality Assurance/Quality Control Plan for its groundwater monitoring program that addresses specific procedures to be followed to ensure that groundwater sampling data is reliable and defensible. The QA/QC plan shall be developed in accordance with acceptable QA/QC standards. The plan shall include a procedure for testing an additional sample anytime there are detections of monitored pollutants above a specific threshold.
- Groundwater Monitoring Reports.** Groundwater monitoring data, including monitoring location (latitude/longitude), groundwater elevation (as compared to

mean sea level), boring logs, and well construction details shall be uploaded to Geotracker.

- a. Groundwater elevation and gradient contour maps shall be developed on a quarterly basis;
  - b. To better understand pollutant fate and transport and trends over time, all groundwater analytical data for the site should be tabulated and graphed.
  - c. Groundwater reports should include iso-concentration contour maps for the constituents of concern (e.g. total dissolved solids)
4. **Groundwater Salinity Assessment.** To address elevated salinity concentrations in Bench 1-4 and Bench 7, the Permittee shall prepare and submit a Groundwater Salinity Assessment Work Plan for Executive Officer review and approval by **January 1, 2019**. The submitted work plan shall include a schedule of implementation and at a minimum, shall include a salinity source assessment, and a method for assessing the horizontal extent of elevated salinity concentrations down-gradient of land applications areas. The Permittee shall implement the work plan in accordance with the approved schedule of implementation.

**IX. OTHER MONITORING REQUIREMENTS**

**A. Monitoring Location STW-001**

- 1. Prior to the first monthly storm water runoff discharge to Barlow Creek, the Permittee shall monitor storm water runoff from the benches at Monitoring Location STW-001 as follows:

**Table E-10. Storm Water Monitoring – Monitoring Location STW-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method <sup>1</sup>
Biochemical Oxygen Demand 5-day @ 20°C (BOD5)	mg/L	Grab	Monthly	Standard Methods
pH	s.u.	Grab	Monthly	Standard Methods
Total Suspended Solids (TSS)	mg/L	Grab	Monthly	Standard Methods
Settleable Solids	mg/L	Grab	Monthly	Standard Methods
Total Coliform Bacteria	MPN/100 mL	Grab	Monthly	Standard Methods
<b>Table Notes:</b>				
1. In accordance with the current edition of <i>Standard Methods for Examination of Water and Wastewater</i> (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.				

**B. Visual Monitoring (Monitoring Locations EFF-001, RSW-001U, and RSW-001D)**

- 1. During periods of discharge to Barlow Creek, visual observations of the discharge and receiving water shall be recorded on the first day of each intermittent discharge. Visual monitoring shall include, but not be limited to, observations for floating

materials, coloration, objectionable aquatic growths, oil and grease films, and odors. Visual observations shall be recorded and included in the Permittee's monthly SMRs.

**C. Monitoring for Development of Effluent Limit Guideline (ELGs) for Discharge to Surface Waters.**

1. In order to develop ELGs for process wastewater generated from Redwood Hill Farms and Dynamic Nutraceuticals, the Permittee shall be required to monitor flow, BOD, and TSS from the ELG regulated waste streams prior to the co-mingling process. The daily biochemical oxygen demand, or BOD5 input/day, (in lbs) of materials used in the processing/production of yogurt and cheese, and freeze dried sprouts is also required. Data on flow, BOD, and TSS as well as the BOD5 input/day of materials used in the processing/production of yogurt and cheese, and freeze dried sprouts should be collected over a minimum of a one year period to accurately capture seasonal variations in the influent process wastewater.

**X. REPORTING REQUIREMENTS**

**A. General Monitoring and Reporting Requirements**

1. The Permittee shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

**B. Self-Monitoring Reports (SMRs)**

1. The Permittee shall submit electronic Self-Monitoring Reports (eSMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal. The Permittee shall maintain sufficient staffing and resources to ensure it submits eSMRs that are complete and timely. This includes provision of training and supervision of individuals (e.g., Permittee personnel or consultant) on how to prepare and submit eSMRs.
2. The Permittee shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Permittee shall submit quarterly SMRs including the results of all required monitoring using U.S. EPA approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Permittee monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. All monitoring results reported shall be supported by the inclusion of the complete analytical report from the laboratory that conducted the analyses.
4. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table E-11. Monitoring Periods and Reporting Schedule<sup>1</sup>**

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following the end of each quarter (February 1, May 1, August 1, November 1)
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling	First day of second calendar month following the end of each quarter (February 1, May 1, August 1, November 1)
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following the end of each quarter (February 1, May 1, August 1, November 1)
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	First day of calendar month through last day of calendar month	First day of second calendar month following the end of each quarter (February 1, May 1, August 1, November 1)
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date.	January 1 through June 30 July 1 through December 31	September 1, each year March 1, each year
Annually	January 1 following (or on) permit effective date	January 1 through December 31	March 1, each year (with annual report)
Once per permit term	Permit effective date	All	March 1 following the year that monitoring is completed (with annual report) and at least 180 days prior to permit expiration

Table Notes:

- Quarterly monitoring periods are as follows: January 1 through March 31; April 1 through June 30; July 1 through September 30; and October 1 through December 31.

**5. Reporting Protocols.** The Permittee shall report with each sample result the applicable ML, the RL, and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

The Permittee shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).



- b.** Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy ( $\pm$  a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c.** Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
- d.** The Permittee is to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

**6.** The Permittee shall submit SMRs in accordance with the following requirements:

- a.** The Permittee shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The reported data shall include calculation of all effluent limitations that require averaging, taking of a median, or other computation. The Permittee is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Permittee shall electronically submit the data in a tabular format as an attachment.
- b.** The Permittee shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify:
  - i.** Facility name and address;
  - ii.** WDID number;
  - iii.** Applicable period of monitoring and reporting;
  - iv.** Violations of the WDRs (identified violations must include a description of the requirement that was violated and a description of the violation);
  - v.** Corrective actions taken or planned; and
  - vi.** The proposed time schedule for corrective actions.
- c.** SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the CIWQS Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). In the event that an alternate method for submittal of SMRs is required, the Permittee shall submit the SMR electronically via e-mail to [NorthCoast@waterboards.ca.gov](mailto:NorthCoast@waterboards.ca.gov) or

on disk (CD or DVD) in Portable Document Format (PDF) file in lieu of paper-sourced documents. The guidelines for electronic submittal of documents can be found on the Regional Water Board website at <http://waterboards.ca.gov/northcoast>.

**C. Discharge Monitoring Reports (DMRs)**

1. DMRs are U.S. EPA reporting requirements. The Permittee shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. DMRs shall be submitted quarterly on the first day of the second calendar month following the end of each quarter (February 1, May 1, August 1, November 1). Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the DMR website at [http://www.waterboards.ca.gov/water\\_issues/programs/discharge\\_monitoring/](http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/).

**D. Other Reports**

1. **Special Study Reports and Progress Reports.** As specified in the Special Provisions contained in section VI of the Order, special study and progress reports shall be submitted in accordance with the following reporting requirements.

**Table E-12. Reporting Requirements for Special Provisions Reports**

Order Section	Special Provision Requirement	Reporting Requirements
Special Provision VI.C.3.a.ii(e)	Pollutant Minimization Program, Annual Facility Report	<b>March 1</b> , annually, following development of Pollutant Minimization Program
MRP Effluent Monitoring Requirement VIII.B.2	Quality Assurance/Quality Control Plan.	<b>October 1, 2018</b>
MRP Effluent Monitoring Requirement V.C.2	Detailed TRE Work Plan	<b>Within 30 days</b> of an accelerated monitoring test that results in "Fail"
MRP Effluent Monitoring Requirements VIII.B.4	Groundwater Salinity Assessment Work Plan	<b>January 1, 2019</b>
MRP Effluent Monitoring Requirements VIII.B.4	Groundwater Salinity Assessment	In accordance with the schedule provided within the approved work plan.

2. **Annual Report.** The Permittee shall submit an annual report to the Regional Water Board for each calendar year through the CIWQS Program Web site. In the event that a paper copy of the annual report is required, the Permittee shall submit the report to the email address in section IX.B.6.c., above. The report shall be submitted by **March 1st** of the following year. The report shall, at a minimum, include the following:
  - a. Where appropriate, tabular and/or graphical summaries of the monitoring data and disposal records from the previous year. If the Permittee monitors any pollutant more frequently than required by this Order, using test procedures approved under 40 C.F.R. part 136 or as specified in this Order, the results of

this monitoring shall be included in the calculation and report of the data submitted SMR.

- b. A comprehensive discussion of the Facility's compliance (or lack thereof) with all effluent limitations and other WDRs, and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the Order.
- c. The names and general responsibilities of all persons employed at the Facility;
- d. The names and telephone numbers of persons to contact regarding the Facility for emergency and routine situations; and
- e. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.
- f. **Storm Water Reporting.** The Permittee shall submit, as part of its annual report to the Regional Water Board, an evaluation of the effectiveness of the Permittee's best management practices (BMPs) to control the run-on of storm water to the treatment facility site, as well as activities to maintain and upgrade these BMPs.

#### E. Spill Notification

1. **Spills and Unauthorized Discharges.** Information regarding all spills and unauthorized discharges (except SSOs) that may endanger health or the environment shall be provided orally to the Regional Water Board<sup>4</sup> within 24 hours from the time the Permittee becomes aware of the circumstances and a written report shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances, in accordance with Section V.E of Attachment D.

Information to be provided verbally to the Regional Water Board includes:

- a. Name and contact information of caller;
- b. Date, time, and location of spill occurrence;
- c. Estimates of spill volume, rate of flow, and spill duration, if available and reasonably accurate;
- d. Surface water bodies impacted, if any;
- e. Cause of spill, if known at the time of the notification;
- f. Cleanup actions taken or repairs made at the time of the notification; and
- g. Responding agencies.

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<sup>4</sup> The contact number of the Regional Water Board during normal business hours is (707) 576-2220. After normal business hours, spill reporting to the California Governor's Office of Emergency Services Warning Center (CalOES) will satisfy the 24 hour spill reporting requirement for the Regional Water Board. The contact number for spill reporting for the CalOES is (800) 852-7550.

Order No. R1-2018-0003  
Sonoma West Holdings, Inc.  
NPDES No. CA0023655

**CERTIFICATION**

I, Matthias St. John, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on November 7, 2018.

Issued by: \_\_\_\_\_  
Matthias St. John  
Executive Officer

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