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Arnold  
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**ORDER NO. R1-2010-0019  
NPDES NO. CA0023655  
WDID NO. 1B812020SON**

**WASTE DISCHARGE REQUIREMENTS  
FOR  
SONOMA WEST HOLDINGS, INCORPORATED  
WASTEWATER TREATMENT FACILITY, PLANT NO. 2**

The following Discharger is subject to waste discharge requirements as set forth in this Order:

**Table 1. Discharger Information**

<b>Discharger</b>	Sonoma West Holdings, Incorporated
<b>Name of Facility</b>	Wastewater Treatment Facility, Plant No. 2
<b>Facility Address</b>	2064 Highway 116 North
	Sebastopol, CA 95472
	Sonoma County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a <b>minor</b> discharge.	

Discharges by Sonoma West Holdings, Incorporated from the discharge points identified below are subject to waste discharge requirements as set forth in this Order.

**Table 2. Discharge Location**

<b>Discharge Point</b>	<b>Effluent Description</b>	<b>Discharge Point Latitude</b>	<b>Discharge Point Longitude</b>	<b>Receiving Water</b>
001	Treated process wastewater	38° 25' 22" N	122° 51' 04" W	Barlow Creek
002	Treated process wastewater	various	various	Land application at Bench Nos. 1 – 7
003	Treated domestic wastewater	38° 25' 221" N	122° 50' 923" W	Land application at Bermed Bench No. 1

**Table 3. Administrative Information**

This Order was adopted by the Regional Water Quality Control Board on:	April 29, 2010
This Order shall become effective on:	June 13, 2010
This Order shall expire on:	June 13, 2015
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	<u>180 days prior to the Order expiration date</u>

IT IS HEREBY ORDERED, that Order No. R1-2003-0059 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Catherine Kuhlman, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on April 29, 2010.

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Catherine Kuhlman, Executive Officer

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## I. Facility Information

The following Discharger is subject to waste discharge requirements as set forth in this Order.

**Table 4. Facility Information**

<b>Discharger</b>	Sonoma West Holdings, Incorporated
<b>Name of Facility</b>	Wastewater Treatment Facility, Plant No. 2
<b>Facility Address</b>	2064 Highway 116 North
	Sebastopol, CA 95472
	Sonoma County
<b>Facility Contact, Title, Phone No.</b>	Mike Babbini, Real Estate Manager, (707) 829-4612
<b>Mailing Address</b>	2064 Highway 116 North, Sebastopol, CA 95472
<b>Type of Facility</b>	Multi-tenant Food and Beverage Processing, Packaging, Storage and Warehousing Facility
<b>Facility Design Flow</b>	0.17 million gallons per day (mgd) and 0.37 mgd – monthly average and daily maximum land application capacities for the disposal of industrial process wastewater
	2,720 gallons per day (gpd) and 6,000 gpd – monthly average and daily maximum land application capacities for the reclamation of domestic wastewater

## II. Findings

The California Regional Water Quality Control Board, North Coast Region (hereinafter the Regional Water Board), finds:

- A. **Background.** Sonoma West Holdings, Incorporated (hereinafter the Discharger) is currently discharging domestic wastewater and commercial food and beverage process wastewater pursuant to Order No. R1-2003-0059 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0023655. The Discharger submitted a Report of Waste Discharge, dated June 13, 2008, and applied for an NPDES permit renewal to discharge treated wastewater from its multi-tenant food processing facility.
- B. **Facility Description.** The Discharger's facility is a multi-tenant food and beverage processing, packaging, storage and warehousing facility located at 2064 Highway 116 North, Sebastopol, CA 95472. As of January 2009, the facility had twenty seven tenants including eleven wineries, seven storage units, six food and beverage processors, two cell towers, and a transportation business office.

Based on the Discharger's Annual Reports from 2003 through 2009, the facility is currently generating approximately 26,000 gallons per day (gpd) of process wastewater with a peak flow of 48,000 gpd. Based on the same annual reports, the facility is currently generating approximately 1,300 gpd of domestic wastewater from tenant facilities with a peak daily flow of 2,204 gallons. The domestic and industrial process wastewater systems are isolated from each other. The equipment and land treatment units for the domestic and industrial systems have maximum daily design treatment capacities of 6,000 gpd and 368,000 gpd, respectively, and average monthly design treatment capacities of 2,720 gpd and 173,000 gpd, respectively.

This Order retains design flow figures (0.17 mgd average and 0.37 mgd maximum) for establishment of limitations and conditions which address land application uses of wastewaters at Discharge Point 002. These design figures represent the upper extent of the land's assimilative capacity for this type of food processing wastewater, as determined by the Discharger in the Capacity Assessment Report dated July 22, 2003.

Process wastewaters are collected in interior and exterior floor drains, which flow to a series of three sumps where large solids are removed by a rotary screen, additional solids are removed by settling, and oil and grease can be removed by skimming, if necessary. Following this primary treatment step, process wastewaters flow by gravity to an irrigation sump before being applied to land on Bench Nos. 1 - 7. Runoff, or tailwater, from the benches is collected and conveyed to an aerated "transfer pond" from which it is reapplied to land or pumped to a 6 acre (15 million gallon) storage pond known as Lake Davis. Process wastewater from Lake Davis can be discharged to Barlow Creek, or it can be returned to the transfer pond. During periods of heavy precipitation or when the benches are saturated, process wastewater is retained in Lake Davis unless discharge to Barlow Creek becomes necessary for safe operation of the pond.

Domestic wastewater from the facility is collected in 4 septic tanks, where settling occurs, and then flows to a lined and aerated domestic wastewater pond. It is then filtered and disinfected with chlorine prior to application to an isolated bermed area of Bench No. 1. The bermed area of Bench No. 1 is designed to allow the domestic tailwater to percolate and evaporate and to prevent commingling of domestic and process tailwaters. Storm water from all benches, including the bermed portion of Bench No. 1, can runoff directly to Barlow Creek during storm events, when discharge to land is not occurring and when certain other protective permit conditions are met.

In September 2008, the Discharger notified the Regional Water Board of its intent to accept process wastewater from offsite wineries and food and beverage

processors, highlighting that its land application and reclamation use of process wastewaters is currently occurring at approximately 15 percent of capacity. This Order permits the Discharger to accept offsite wastewater, of similar quality to that produced by this facility, and establishes terms and conditions to address the practice.

Attachment B provides a map of the area around the facility. Attachment C provides a flow schematic of the facility.

- C. **Legal Authorities.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).
- D. **Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E are also incorporated into this Order.
- E. **California Environmental Quality Act (CEQA).** Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.
- F. **Technology-Based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations<sup>1</sup>, require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. Discharges to surface waters authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3. A detailed, discussion of the technology-based effluent limitations development is included in the Fact Sheet.
- G. **Water Quality-Based Effluent Limitations.** Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than

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<sup>1</sup> All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

- H. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan for the North Coast Region* (hereinafter the Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan does not specifically identify beneficial uses for Barlow Creek, but does identify uses for the Russian River, to which Barlow Creek, via Atascadero Creek and Green Valley Creek, is tributary. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to Barlow Creek are as follows:

**Table 5. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water	Beneficial Uses
001	Barlow Creek, tributary to the Russian River within the Guerneville Hydrologic Subarea of the Russian River Hydrologic Unit	<b>Existing:</b> MUN - Municipal and Domestic Supply AGR - Agricultural Supply IND - Industrial Service Supply GWR - Ground Water Recharge FRSH - Freshwater Replenishment NAV - Navigation REC-1 - Water Contact Recreation REC-2 - Non-Contact Water Recreation COMM - Commercial and Sport

Discharge Point	Receiving Water	Beneficial Uses
		Fishing WARM - Warm Freshwater Habitat COLD - Cold Freshwater Habitat WILD - Wildlife Habitat RARE - Preservation of Rare, Threatened, or Endangered Species MIGR - Migration of Aquatic Organisms SPWN - Spawning, Reproduction, and/or Early Development EST - Estuarine Habitat  <b>Potential:</b> PRO - Industrial Process Supply POW - Hydropower Generation SHELL - Shellfish Harvesting AQUA - Aquaculture
002 and 003	Groundwater	<b>Existing:</b> MUN - Municipal and Domestic Supply AGR - Agricultural Supply IND - Industrial Service Supply PRO - Industrial Process Supply FRSH - Freshwater Replenishment to Surface Waters

Requirements of this Order implement the Basin Plan.

- I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.
- J. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water

Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

- K. **Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does not include compliance schedules or interim effluent limitations.
- L. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. [40 C.F.R. § 131.21; 65 Fed. Reg. 24641 (April 27, 2000)] Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.
- M. **Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (BOD<sub>5</sub>), total suspended solids (TSS), and settleable solids. Restrictions on these pollutants are discussed in section IV.B.2 of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The

scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless “applicable water quality standards for purposes of the CWA” pursuant to section 131.21(c)(1). Collectively, this Order’s restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

- N. **Antidegradation Policy.** Section 131.12 requires that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California’s antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board’s Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with the antidegradation provisions of section 131.12 and State Water Board Resolution No. 68-16.
- O. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.
- P. **Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.
- Q. **Monitoring and Reporting.** Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require

technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

- R. **Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.
- S. **Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections IV.B, IV.C, and V.B of this Order are included to implement State law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.
- T. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.
- U. **Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

### III. Discharge Prohibitions

- A. The discharge of any waste not specifically regulated by this permit, not disclosed by the Discharger, or not within the reasonable contemplation of the Regional Water Board is prohibited.
- B. Creation of pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code is prohibited.
- C. The discharge of waste to land that is not owned or under agreement for use by the Discharger is prohibited, except for use for fire suppression as provided in Title 22, sections 60307 (a) and (b) of the California Code of Regulations.

- D. The discharge or reclamation use of untreated or partially treated process waste (receiving a lower level of treatment than described in section II.A of the Fact Sheet) from anywhere within the collection, treatment, or disposal facility is prohibited except as provided for in Attachment D, Standard Provision G (Bypass).
- E. The discharge of wastewater, other than process wastewater and cold storage defrost wastewater, into the process wastewater treatment system is prohibited.
- F. Direct discharge of process wastewater to Barlow Creek is prohibited during the summer dry season (May 15 through September 30). The discharge of domestic waste to Barlow Creek is prohibited at all times.
- G. The Discharger shall minimize the discharge of process wastewater to Barlow Creek, specifically limiting discharges to periods when large volumes of wastewater jeopardize the safe operation of the storage pond. During the period of October 1 through May 14 each year, the discharge of process wastewater into Barlow Creek is limited to only excess wastewater as needed to safely operate the aerated storage pond and shall not exceed more than one-percent of the flow of Atascadero Creek as measured at the Occidental Road Bridge. For purposes of this Order, compliance with this discharge prohibition shall be determined as follows:
  - 1. The discharge of treated process wastewater shall be adjusted at least once daily to avoid exceeding, to the extent practicable, one percent of the most recent daily flow measurement of Atascadero Creek<sup>2</sup>. Daily flow shall be based on flow meter comparisons reasonably read between the hours of 12:01 am to 12:00 midnight; and
  - 2. In no case shall the total volume of treated process wastewater discharged in a calendar month exceed one percent of the total volume of Atascadero Creek in the same calendar month. At the beginning of the discharge season, the monthly flow volume comparisons shall be based on the date when the discharge commenced to the end of the calendar month. At the end of the discharge season, the monthly flow volume shall be calculated from the first day of the calendar month to the date when the discharge ceased for the season.

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<sup>2</sup> An alternative flow gauging location may be established if it is determined that measurements at an alternative location are more representative of conditions at the point of discharge. In the event that a new gauge station is established, the Monitoring and Reporting Program will be modified to identify the new flow monitoring gauge.

- H. The discharge of domestic waste, treated or untreated, to surface waters is prohibited.
- I. The discharge of waste classified as “hazardous,” as defined in CCR, Title 23, Chapter 15, Section 2521(a) to any part of the domestic and/or process wastewater disposal systems is prohibited.
- J. The reclamation use of treated domestic wastewater shall be restricted to irrigation Bench No. 1 at Discharge Point 003.
- K. Treated domestic and process wastewaters shall not be applied to the bench irrigation areas within 24 hours preceding a forecasted rain event, during rainfall, or 24 hours after a rainfall event, or when soils are saturated.
- L. Treated process wastewater may not be land applied at a rate exceeding 0.37 mgd on any single day or at a rate exceeding 0.17 mgd, as determined from any consecutive 30-day mean daily flow.
- M. Cold storage defrost water shall only be discharged to Lake Davis. The direct discharge of cold storage defrost wastewater to Barlow Creek is prohibited.

**IV. Effluent Limitations and Discharge Specifications**

**A. Effluent Limitations – Discharge Point 001**

**1. Final Effluent Limitations – Discharge Point 001**

- a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached Monitoring and Reporting Program (MRP).

**Table 6. Effluent Limitations for Discharge Point 001**

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
BOD <sub>5</sub>	mg/L	--	80.
TSS	mg/L	--	80.
pH	pH units	6.5 – 8.5	
Settleable Solids	mL/L/hr	--	0.2
Temperature	°C	--	27

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
COD	mg/L	--	50
Cadmium	µg/L	1.8 <sup>3</sup>	3.6 <sup>4</sup>
Copper	µg/L	6.0 <sup>4</sup>	12 <sup>5</sup>
Cyanide	µg/L	4.3	8.5
Nickel	µg/L	37 <sup>5</sup>	75 <sup>6</sup>
Selenium	µg/L	4.1	8.2
Zinc	µg/L	52 <sup>6</sup>	104 <sup>7</sup>

- b. **Acute Toxicity:** There shall be no acute toxicity in treated wastewater discharged to Barlow Creek. The Discharger will be considered compliant with this limitation when the survival of aquatic organisms in a 96-hour flow through or static acute toxicity bioassay of undiluted effluent discharged to Barlow Creek complies with the following:
- i. Minimum for any one bioassay: 70 percent survival; and
  - ii. Median for any three or more consecutive bioassays<sup>7</sup>: at least 90 percent survival.

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<sup>3</sup> Final effluent limitations for cadmium are hardness-dependent and must be determined at the time of monitoring. Values in Table 6 are based on a receiving water hardness of 85 mg/L CaCO<sub>3</sub>. See Appendix E-1 in Attachment E for the full table of hardness-dependent final cadmium effluent limitations, which are determined based on the hardness of the receiving water at the time the discharge is sampled.

<sup>4</sup> Final effluent limitations for copper are hardness-dependent and must be determined at the time of monitoring. Values in Table 6 are based on a receiving water hardness of 85 mg/L CaCO<sub>3</sub>. See Appendix E-2 to Attachment E for the full table of hardness-dependent final copper effluent limitations, which are determined based on the hardness of the receiving water at the time the discharge is sampled.

<sup>5</sup> Final effluent limitations for nickel are hardness-dependent and must be determined at the time of monitoring. Values in Table 6 are based on a receiving water hardness of 85 mg/L CaCO<sub>3</sub>. See Appendix E-3 to Attachment E for the full table of hardness-dependent final nickel effluent limitations, which are determined based on the hardness of the receiving water at the time the discharge is sampled.

<sup>6</sup> Final effluent limitations for zinc are hardness-dependent and must be determined at the time of monitoring. Values in Table 6 are based on a receiving water hardness of 85 mg/L CaCO<sub>3</sub>. See Appendix E-4 to Attachment E for the full table of hardness-dependent final zinc effluent limitations, which are determined based on the hardness of the receiving water at the time the discharge is sampled.

Compliance with the acute toxicity effluent limitation shall be determined in accordance with section V.A of the attached MRP (Attachment E) of this Order.

- c. **Chronic toxicity:** Chronic toxicity in the effluent shall not exceed 1.0 TUc.

Compliance with this effluent limitation shall be determined in accordance with section V.B of the Monitoring and Reporting Program (Attachment E).

**2. Interim Effluent Limitations – Discharge Point 001 – Not Applicable**

**B. Land Discharge Specifications – Discharge Point 002**

**1. Final Effluent Limitations – Discharge Point 002**

- a. The Discharger shall maintain compliance with the following effluent limitations contained in Table 7, with compliance measured at Monitoring Location STG-001, as described in the attached MRP:

**Table 7. Effluent Limitations for Discharge Point 002**

Parameter	Units	Effluent Limitations	
		Maximum Daily	Average Monthly
BOD <sub>5</sub>	mg/L	80.	---
TSS	mg/L	80.	---
pH	pH units	6.5 – 8.5	---
Settleable Solids	mL/ r	1.0	---

- b. The Discharger shall properly operate and maintain all treatment, storage, and irrigation equipment.
- c. 1.8 acres of Bench No. 1 shall be bermed and separated to receive only treated domestic wastewater. The remaining portion of Bench No. 1 shall receive only treated process wastewater. The tailwater collection system of Bench No. 1 shall retain all tailwater and prevent commingling of domestic and process wastewaters.

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<sup>7</sup> During periods of survival greater than 90 percent, the median shall be reported using the three most recent consecutive bioassays. When survival is depressed below 90 percent, the median calculation shall be reported after two more consecutive bioassays have been completed and shall continue to be calculated using all bioassays from the first reduction in survival below 90 percent until the median survival of all such samples exceeds 90 percent survival or until three consecutive samples demonstrate survival exceeding 90 percent.

- d. The Discharger shall continue to develop, and update annually, a plan to maximize the volume of treated process wastewater that is reused and/or land applied while maintaining compliance with this Order and the Basin Plan.
- e. To the maximum extent practicable, the inflow of uncontaminated storm water into the process wastewater collection system, including the storage pond, shall be prevented.

**C. Reclamation Specifications – Discharge Point 003**

**1. Final Effluent Limitations – Discharge Point 003**

- a. The Discharger shall maintain compliance with the following effluent limitations contained in Table 8, at Discharge Point 003, with compliance measured at Monitoring Location REC-001 as described in the attached MRP:

**Table 8. Effluent Limitations for Discharge Point 003**

Parameter	Units	Effluent Limitations	
		Maximum Daily	Average Monthly
BOD <sub>5</sub>	mg/L	80.	50.
TSS	mg/L	80.	50.
pH	pH units	6.5 – 8.5	---

- b. 1.8 acres of Bench No. 1 shall be bermed and separated to receive only treated domestic wastewater. The remaining portion of Bench No. 1 shall receive only treated process wastewater. The tailwater collection system of Bench No. 1 shall retain all tailwater and prevent commingling of domestic and process wastewaters.
- c. **Flow.** The maximum daily flow of domestic waste to the domestic wastewater treatment system shall not exceed 6,000. gpd and the monthly average flow shall not exceed 2,720. gallons.
- d. **Bacteria.** Disinfected treated domestic wastewater discharged at Discharge Point 003 to Bench No. 1 shall not contain total coliform bacteria in excess of the following concentrations:
  - i. The median concentration of the results of bacteriological analyses from samples collected during any calendar month shall not exceed an MPN of 23 per 100 mL, and

- ii. No sample shall exceed an MPN of 240 total coliform bacteria per 100 mL.

## **2. Wastewater Reclamation Additional Requirements**

Treated domestic wastewater shall be disposed of in accordance with the following provisions:

- a. The Discharger shall manage recycled water in accordance with Title 22, California Code of Regulations (CCR), Division 4, Chapter 3 (Section 60310 - 60357).
- b. The use of recycled water shall not create a condition of pollution or nuisance as defined in Water Code section 13050(m).
- c. Recycled water shall not be applied to irrigation areas during periods when uncontrolled runoff may occur.
- d. Recycled water shall be applied in such a manner so as not to exceed vegetative demand or field capacity.
- e. Recycled water and airborne spray shall not be allowed to escape from the authorized recycled water use area(s). [Title 22, CCR, Division 4, Chapter 3, Section 60310(e)]
- f. Direct or windblown spray, mist, or runoff from irrigation areas shall not enter dwellings, designated outdoor eating areas, or food handling facilities. [Title 22 CCR Division 4, Chapter 3, Section 60310(e)(2)]
- g. All pipes carrying recycled water shall be installed and maintained to comply with the requirements of California Health and Safety Code section 116815 regarding labeling and marking of pipes that carry recycled water.
- h. Recycled water shall not be irrigated within 50 feet of any domestic water supply well or domestic water supply surface intake, unless the technical requirements specified in Title 22 CCR Division 4, Chapter 3, Section 60310 (a) have been met and approved by DHS.
- i. Recycled water shall not be impounded within 100 feet of a domestic water supply well unless the technical requirements specified in Title 22 CCR Division 4, Chapter 3, Section 60310 (b) have been met.
- j. The use of recycled water shall not cause degradation of any water supply.

- k. Areas irrigated with recycled water shall be managed to prevent ponding and conditions conducive to the proliferation of mosquitoes and other disease vectors, and to avoid creation of a public nuisance or health hazard. Irrigation water shall infiltrate completely within a 24-hour period.
- l. All areas where recycled water is used that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than 4 inches high by 8 inches wide, that include the following wording: "RECYCLED WATER – DO NOT DRINK". [Title 22 CCR Division 4, Chapter 3, Section 60310 (g)] These warning signs shall be posted at least every 500 feet with a minimum of one sign at each corner and access road.

## **V. Receiving Water Limitations**

### **A. Surface Water Limitations**

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. Compliance with receiving water limitations shall be measured at monitoring locations described in the MRP (Attachment E). Discharges to surface water from the facility, land application of wastewater, and/or reclamation uses of wastewater shall not cause the following:

1. The discharge shall not cause the dissolved oxygen concentration of the receiving water to violate the following objectives established by Table 3-1 of the Basin Plan.
  - 7.0 mg/L, minimum in any sample
  - 7.5 mg/L, 90 percent lower limit (90 percent or more of the monthly mean dissolved oxygen concentrations in a calendar year shall be greater than or equal to 7.5 mg/L)
  - 10.0 mg/L, 50 percent lower limit (50 percent or more of the monthly mean dissolved oxygen concentrations in a calendar year shall be greater than or equal to 10.0 mg/L)
2. As established by Table 3-1 of the Basin Plan, the discharge shall not cause the pH of receiving waters to be depressed below 6.5 nor raised above 8.5. Within this range, the discharge shall not cause the pH of the receiving waters to be changed at any time more than 0.5 units from that which occurs naturally.

3. The discharge shall not cause turbidity of receiving waters to be increased more than 20 percent above naturally occurring background levels.
4. The discharge shall not cause receiving waters to contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.
5. The discharge shall not cause receiving waters to contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
6. The discharge shall not cause receiving waters to contain taste or odor producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.
7. The discharge shall not cause coloration of receiving waters that causes nuisance or adversely affects beneficial uses.
8. The discharge shall not contain suspended material in concentrations that result in deposition of material in receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses.
9. The discharge shall not cause or contribute concentrations of biostimulants to the receiving water that promote objectionable aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.
10. The discharge shall not cause receiving waters to contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in humans, plants, animals, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods, as specified by the Regional Water Board.
11. The discharge shall not cause an increase of the receiving water temperature by more than 5°F above natural receiving water temperature.
12. The discharge shall not cause an individual pesticide or combination of pesticides to be present in concentrations that adversely affect beneficial uses. The discharge must not cause bioaccumulation of pesticide, fungicide, wood treatment chemical, or other toxic pollutant concentrations in bottom sediments or aquatic life to levels which are harmful to human health. The discharge shall not cause the receiving waters to contain concentrations of pesticides in excess of the limiting concentrations set forth in Table 3-2 of the Basin Plan.

13. The discharge shall not cause receiving waters to contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise affect beneficial uses.
14. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board, as required by the federal Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Clean Water Act, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.
15. The discharge shall not cause concentrations of chemical constituents to occur in excess of limits specified in Table 3-2 of the Basin Plan or in excess of more stringent Maximum Contaminant Levels (MCLs) established for these pollutants in Title 22, Division 4, Chapter 15, Articles 4 and 5.5 of the California Code of Regulations.
16. The discharge shall not cause exceedances of the following water quality objectives established by Table 3-1 of the Basin Plan for the mainstem of the Russian River downstream of its confluence with Laguna de Santa Rosa.

**Table 9. Water Quality Objectives for the Russian River HU**

Parameter	Units	Water Quality Objective	
		90% Upper Limit <sup>8</sup>	50% Upper Limit <sup>6</sup>
Specific Conductance	µmhos/cm	375	285
Total Dissolved Solids	mg/L	200	170

## B. Groundwater Limitations

1. The collection, storage, and use of wastewater or recycled water shall not cause or contribute to a statistically significant degradation of groundwater quality.
2. The collection, storage, and use of wastewater shall not cause groundwater to contain taste or odor producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

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<sup>8</sup> 90 and 50 percent upper limits represent the 90<sup>th</sup> and 50<sup>th</sup> percentile values for a calendar year; i.e., 90 (or 50) percent or more of the monthly means must be less than or equal to the upper limit.

## VI. Provisions

### A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.
2. **Regional Water Board Standard Provisions.** The Discharger shall comply with the following provisions.
  - a. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
  - b. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, interim or final effluent limitation, land discharge specification, reclamation specification, receiving water limitation or provision of this Order that may result in a significant threat to human health or the environment, such as inundation of treatment components, breach of pond containment, ponding of wastewater on the land application sites, etc, or that results in a discharge to surface water at a location other than Discharge Point 001, the Discharger shall as soon as possible, but no later than two (2) hours after becoming aware of the circumstances, orally<sup>9</sup> notify the State Office of Emergency Services, the local health officer or director of the environmental health with jurisdiction over affected water bodies, and the Regional Water Board.
  - c. As soon as possible, but no later than twenty-four (24) hours after becoming aware of a discharge to surface water at a location other than Discharge Point 001, the Discharger shall submit to the Regional Water Board a written certification that the State Office of Emergency Services and the local health officer or director of the environmental health with jurisdiction over affected water bodies have been notified of the discharge. Written documentation of the circumstances of the spill event shall be submitted to the Regional Water Board within five (5) days, unless the Regional Water Board waives confirmation. The written documentation

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<sup>9</sup> Oral reporting means direct contact with a Regional Water Board staff person. The oral report may be given in person or by telephone. After business hours, oral contact must be made by calling the State Office of Emergency Services or Regional Water Board spill officer.

shall state the nature, time, duration, and cause of noncompliance and shall describe the measures taken or being taken to remedy the noncompliance and prevent recurrence including, where applicable, a schedule of implementation. Other types of noncompliance require written notification, as above, at the time of the routine monitoring report.

- d. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Water Code section § 1211)

## **B. Monitoring and Reporting Program (MRP) Requirements**

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order.

## **C. Special Provisions**

### **1. Reopener Provisions**

- a. **Standard Revisions.** If applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, the Regional Water Board may reopen this Order and make modifications in accordance with such revised standards.
- b. **Reasonable Potential.** This Order may be reopened for modification to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above an applicable water quality objective.
- c. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on that objective.
- d. **303(d)-Listed Pollutants.** If a TMDL is adopted and is applicable to receiving waters for this discharge, this Order may be reopened to incorporate requirements of the TMDL. If the Regional Water Board determines that a voluntary offset program is feasible for and desired by the Discharger, then this Order may be reopened to re-evaluate the effluent limitations for the pollutant(s) that are subject of the TMDL and, if

appropriate, to incorporate provisions recognizing the Discharger's participation in an offset program.

- e. **Water Effects Ratios (WERs) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, when applicable, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for certain metals. If the Discharger performs studies to determine site-specific WERs and /or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.
- f. **Recycled Water Policy.** The Discharger shall comply with the applicable sections of the State Water Board adopted Resolution No. 2009-0011 (Recycled Water Policy). This Order incorporates provisions and requirements of the policy pertinent to the Discharger's water recycling practice.

## 2. Special Studies, Technical Reports and Additional Monitoring Requirements

### a. Toxicity Reduction Requirements

- i. **Whole Effluent Toxicity.** This Order contains limitations for both acute and chronic whole effluent toxicity for Discharge Point 001. There shall be no acute toxicity in the effluent, measured as a minimum of 70% survival for any single sample bioassay or 90% survival for a bioassay three-sample median. Chronic toxicity shall not exceed 1.0 TUC in effluent. As established by the MRP, if either effluent limitation is exceeded, the Discharger shall conduct accelerated toxicity monitoring. Results of accelerated toxicity monitoring will indicate a need to conduct a Toxicity Reduction Evaluation (TRE), if toxicity persists; or it will indicate that a return to routine toxicity monitoring is justified because persistent toxicity has not been identified by accelerated monitoring. TREs shall be conducted in accordance with the TRE workplan prepared by the Discharger pursuant to Section VI. C. 2. a. (2) of this Order, below.
- ii. **Toxicity Reduction Evaluations (TRE) workplan.** The Discharger shall prepare and submit to the Regional Water Board Executive Officer an updated TRE workplan within 180 days of the effective date of this Order that ensures consistency with this Order. This workplan shall be reviewed and updated as necessary in order to remain current

and applicable to the discharge and discharge facilities. The workplan shall describe the steps the Discharger 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 and 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).

**iii.** Toxicity Reduction Evaluations (TRE). The TRE shall be conducted in accordance with the following:

- (a)** The TRE shall be initiated within 30 days of the date of completion of the accelerated monitoring test, required by Section V of the MRP, observed to exceed either the acute or chronic toxicity parameter.
- (b)** The TRE shall be conducted in accordance with the Discharger's workplan.
- (c)** The TRE shall be in accordance with current technical guidance and reference material including, at a minimum, the USEPA manual EPA/833B 99/002.
- (d)** The TRE may end at any stage if, through monitoring results, it is determined that there is no longer consistent toxicity.
- (e)** The Discharger may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. As guidance, the Discharger shall use the USEPA acute and chronic manuals, EPA/600/6-91/005F (Phase I), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III).
- (f)** As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the source(s) 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 chronic toxicity parameters.

- (g) Many recommended TRE elements accompany required efforts of source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements of recommendations of such programs may be acceptable to comply with requirements of the TRE.
- (h) The Regional Water Board recognizes that chronic toxicity may be episodic and identification of a reduction of sources of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

**b. Groundwater Monitoring Program.**

The Discharger shall implement the monitoring program described by the Groundwater Monitoring and Reporting Plan, submitted to the Regional Water Board on March 17, 2004. The monitoring program described by the plan is incorporated with additions into section VIII.B of the attached MRP (Attachment E).

**c. Surface Receiving Water Study.**

The Discharger shall perform a study by October 1, 2014 that assesses the impacts to Barlow and Atascadero Creeks by analyzing all of the following factors:

- i. The reliability of the process wastewater treatment facility;
- ii. The range of flow rates of effluent discharges and receiving water flows and respective constituent levels that would protect the beneficial uses of the receiving waters;
- iii. Whether reasonable alternatives for reclamation have been addressed to limit the amount of the wastewater to be discharged.

**3. Best Management Practices and Pollution Prevention**

**a. Facility-Wide Operational Best Management Practices (BMPs) Manual**

The Discharger shall continue to annually review and update its Facility-Wide Operational BMPs Manual. In addition, the Discharger shall

continue to require all tenants to adhere to the provisions of the manual as a condition of all lease agreements.

**b. Pollutant Minimization Program (PMP)**

The Discharger shall, as required by the Executive Officer, develop and conduct a PMP as further described below when there is evidence (e.g., sample results reported as detected, not quantified (DNQ) when the effluent limitation is less than the minimum detection limit (MDL), sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent discharged directly to surface waters at Discharge Point 001 above an effluent limitation and either:

- i. A sample result is reported as DNQ and the effluent limitation is less than the RL; or
- ii. A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section X.B.4.

The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

- iii. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;
- vi. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;
- v. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;
- vi. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and
- vii. An annual status report that shall be sent to the Regional Water Board including:
  - (a) All PMP monitoring results for the previous year;

- (b) A list of potential sources of the reportable priority pollutant(s);
- (c) A summary of all actions undertaken pursuant to the control strategy; and
- (d) A description of actions to be taken in the following year.

#### **4. Construction, Operation and Maintenance Specifications**

- a. The Discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory quality control and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger only when necessary to achieve compliance with the conditions of this Order. [40 CFR 122.41(e)]
- b. The Discharger shall maintain an updated Operation and Maintenance (O&M) Manual for the Facility. The Discharger shall update the O&M Manual, as necessary, to conform with changes in operation and maintenance of the Facility. The O&M Manual shall be readily available to operating personnel onsite. The O&M Manual shall include the following.
  - i. Description of the treatment plant table of organization showing the number of employees, duties and qualifications and plant attendance schedules (daily, weekends and holidays, part-time, etc). The description should include documentation that the personnel are knowledgeable and qualified to operate the treatment facility so as to achieve the required level of treatment at all times.
  - ii. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.
  - iii. Description of laboratory and quality assurance procedures.
  - iv. Process and equipment inspection and maintenance schedules.
  - v. Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Discharger will be able to comply with requirements of this Order.

- vi. Description of preventative (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.

**5. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable**

**6. Other Special Provisions**

**a. Solids Disposal and Handling Requirements**

- i. Sludge, as used in this Order, means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Biosolids refers to sludge that has been treated, tested, and demonstrated to be capable of being beneficially and legally used pursuant to federal and State regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities.
- ii. All collected sludges and other solid waste removed from liquid wastes shall be removed from screens, sumps, ponds, and tanks as needed to ensure optimal plant operation and disposed of in accordance with applicable federal and State regulations.
- iii. The use and disposal of biosolids shall comply with all the requirements in 40 CFR 503, which are enforceable by the USEPA, not the Regional Water Board. If during the life of this Order, the State accepts primacy for implementation of 40 CFR 503, the Regional Water Board may also initiate enforcement where appropriate.
- iv. Sludge or biosolids that are disposed of in a municipal solid waste landfill or used as daily landfill cover shall meet the applicable requirements of 40 CFR 258. In the annual self-monitoring report, the Discharger shall report the amount of sludge placed in a landfill and the landfill(s) which received the sludge or biosolids.
- v. The beneficial use of biosolids by application to land as a soil amendment is not covered or authorized by this Order. Class B biosolids that are applied to land as a soil amendment by the

Discharger within the North Coast Region shall comply with State Water Board Water Quality Order No. 2000-10-DWQ (General Waste Discharge Requirements for the Discharge of Biosolids to Land as a Soil amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities) or other WDRs issued by the Regional Water Board.

- vi. The Discharger shall take all reasonable steps to prevent and minimize any sludge use or disposal in violation of this Order that has a likelihood of adversely affected human health or the environment.
- vii. Solids and sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination.
- viii. Solids and sludge treatment and storage sites shall have facilities adequate to divert surface water runoff from adjacent areas, to protect the boundaries of the site from erosion, and to prevent drainage from the treatment and storage site. Adequate protection is defined as protection from at least a 100-year storm.
- ix. The discharge of sewage sludge and solids shall not cause waste material to be in a position where it is, or can be, conveyed from the treatment and storage sites and deposited in the waters of the State.

**b. Requirements for Aerated or Oxidation Pond Systems**

For aerated or oxidation pond systems, the following additional requirements apply:

- i. The dissolved oxygen concentration in the treatment/holding ponds shall not be less than 1.0 mg/L at any time.
- ii. A minimum freeboard, consistent with pond design but not less than two feet, shall be maintained at all times in any pond containing process and/or domestic wastewater, except with prior authorization by the Executive Officer.
- iii. All reservoirs and ponds shall be operated and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
- iv. Ponds shall have sufficient capacity to accommodate wastewater flow, groundwater infiltration and inflow in the collection system, and seasonal precipitation during the rainy season.

- v. All ponds shall have a foundation or base capable of providing support for the structures, and be capable of withstanding hydraulic pressure gradients to prevent failure due to settlement, compression, or uplift and all effects of ground motions resulting from at least the maximum probable earthquake, as certified by a registered civil engineer or certified engineering geologist.

**c. New Tenants and Operational Requirements**

- i. Prospective tenants shall be limited to wine, beverage, and food processing. Meat processing businesses, businesses producing or utilizing hazardous wastes including high proof alcohol, and businesses not generating an organic waste stream such as vehicle maintenance, and light or heavy industry are prohibited.
- ii. The Discharger shall require a written statement by each new tenant certifying that toxic or otherwise deleterious substances will not be discharged and that they will immediately notify the Discharger if the quality or quantity of discharge is anticipated to change. Additionally, the tenant must certify in writing that they have read and intend to implement the Facility-Wide Operational BMPs Manual established by the Discharger.
- iii. The Discharger shall ensure that adequate grease interceptor or removal equipment is installed prior to commencement of any processing activities involving high fat or oil content substances. Processing activities involving high fat or oil content substances shall not discharge grease to the wastewater treatment system in amounts that impair the performance of the wastewater treatment system.

**d. Storm Water**

- i. Storm water runoff from Bench Nos. 1 through 7 may be discharged to Barlow Creek if the following criteria are met: (a) land application of treated domestic and process wastewater is not occurring; (b) the first one inch of storm water runoff is captured and returned to Lake Davis; and (c) prior to discharge of storm water to Barlow Creek, a storm water sample is collected for analysis as described in section IX.A of the attached MRP.
- ii. The Discharger shall continue to limit inflow of uncontaminated storm water into the process wastewater collection system, including the storage pond, to the maximum extent practicable.

**e. Hauled Wastewater**

The Discharger may accept offsite wine, beverage, and food processing wastewaters for onsite treatment and land application at Discharge Point 002 in accordance with the following requirements:

- i The Discharger shall maintain a waste hauler manifest that identifies the hauler, the county ID number, the volume and source/generator of the waste, the date and time the waste load was transferred, and the Discharger's representative who was present when the waste was received.
- ii The Discharger shall only accept wastewater which is similar to that generated onsite. Such wastewater shall be limited to wine and similar food and beverage processing wastewaters. Wastewaters shall not be accepted from meat processors. No septage or wastewaters from commercial facilities (e.g., restaurants) or industrial activity (e.g., vehicle maintenance) shall be accepted. No wastewaters containing nonfood-grade cleaning compounds shall be accepted.
- iii Before wastewater is accepted from a new offsite generator, that generator shall provide a written description of the wastewater, including its origin and the anticipated volume to be transferred to the Discharger on an annual basis. The generator shall certify that the wastewater to be transferred is as it has been described and, to the best of his/her knowledge, that it does not contain any toxic or hazardous pollutants above naturally occurring levels. This documentation from generators shall be maintained onsite and shall be available for review by Regional Water Board staff.
- iv The Discharger shall accept wastewater when the Discharger's operations staff is onsite.
- v Offsite wastewaters shall be transferred to the Discharger's collection sump or otherwise at a location preceding wastewater screening, settling, and skimming equipment. Offsite wastewaters shall not be transferred directly to the irrigation sump, the transfer pond, or Lake Davis, or to any other location where the facility's initial 3-sump (screening / settling / skimming) wastewater treatment equipment will be bypassed.
- vi Sampling and analysis of accepted offsite wastewaters shall be performed in accordance with the Section III.B of Monitoring and Reporting Program (MRP) included in Attachment E of this Order.

## **7. Compliance Schedules – Not Applicable**

### **VII. Compliance Determination**

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below.

#### **A. General.**

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

#### **B. Multiple Sample Data.**

When determining compliance with an AMEL for priority pollutants, and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of “Detected, but Not Quantified” (DNQ) or “Not Detected” (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure.

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

#### **C. Average Monthly Effluent Limitation (AMEL).**

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that

sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

**D. Maximum Daily Effluent Limitation (MDEL).**

If a daily discharge (or when applicable, the median determined by subsection B, above, for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

**E. Instantaneous Minimum Effluent Limitation.**

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

**F. Instantaneous Maximum Effluent Limitation.**

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

## ATTACHMENT A – DEFINITIONS

**Arithmetic Mean ( $\mu$ )**, also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean =  $\mu = \Sigma x / n$                       where:                       $\Sigma x$  is the sum of the measured ambient water concentrations, and  $n$  is the number of samples.

**Average Monthly Effluent Limitation (AMEL)**: the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

**Average Weekly Effluent Limitation (AWEL)**: the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

**Bioaccumulative** pollutants are those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

**Carcinogenic** pollutants are substances that are known to cause cancer in living organisms.

**Coefficient of Variation (CV)** is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

**Daily Discharge**: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

**Detected, but Not Quantified (DNQ)** are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

**Dilution Credit** is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

**Effluent Concentration Allowance (ECA)** is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

**Enclosed Bays** means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

**Estimated Chemical Concentration** is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

**Estuaries** means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

**Inland Surface Waters** are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

**Instantaneous Maximum Effluent Limitation:** the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

**Instantaneous Minimum Effluent Limitation:** the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

**Maximum Daily Effluent Limitation (MDEL)** means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

**Median** is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements ( $n$ ) is odd, then the median =  $X_{(n+1)/2}$ . If  $n$  is even, then the median =  $(X_{n/2} + X_{(n/2)+1})/2$  (i.e., the midpoint between the  $n/2$  and  $n/2+1$ ).

**Method Detection Limit (MDL)** is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

**Minimum Level (ML)** is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

**Mixing Zone** is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

**Not Detected (ND)** are those sample results less than the laboratory's MDL.

**Ocean Waters** are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

**Persistent** pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

**Pollutant Minimization Program (PMP)** means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

**Pollution Prevention** means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

**Reporting Level (RL)** is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

**Satellite Collection System** is the portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

**Source of Drinking Water** is any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

**Standard Deviation ( $\sigma$ )** is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

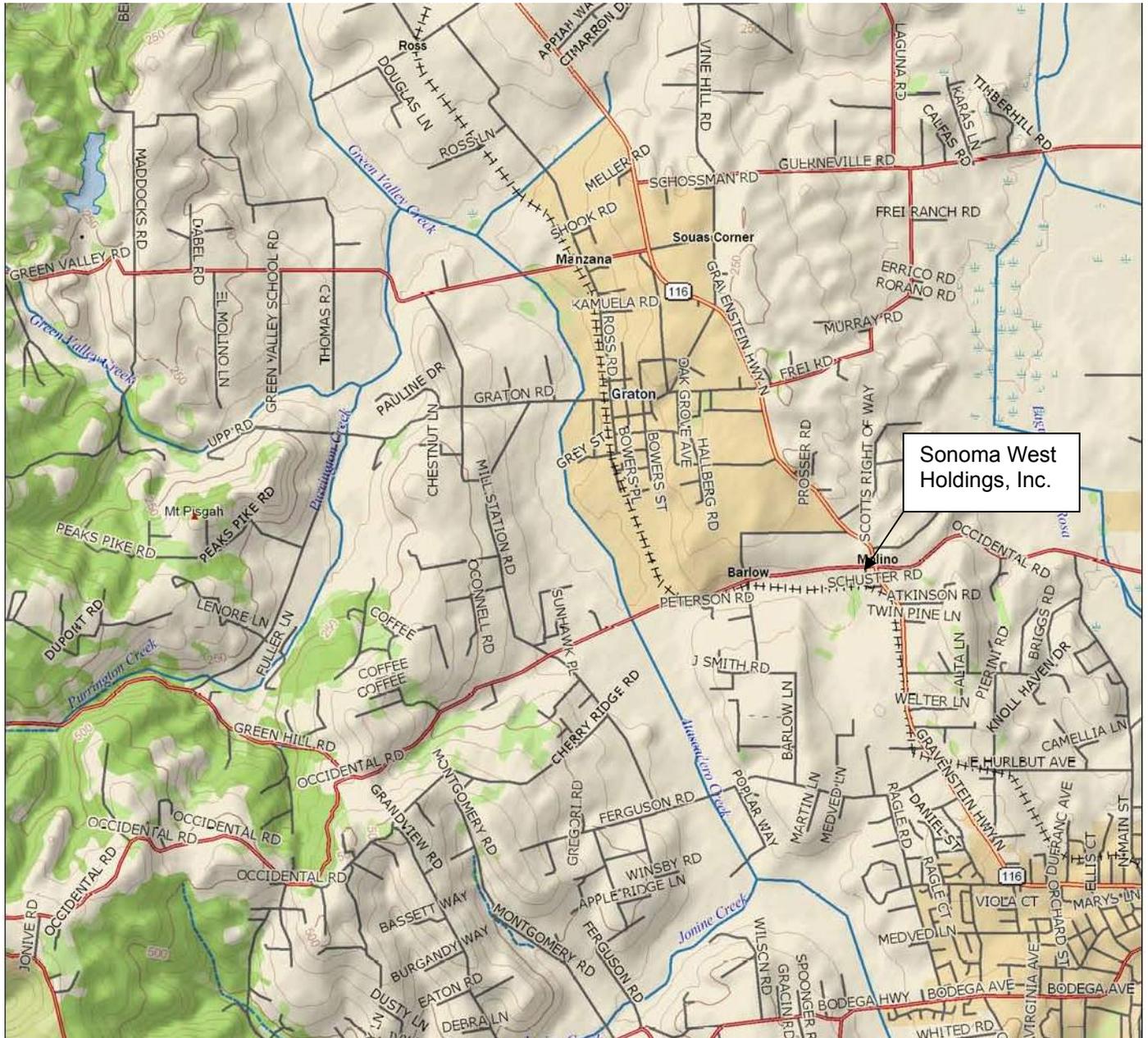
x is the observed value;

$\mu$  is the arithmetic mean of the observed values; and

n is the number of samples.

**Toxicity Reduction Evaluation (TRE)** is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

Attachment B – Map





## **ATTACHMENT D –STANDARD PROVISIONS**

### **I. STANDARD PROVISIONS – PERMIT COMPLIANCE**

#### **A. Duty to Comply**

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 C.F.R. § 122.41(a).)
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

#### **B. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

#### **C. Duty to Mitigate**

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

#### **D. Proper Operation and Maintenance**

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

#### E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

#### F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 C.F.R. § 122.41(i); Wat. Code, § 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 C.F.R. § 122.41(i)(1));
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 C.F.R. § 122.41(i)(2));
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 C.F.R. § 122.41(i)(3)); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 C.F.R. § 122.41(i)(4).)

#### G. Bypass

##### 1. Definitions

- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
- b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe

property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
  - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
  - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
  - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)
5. Notice
  - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i).)
  - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii).)

## H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)
2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
  - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
  - b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
  - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
  - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

## **II. STANDARD PROVISIONS – PERMIT ACTION**

### **A. General**

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

### **B. Duty to Reapply**

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

### **C. Transfers**

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 122.41(l)(3); § 122.61.)

## **III. STANDARD PROVISIONS – MONITORING**

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)

B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

## **IV. STANDARD PROVISIONS – RECORDS**

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application.

This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

## V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in

- accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 C.F.R. § 122.22(a)(3).)
  3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
    - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and
    - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)
  4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)
  5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.” (40 C.F.R. § 122.22(d).)

### C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.22(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

### D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5).)

### E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from

- the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):
    - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)
    - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)
  3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

#### F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R. § 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 C.F.R. § 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

**VI. STANDARD PROVISIONS – ENFORCEMENT**

- A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

**VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS**

**A. Non-Municipal Facilities**

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [section 122.42(a)]:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [section 122.42(a)(1)]:
  - a. 100 micrograms per liter (µg/L) [section 122.42(a)(1)(i)];

- b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony [*section 122.42(a)(1)(ii)*];
  - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*section 122.42(a)(1)(iii)*]; or
  - d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [*section 122.42(a)(1)(iv)*].
2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [*section 122.42(a)(2)*]:
- a. 500 micrograms per liter (µg/L) [*section 122.42(a)(2)(i)*];
  - b. 1 milligram per liter (mg/L) for antimony [*section 122.42(a)(2)(ii)*];
  - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*section 122.42(a)(2)(iii)*]; or
  - d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [*section 122.42(a)(2)(iv)*].

**B. Publicly-Owned Treatment Works (POTWs) – Not Applicable**

**ATTACHMENT E – MONITORING AND REPORTING PROGRAM (REVISED  
AUGUST 15, 2013)**

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**ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) (REVISED AUGUST 15, 2013)**

The Code of Federal Regulations section 122.48 of title 40 requires that all NPDES permits specify monitoring and reporting requirements. Water Code Sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the 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 one hour.
- B.** If the Discharger monitors any pollutant more frequently than required by this Order, using test procedures approved by 40 CFR 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 discharger monitoring reports.
- C.** Laboratories analyzing monitoring samples shall be certified by the California Department of Public Health (CDPH) in accordance with the provisions of Water Code section 13176, and must include quality assurance / quality control data with their analytical reports.

**II. MONITORING LOCATIONS**

The Discharger 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	Monitoring Location	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 to Barlow Creek, can be

Discharge Point	Monitoring Location	Monitoring Location Description
		collected at a point after treatment and before contact with the receiving water.
002	STG-001	Sampling location for process wastewater stored in Lake Davis prior to land application.
	LND-001	Sampling location for 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 1 can be collected after treatment and before being applied to land.
--	STW-001	A 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	Upstream receiving waters of Barlow Creek, upstream of the discharge point and of any inputs from the bench storm water runoff.
--	RSW-001D	Downstream receiving waters of Barlow Creek, where Discharge Point 001 meets Barlow Creek (at end of pipe).
--	RGW-001	Groundwater monitoring well located in the south eastern portion of the berm section of Bench No. 1, representing upgradient 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 upgradient 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.
--	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 reclaimed wastewater irrigation system.
--	RGW-006	Groundwater monitoring well located at the south corner of Building 1, representing potable water supply well.
--	RGW-007	Groundwater monitoring well located north of the Facility, representing potable water supply well (an alternate potable water supply well).

### III. INFLUENT MONITORING REQUIREMENTS

#### A. Monitoring Location INF-001

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

**Table E-2. Influent Monitoring**

Constituent	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
BOD <sub>5</sub>	mg/L	Grab	Weekly	SM 5210B
Flow <sup>1</sup>	gpd	Meter	Daily	Meter

#### B. Offsite Waste Haulers

1. In accordance with section VI.C.6.e of the Order, the Discharger shall maintain a manifest system which includes, for each truck load of wastewater received: the hauler, the volume and source/generator of the waste, the date and time the waste load was transferred, and the Discharger's representative who was present when the waste was received. In its monthly Self Monitoring Reports, the Discharger shall report the total volume of wastewater received from each generator who transferred wastewater to the Discharger during the reporting period.
2. For any month when outside wastewater is accepted into the treatment process, a representative of the Discharger shall collect at least one grab sample from each accepted load. The Discharger shall ensure that the grab sample is collected in a manner that results in a sample that is representative of that load. The Discharger 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. Samples may be discarded after 7 days if there is no indication of plant upset that may be attributed to the accepted load.
3. The Discharger shall collect monthly random<sup>2</sup> samples of each offsite load of wastewater and have them analyzed by a certified laboratory in accordance with the following table:

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<sup>1</sup> On a monthly basis, the Discharger shall report average and maximum daily flows.

<sup>2</sup> To select a random sample, the Discharger shall estimate, prior to the beginning of a monthly monitoring period, the number of anticipated wastewater deliveries for the month, and generate a

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

Constituent	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
BOD (20°C, 5-day)	mg/L	Grab	Monthly	SM 5210 B
TSS	mg/L	Grab	Monthly	SM 2540 D
pH	s.u.	Grab	Monthly	40 CFR 136
Settleable Solids	mL/L	Grab	Monthly	SM 2540 F
Total Coliform Organisms	MPN/100 ml	Grab	Monthly	SM 9221

#### IV. EFFLUENT MONITORING REQUIREMENTS

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

1. When discharging to Barlow Creek at Discharge Point 001, the Discharger shall monitor treated process wastewater at Monitoring Location EFF-001, as follows:

**Table E-4. Effluent Monitoring, Monitoring Location EFF- 001<sup>3</sup>**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
Effluent Flow <sup>4</sup>	gpd	Meter	Daily	Meter
pH	s.u.	Grab	Daily	40 CFR 136
Temperature	°C	Grab	Daily	40 CFR 136
Chlorine Residual <sup>5</sup>	mg/L	Grab	Daily	40 CFR 136
BOD (20°C, 5-day)	mg/L	Grab	Weekly	SM 5210 B
Total Suspended Solids	mg/L	Grab	Weekly	SM 2540 D
Settleable Solids	mL/L	Grab	Weekly	SM 2540 F

random load number from this total. When the delivery corresponding to the pre-chosen random number is received, the Discharger will collect a representative wastewater sample and have the samples analyzed in accordance with Table E-3 and with standard sample collection and handling procedures.

- <sup>3</sup> Discharges at Discharge Point 001 occur infrequently; therefore, monitoring shall occur per discharge event.
- <sup>4</sup> On a monthly basis, the Discharger shall report average and maximum daily flows.
- <sup>5</sup> Samples shall be collected at a point following disinfection and prior to discharge. All chlorine measurements shall be reported as total chlorine residual and shall be analyzed immediately.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
Cadmium	µg/L	Grab	Weekly	40 CFR 136
Copper	µg/L	Grab	Weekly	40 CFR 136
Cyanide	µg/L	Grab	Weekly	40 CFR 136
Nickel	µg/L	Grab	Weekly	40 CFR 136
Selenium	µg/L	Grab	Weekly	40 CFR 136
Zinc	µg/L	Grab	Weekly	40 CFR 136
Total Coliform Bacteria	MPN/100mL	Grab	Weekly	SM 9221
Turbidity	NTU	Grab	Weekly	SM 2130 B
Nitrate-Nitrogen	mg/L as N	Grab	Monthly	40 CFR 136
Ammonia, Total	mg/L as N	Grab	Monthly	40 CFR 136
Acute Toxicity <sup>6</sup>	% Survival	Grab	Monthly	40 CFR 136
Chronic Toxicity	TUc	Grab	Annually	40 CFR 136
CTR Scan	µg/L	Grab	Annually	Standard Methods

## V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

### A. Acute Toxicity Testing

The Discharger shall conduct acute whole effluent toxicity (WET) testing to determine compliance with the effluent limitation for acute toxicity established by section IV. A. 1 of the Order.

1. **Test Frequency.** The Discharger shall conduct acute WET testing monthly if wastewater is discharged from Discharge Point 001 during that month.
2. **Sample Type.** For 96-hour static renewal or 96-hour static non-renewal testing, the effluent samples shall be 24-hour composite samples representative of the volume and quality of the discharge from the facility, collected at Monitoring Location EFF-001. For toxicity tests requiring renewals, 24-hour composite samples collected on consecutive days are required.
3. **Test Species.** Test species for acute WET testing shall be an invertebrate, the water flea, *Ceriodaphnia dubia*, and a vertebrate, the rainbow trout, *Oncorhynchus mykiss* for at least the first two suites of tests conducted after

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<sup>6</sup> Whole effluent acute and chronic toxicity shall be monitored in accordance with the requirements of section V of this Monitoring and Reporting Program.

the effective date of the Order. After this screening period, monitoring shall be conducted monthly using the most sensitive species.

4. **Test Methods.** The presence of acute toxicity shall be estimated as specified in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (USEPA Report No. EPA-821-R-02-012, 5<sup>th</sup> edition or subsequent editions), or other methods approved by the Executive Officer.

Test procedures related to pH control, sample filtration, aeration, temperature control and sample dechlorination shall be performed in accordance with the USEPA method, and fully explained and justified in each acute toxicity report submitted to the Regional Water Board. Control of the pH in acute toxicity tests is allowed, provided that the test pH is maintained at the effluent pH, and the control of pH is done in a manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide, and cyanide.

5. **Test Dilutions.** The acute toxicity test shall be conducted using 100 percent effluent collected at Monitoring Location EFF-001, when discharging to Barlow Creek. Dilution and control waters shall be receiving water samples collected upstream of the influence of the discharge. Standard dilution water may be used if the above source exhibits toxicity.
6. **Test Failure.** If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger shall re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.
7. **Accelerated Monitoring.** If the result of any acute toxicity test fails to meet the single test minimum limitation (70 percent survival), and the testing meets all test acceptability criteria, the Discharger shall take two more samples, one within 14 days and one within 21 days following receipt of the initial sample result. If any one of the additional samples do not comply with the three sample median minimum limitation (90 percent survival), the Discharger shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with section VI. C. 2.a of the Order. If the two additional samples are in compliance with the acute toxicity requirement and testing meets all test acceptability criteria, then a TRE will not be required. If the discharge stops before additional samples can be collected, the Discharger shall contact the Executive Officer within 21 days with a plan to demonstrate compliance with the effluent limitation.

8. **Notification.** The Discharger shall notify the Regional Water Board in writing 14 days after the receipt of test results exceeding the acute toxicity effluent limitation. The notification will describe actions the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by this Order, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.
9. **Reporting.** Test results for acute toxicity tests shall be reported according to section 12 (Report Preparation) of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* or in an equivalent format that clearly demonstrates that the Discharger is in compliance with effluent limitations, and other permit requirements.
10. **Ammonia Toxicity.** The acute toxicity test shall be conducted without modifications to eliminate ammonia toxicity.

## B. Chronic Toxicity Testing

The Discharger shall conduct chronic toxicity testing to determine compliance with the effluent limitation for chronic toxicity established by section IV. A. 1 of the Order. The Discharger shall meet the following chronic toxicity testing requirements:

1. **Test Frequency.** The Discharger shall conduct chronic WET testing annually if wastewater is discharged from Discharge Point 001 during that year.
2. **Sample Type.** For 96-hour static renewal or 96-hour static non-renewal testing, effluent samples from Monitoring Locations EFF-001 shall be 24-hour composite samples that are representative of the volume and quality of the discharge from the facility. For toxicity tests requiring renewals, 24-hour composite samples collected on consecutive days are required.
3. **Test Species.** Test species for chronic WET testing shall be a vertebrate, the fathead minnow, *Pimephales promelas* (larval survival and growth), an invertebrate, the water flea, *Ceriodaphnia dubia* (survival and reproduction test), and a plant, the green algae, *Selanastrum capricornutum* (growth test). At least one time every 5 years, the Discharger shall conduct two suites of chronic WET testing using the three species listed above. After this screening period, monitoring shall be conducted annually using the most sensitive species. The next multiple-species chronic WET test shall be conducted by March 2014 if a discharge to Barlow Creek occurs during that time period.

4. **Test Methods.** The presence of chronic toxicity shall be estimated as specified in USEPA's *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms* (USEPA Report No. EPA-821-R-02-013, or subsequent editions).

Test procedures related to pH control, sample filtration, aeration, temperature control, and sample dechlorination shall be performed in accordance with the USEPA method, and fully explained and justified in each chronic toxicity report submitted to the Regional Water Board. Control of the pH in chronic toxicity tests is allowed, provided the test pH is maintained at the measured pH of the downstream receiving water, and the control of pH is done in a manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide, and cyanide.

5. **Test Dilutions.** The chronic toxicity test shall be conducted using a series of at least five dilutions and a control. The series shall consist of the following dilution series: 12.5, 25, 50, 75, and 100 percent effluent. Control and dilution water shall be receiving water collected at an appropriate location upstream of the discharge point. Laboratory water may be substituted for receiving water, as described in the USEPA test methods manual, upon approval by the Executive Officer. If the dilution water used is different from the culture water, a second control using culture water shall be used.
6. **Reference Toxicant.** If organisms are not cultured in-house, concurrent testing with a reference toxicant shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests also shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).
7. **Test Failure.** If either the reference toxicant test or the chronic toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger shall re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.
8. **Notification.** The Discharger shall notify the Regional Water Board in writing 14 days after the receipt of test results that indicate an exceedance of an effluent limitation for chronic toxicity.
9. **Accelerated Monitoring Requirements.** If the result of any chronic toxicity test exceeds the effluent limitation of 1.0 TUc as a single sample maximum, as specified in section VI.C.2.a. of the Order, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring.

Accelerated monitoring shall consist of four additional samples – with one test conducted approximately every week over a four week period. Testing shall commence within 14 days of receipt of initial sample results which indicated an exceedance of the chronic toxicity limitation. If the discharge will cease before the additional samples can be collected, the Discharger shall contact the Executive Officer within 21 days with a plan to address elevated levels of chronic toxicity in effluent and/or receiving water. The following protocol shall be used for accelerated monitoring and TRE implementation:

- a. If the results of each of the four consecutive accelerated monitoring tests do not exceed the single sample maximum chronic toxicity limitation of 1.0 TUc, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, if there is adequate evidence of a pattern of effluent toxicity, the Regional Water Board's Executive Officer may require that the Discharger initiate a TRE.
- b. If the source(s) of the toxicity is easily identified (i.e. temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring "trigger." Upon confirmation that the chronic toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.
- c. If the result of any accelerated chronic toxicity test exceeds the effluent limitation, the Discharger shall cease accelerated monitoring and, within thirty (30) days of the date of completion of the accelerated monitoring test, initiate the TRE Workplan developed in accordance with Section VI.C.2.a (2) of the Order to investigate the cause(s) and identify corrective actions to reduce or eliminate the chronic toxicity. Within thirty (30) days of completing the TRE Workplan implementation, the Discharger shall submit a report to the Regional Water Board including, at minimum:
  - i. Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;
  - ii. Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
  - iii. Recommendations for further actions to mitigate continued toxicity, if needed; and
  - iv. A schedule for implementation of the recommended actions.

10. **Ammonia Toxicity.** The chronic toxicity test shall be conducted without modifications to eliminate ammonia toxicity.

### C. Chronic Toxicity Reporting

1. **Routine Reporting.** All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. Test results for chronic WET tests shall be reported according to the appropriate acute and chronic guidance manuals and this Monitoring and Reporting Program and shall be attached to the self-monitoring report.

The WET test report 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
- b. The source and make-up 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 toxicant testing performed
- e. Tabular summary of test results for control water and each effluent dilution and statistics summary to include calculation of NOEC,  $TU_c$  and  $IC_{25}$ .
- f. Identification of any anomalies or nuances in the test procedures or results
- g. Summary and Conclusions section.

Test results shall include, at a minimum, for each test:

- h. sample date(s)
- i. test initiation date
- j. test species
- k. end point values for each dilution (e.g., number of young, growth rate, percent survival)
- l. NOEC value(s) in percent effluent

- m. IC15, IC25, IC40, and IC50 values (or EC15, EC25...etc.) in percent effluent
  - n. TUc values (100/NOEC, 100/IC25, 100/ EC25)
  - o. Mean percent mortality ( $\pm$ s.d.) after 96 hours in 100 percent effluent (if applicable)
  - p. NOEC and LOEC values for reference toxicant test(s)
  - q. IC50 or EC50 value(s) for reference toxicant test(s)
  - r. Available water quality measurements for each test (e.g., pH, DO, temperature, conductivity, hardness, salinity, ammonia)
  - s. Statistical methods used to calculate endpoints
  - t. The statistical output page, which includes the calculation of percent minimum significant difference (PMSD)
  - u. 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.
2. **Quality Assurance Reporting.** Because the permit requires sublethal hypothesis testing endpoints from methods 1000.0, 1002.0, and 1003.0 in the test methods manual titled *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA-821-R-02-013, 2002), with-in test variability must be reviewed for acceptability and variability criteria (upper and lower PMSD bounds) must be applied, as directed under section 10.2.8 – *Test Variability* of the test methods manual. Under section 10.2.8, the calculated PMSD for both reference toxicant test and effluent toxicity test results must be compared with the upper and lower PMSD bounds variability criteria specified in Table 6 – *Variability Criteria (Upper and Lower PMSD Bounds) for Sublethal Hypothesis Testing Endpoints Submitted Under NPDES Permits*, following the review criteria in paragraphs 10.2.8.2.1 through 10.2.8.2.5 of the test methods manual. Based on this review, only accepted effluent toxicity test results shall be reported.

3. **Compliance Summary:** Monthly self-monitoring reports submitted by the Discharger shall contain an updated chronology of chronic toxicity test results expressed in TUC, and organized by test species, the type of test (survival, growth, or reproduction), and monitoring frequency (routine, accelerated, or TRE). The final report shall clearly demonstrate that the Discharger is in compliance with effluent limitations and other permit requirements.

## VI. LAND DISCHARGE MONITORING REQUIREMENTS

### A. Monitoring Location STG-001

1. The Discharger shall monitor process wastewater effluent, to be land applied (Discharge Point 002) at Monitoring Location STG-001, as follows:

**Table E-5. Effluent Monitoring, Monitoring Location STG-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
BOD <sub>5</sub>	mg/L	Grab	Monthly	SM 5210 B
TSS	mg/L	Grab	Monthly	SM 2540 D
Dissolved Oxygen	ml/L	Grab	Monthly	40 CFR 136
pH	s.u.	Grab	Monthly	40 CFR 136
Settleable Solids	ml/L	Grab	Monthly	SM 2540 F
Total Coliform Organisms	MPN/100 ml	Grab	Monthly	SM 9221
Water Depth	Feet	---	Weekly	Observation
Pond Freeboard	Feet	---	Weekly	Observation

### B. Monitoring Location LND-001

1. The Discharger shall monitor process wastewater effluent, to be land applied (Discharge Point 002) at Monitoring Location LND-001, as follows:

**Table E-6. Effluent Monitoring, Monitoring Location LND-001**

Constituent	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
Aluminum	ug/L	Grab	Twice Annually	ICPMS <sup>7</sup>
Manganese	ug/L	Grab	Twice Annually	ICPMS
Title 22 Pollutants <sup>8</sup>	mg/L	Grab	Once every five years <sup>9</sup>	40 CFR 136

<sup>7</sup> Inductively Coupled Plasma/Mass Spectrometry

<sup>8</sup> The term Title 22 Pollutants shall include all chemicals listed in the Basin Plan Groundwater Objectives, including all chemicals with primary and secondary maximum contaminant levels listed in

## VII. RECLAMATION MONITORING REQUIREMENTS

### A. Monitoring Location REC-001

1. The Discharger shall monitor reclaimed domestic wastewater discharged to Bench No.1 (Discharge Point 003), at Monitoring Locations REC-001, as follows:

**Table E-7. Monitoring Locations REC-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
Flow <sup>10</sup>	gpd	Meter	Continuous	Meter
BOD <sub>5</sub>	mg/L	Grab	Weekly	SM 5210 B
TSS	mg/L	Grab	Weekly	SM 2540 D
pH	s.u.	Grab	Weekly	40 CFR 136
Aluminum	ug/L	Grab	Monthly	ICPMS
Manganese	ug/L	Grab	Monthly	ICPMS
Chlorine Residual <sup>11</sup>	mg/L	Grab	Weekly	40 CFR 136
Total Coliform Organisms	MPN/100mL	Grab	Weekly	SM 9221

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

### A. Receiving Surface Water Monitoring – Monitoring Locations RSW-001U and RSW-001D

1. When discharging to Barlow Creek, the Discharger shall monitor upstream (Monitoring Location RSW-001U) and downstream (Monitoring Location

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Title 22 of the California Code of Regulations. These chemicals are regulated for the protection of the municipal and domestic supply beneficial uses.”

<sup>9</sup> The Title 22 Pollutant scan shall be performed in August (dry season) before 2014 and reported with the respective monthly SMR.

<sup>10</sup> On a monthly basis, the Discharger shall report average and maximum daily flows.

<sup>11</sup> Samples shall be collected at a point following disinfection and prior to discharge. All chlorine measurements shall be reported as total chlorine residual.

RSW-001D) conditions in Barlow Creek, at locations approved by the Executive Officer, as follows:

**Table E-8. Receiving Water Monitoring Requirements, Monitoring Locations RSW-001U and RSW-001D**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Method
Dissolved Oxygen	mg/L	Grab	Weekly	40 CFR 136
pH	s.u.	Grab	Weekly	40 CFR 136
Turbidity	NTU	Grab	Weekly	SM 2130 B
Hardness	mg/L CaCO <sub>3</sub>	Grab	Monthly	40 CFR 136

**B. Receiving Ground Water Monitoring – Monitoring Locations RGW-001 through RGW-007**

1. The Discharger shall monitor groundwater wells at RGW-001, RGW-002, RGW-003, RGW-004, RGW-005, and RGW-006, as follows:

**Table E-9. Groundwater Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Dissolved Solids	mg/L	Grab	Twice annually <sup>12</sup>	SM 2540 C
Specific Conductivity	µmhos/cm	Grab	Twice annually	40 CFR 136
Dissolved Oxygen	mg/L	Grab	Twice annually	40 CFR 136
pH	s.u.	Grab	Twice annually	40 CFR 136
Nitrate	mg/L as N	Grab	Twice annually	40 CFR 136
Groundwater Elevation	inches	---	Twice annually	Observation

**IX. OTHER MONITORING REQUIREMENTS**

**A. Monitoring Location STW-001**

1. Prior to the first monthly storm water runoff discharge to Barlow Creek at Discharge Point 001, the Discharger shall monitor bench storm water runoff at Monitoring Location STW-001, as follows:

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<sup>12</sup> For all twice per year sample frequencies, two sample events shall occur each year – once in August (during the dry season) and once in March (during the wet season).

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

Parameter	Units	Sample Type	Sampling Frequency	Required Analytical Method
BOD <sub>5</sub>	mg/L	Grab	Monthly <sup>13</sup>	SM 5210 B
TSS	mg/L	Grab	Monthly	SM 2540 D
pH	s.u.	Grab	Monthly	40 CFR 136
Settleable Solids	mL/L	Grab	Monthly	SM 2540 F
Total Coliform Organisms	MPN/100 mL	Grab	Monthly	SM 9221

**B. Other Storm Water Monitoring**

1. All other storm water monitoring shall be performed to satisfy the requirements of the General Industrial Storm Water Permit.

**X. REPORTING REQUIREMENTS**

**A. General Monitoring and Reporting Requirements**

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. Schedules of Compliance. If applicable, the Discharger shall submit all reports and documentation required by compliance schedules that are established by this Order. Such reports and documentation shall be submitted to the Regional Water Board on or before each compliance date established by this Order. If noncompliance is reported, the Discharger shall describe the reasons for noncompliance and a specific date when compliance will be achieved. The Discharger shall notify the Regional Water Board when it returns to compliance with applicable compliance dates established by schedules of compliance.

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

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board’s California Integrated Water Quality System (CIWQS) Program Web site

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<sup>13</sup> Monthly bench storm water runoff monitoring shall occur during the first storm water runoff event after the land application of wastewater has occurred. If no land application of wastewater has occurred since the previous monthly monitoring event, then no monitoring will be required for that month.

(<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger 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. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table E-11. Monitoring Periods and Reporting Schedule**

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	June 13, 2010	All	First day of second calendar month following month of sampling
Daily	June 13, 2010	(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 month of sampling
Weekly	June 13, 2010	Sunday through Saturday	First day of second calendar month following month of sampling
Monthly	July 1, 2010	1 <sup>st</sup> day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
Twice Annually	June 13, 2010	October 1 – May 15 and May 16 – September 30	First day of second calendar month following sampling date
Annually	January 1 following (or on) permit effective date	January 1 through December 31	March 1 each year
1X / 3 Years	June 13, 2010	October 1 – May 15 and May 16 – September 30	First day of second calendar month following sampling date

4. Reporting Protocols. The Discharger shall report with each sample result the applicable reported Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in title 40, Part 136.

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

- a. Sample results greater than or equal to the reported RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
  - b. Sample results less than the RL, 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.
  - c. 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 (+/- a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.
  - d. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
  - e. Dischargers are 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 Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
5. The Discharger shall submit SMRs in accordance with the following requirements:
    - a. The Discharger 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 Discharger 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 Discharger shall electronically submit the data in a tabular format as an attachment. During periods of land discharge, the reports shall certify "land discharge."

- b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify:
  - i. Facility name;
  - 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 address listed below:

**North Coast Regional Water Quality Control Board  
5550 Skylane Blvd., Suite A  
Santa Rosa, CA 95403**

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

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below
2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

<b>STANDARD MAIL</b>	<b>FEDEX/UPS/ OTHER PRIVATE CARRIERS</b>
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15 <sup>th</sup> Floor Sacramento, CA 95814

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

**D. Other Reports**

1. The Discharger shall report the results of any special studies required by Special Provision VI.C.2 of this Order.
2. Annual Report. The Discharger shall submit an Annual Report to the Regional Water Board for each calendar year. The report shall be submitted by March 1st of the following year. The report shall, at a minimum, include the following:
  - a. Both tabular and, where appropriate, graphical summaries of the monitoring data and disposal records from the previous year. If the Discharger monitors any pollutant more frequently than required by this Order, using test procedures approved under title 40, section 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

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taken or planned, which may be needed to bring the discharge into full compliance with the Order.

Ordered By: \_\_\_\_\_

Matthias St. John  
Executive Officer

August 15, 2013

**Appendix E-1. Sonoma West Wastewater Treatment Facility, Plant No. 2 Final Cadmium Effluent Limitations**

Hardness (mg/L as CaCO3)	CCC 4-Day Average (ug/L)	CMC 1-Hour Average (ug/L)	0.527*CCC	0.321*CMC	Lowest LTA	AMEL (ug/L)	MDEL (ug/L)
5	0.23	0.15	0.12	0.05	0.05	0.08	0.15
10	0.40	0.34	0.21	0.11	0.11	0.17	0.34
15	0.56	0.53	0.29	0.17	0.17	0.26	0.53
20	0.70	0.74	0.37	0.24	0.24	0.37	0.73
25	0.83	0.95	0.44	0.30	0.30	0.47	0.94
30	0.96	1.16	0.50	0.37	0.37	0.58	1.2
35	1.08	1.38	0.57	0.44	0.44	0.69	1.4
40	1.20	1.61	0.63	0.52	0.52	0.80	1.6
45	1.32	1.84	0.69	0.59	0.59	0.91	1.8
50	1.43	2.07	0.75	0.66	0.66	1.0	2.1
55	1.54	2.30	0.81	0.74	0.74	1.1	2.3
60	1.65	2.54	0.87	0.81	0.81	1.3	2.5
65	1.76	2.78	0.93	0.89	0.89	1.4	2.8
70	1.86	3.02	0.98	0.97	0.97	1.5	3.0
75	1.96	3.27	1.04	1.05	1.04	1.6	3.2
80	2.07	3.51	1.09	1.13	1.09	1.7	3.4
85	2.17	3.76	1.14	1.21	1.14	1.8	3.6
90	2.27	4.01	1.19	1.29	1.19	1.9	3.7
95	2.36	4.26	1.25	1.37	1.25	1.9	3.9
100	2.46	4.52	1.30	1.45	1.30	2.0	4.0
105	2.56	4.77	1.35	1.53	1.35	2.1	4.2
110	2.65	5.03	1.40	1.61	1.40	2.2	4.3
115	2.75	5.29	1.45	1.70	1.45	2.2	4.5
120	2.84	5.55	1.50	1.78	1.50	2.3	4.7

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125	2.93	5.81	1.55	1.87	1.55	2.4	4.8
130	3.03	6.07	1.59	1.95	1.59	2.5	5.0
135	3.12	6.34	1.64	2.03	1.64	2.5	5.1
140	3.21	6.60	1.69	2.12	1.69	2.6	5.3
145	3.30	6.87	1.74	2.21	1.74	2.7	5.4
150	3.38	7.14	1.78	2.29	1.78	2.8	5.5
155	3.47	7.41	1.83	2.38	1.83	2.8	5.7
160	3.56	7.68	1.88	2.46	1.88	2.9	5.8
165	3.65	7.95	1.92	2.55	1.92	3.0	6.0
170	3.73	8.22	1.97	2.64	1.97	3.1	6.1
175	3.82	8.49	2.01	2.73	2.01	3.1	6.3
180	3.91	8.77	2.06	2.81	2.06	3.2	6.4
185	3.99	9.04	2.10	2.90	2.10	3.3	6.5
190	4.08	9.32	2.15	2.99	2.15	3.3	6.7
195	4.16	9.60	2.19	3.08	2.19	3.4	6.8
200	4.24	9.87	2.24	3.17	2.24	3.5	7.0
205	4.33	10.15	2.28	3.26	2.28	3.5	7.1
210	4.41	10.43	2.32	3.35	2.32	3.6	7.2
215	4.49	10.71	2.37	3.44	2.37	3.7	7.4
220	4.57	10.99	2.41	3.53	2.41	3.7	7.5
225	4.65	11.28	2.45	3.62	2.45	3.8	7.6
230	4.73	11.56	2.50	3.71	2.50	3.9	7.8
235	4.82	11.84	2.54	3.80	2.54	3.9	7.9
240	4.90	12.13	2.58	3.89	2.58	4.0	8.0
245	4.98	12.41	2.62	3.98	2.62	4.1	8.2
250	5.06	12.70	2.66	4.08	2.66	4.1	8.3
255	5.13	12.99	2.71	4.17	2.71	4.2	8.4
260	5.21	13.27	2.75	4.26	2.75	4.3	8.5
265	5.29	13.56	2.79	4.35	2.79	4.3	8.7
270	5.37	13.85	2.83	4.45	2.83	4.4	8.8
275	5.45	14.14	2.87	4.54	2.87	4.5	8.9
280	5.53	14.43	2.91	4.63	2.91	4.5	9.1
285	5.60	14.72	2.95	4.73	2.95	4.6	9.2
290	5.68	15.01	2.99	4.82	2.99	4.6	9.3
295	5.76	15.31	3.03	4.91	3.03	4.7	9.4
300	5.83	15.60	3.07	5.01	3.07	4.8	9.6
310	5.99	16.19	3.15	5.20	3.15	4.9	9.8
320	6.14	16.78	3.23	5.39	3.23	5.0	10
330	6.29	17.37	3.31	5.58	3.31	5.1	10
340	6.44	17.96	3.39	5.77	3.39	5.3	11
350	6.58	18.56	3.47	5.96	3.47	5.4	11
360	6.73	19.16	3.55	6.15	3.55	5.5	11
370	6.88	19.76	3.62	6.34	3.62	5.6	11
380	7.02	20.36	3.70	6.54	3.70	5.7	12
390	7.17	20.97	3.78	6.73	3.78	5.9	12
400	7.31	21.58	3.85	6.93	3.85	6.0	12
>400	7.31	21.58	3.85	6.93	3.85	6.0	12

CCC (Criteria Continuous Concentration) =  $(0.7852 * (\ln(\text{hardness})) - 2.715)$   
CMC (Criteria Maximum Concentration) =  $(1128 * (\ln(\text{hardness})) - 3.6867)$   
AMEL (Average Monthly Effluent Limitation) =  $1.55 * (\text{minimum } 0.527\text{CCC}, 0.321\text{CMC})$   
MDEL (Maximum Daily Effluent Limitation) =  $3.11 * (\text{minimum } 0.527\text{CCC}, 0.321\text{CMC})$   
Hardness = hardness of the receiving water at the time the discharge is sampled  
LTA = Long-term average  
CV = 0.60

**Appendix E-2. Sonoma West Wastewater Treatment Facility, Plant No. 2 Final Copper Effluent Limitations.**

Hardness (mg/L as CaCO3)	CCC 4-Day Average (ug/L)	CMC 1-Hour Average (ug/L)	0.527*CCC	0.321*CMC	Lowest LTA	AMEL (ug/L)	MDEL (ug/L)
5	0.72	0.83	0.38	0.27	0.27	0.41	0.83
10	1.30	1.60	0.69	0.51	0.51	0.80	1.6
15	1.84	2.34	0.97	0.75	0.75	1.2	2.3
20	2.36	3.07	1.24	0.99	0.99	1.5	3.1
25	2.85	3.79	1.50	1.22	1.22	1.9	3.8
30	3.33	4.50	1.76	1.45	1.45	2.2	4.5
35	3.80	5.21	2.00	1.67	1.67	2.6	5.2
40	4.26	5.90	2.25	1.90	1.90	2.9	5.9
45	4.72	6.60	2.48	2.12	2.12	3.3	6.6
50	5.16	7.29	2.72	2.34	2.34	3.6	7.3
55	5.60	7.97	2.95	2.56	2.56	4.0	8.0
60	6.03	8.65	3.18	2.78	2.78	4.3	8.6
65	6.46	9.33	3.40	2.99	2.99	4.6	9.3
70	6.88	10.00	3.62	3.21	3.21	5.0	10.0
75	7.30	10.68	3.84	3.43	3.43	5.3	11
80	7.71	11.34	4.06	3.64	3.64	5.6	11
85	8.12	12.01	4.29	3.86	3.86	6.0	12
90	8.53	12.68	4.49	4.07	4.07	6.3	13
95	8.93	13.34	4.71	4.28	4.28	6.6	13
100	9.33	14.00	4.92	4.49	4.49	7.0	14
105	9.73	14.66	5.13	4.71	4.71	7.3	15
110	10.12	15.31	5.33	4.92	4.92	7.6	15
115	10.51	15.97	5.54	5.13	5.13	7.9	16
120	10.90	16.62	5.75	5.34	5.34	8.3	17
125	11.29	17.27	5.95	5.55	5.55	8.6	17
130	11.67	17.92	6.15	5.75	5.75	8.9	18
135	12.06	18.57	6.35	5.96	5.96	9.2	19
140	12.44	19.22	6.55	6.17	6.17	9.6	19
145	12.82	19.87	6.75	6.38	6.38	9.9	20
150	13.19	20.51	6.95	6.58	6.58	10	20
155	13.57	21.16	7.15	6.79	6.79	11	21
160	13.94	21.80	7.35	7.00	7.00	11	22
165	14.31	22.44	7.54	7.20	7.20	11	22
170	14.68	23.08	7.74	7.41	7.41	11	23
175	15.05	23.72	7.93	7.61	7.61	12	24
180	15.42	24.36	8.12	7.82	7.82	12	24
185	15.78	24.99	8.32	8.02	8.02	12	25
190	16.14	25.63	8.51	8.23	8.23	13	26
195	16.51	26.26	8.70	8.43	8.43	13	26
200	16.87	26.90	8.89	8.63	8.63	13	27
205	17.23	27.53	9.08	8.84	8.84	14	27
210	17.59	28.16	9.27	9.04	9.04	14	28
215	17.94	28.80	9.46	9.24	9.24	14	29
220	18.30	29.43	9.64	9.45	9.45	15	29
225	18.65	30.06	9.83	9.65	9.65	15	30
230	19.01	30.68	10.02	9.85	9.85	15	31
235	19.36	31.31	10.20	10.05	10.05	16	31
240	19.71	31.94	10.39	10.25	10.25	16	32
245	20.06	32.57	10.57	10.45	10.45	16	33
250	20.41	33.19	10.76	10.65	10.65	17	33
255	20.76	33.82	10.94	10.86	10.86	17	34
260	21.11	34.44	11.12	11.06	11.06	17	34
265	21.45	35.07	11.31	11.26	11.26	17	35
270	21.80	35.69	11.49	11.46	11.46	18	36
275	22.14	36.31	11.67	11.66	11.66	18	36
280	22.49	36.93	11.85	11.86	11.86	18	37
285	22.83	37.55	12.03	12.05	12.03	19	37
290	23.17	38.17	12.21	12.25	12.21	19	38
295	23.51	38.79	12.39	12.45	12.39	19	39
300	23.85	39.41	12.57	12.65	12.57	19	39
310	24.53	40.65	12.93	13.05	12.93	20	40
320	25.20	41.88	13.28	13.44	13.28	21	41
330	25.88	43.12	13.64	13.84	13.64	21	42
340	26.54	44.35	13.99	14.24	13.99	22	44
350	27.21	45.57	14.34	14.63	14.34	22	45
360	27.87	46.80	14.69	15.02	14.69	23	46
370	28.53	48.02	15.04	15.42	15.04	23	47
380	29.19	49.25	15.38	15.81	15.38	24	48
390	29.85	50.47	15.73	16.20	15.73	24	49
400	30.50	51.68	16.07	16.59	16.07	25	50
>400	30.50	51.68	16.07	16.59	16.07	25	50

CCC (Criteria Continuous Concentration) = (0.8545\*(LN[hardness]))-1.702  
CMC (Criteria Maximum Concentration) = (0.9422\*(LN[hardness]))-1.7  
AMEL (Average Monthly Effluent Limitation) = 1.55\*(minimum 0.527\*CCC,0.321\*CMC)  
MDEL (Maximum Daily Effluent Limitation) = 3.1\*(minimum 0.527\*CCC,0.321\*CMC)  
Hardness = hardness of the receiving water at the time the discharge is sampled  
LTA = Long-term average  
CV = 0.60

**Appendix E-3. Sonoma West Wastewater Treatment Facility, Plant No. 2 Final Nickel Effluent Limitations.**

Hardness mg/L as CaCO3	CCC 4-Day Average (ug/L)	CMC 1-Hour Average (ug/L)	0.527*CCC	0.321*CMC	Lowest LTA	AMEL (ug/L)	MDEL (ug/L)
5	4.14	37.21	2.18	11.94	2.18	3.4	6.8
10	7.44	66.89	3.92	21.47	3.92	6.1	12
15	10.48	94.26	5.52	30.26	5.52	8.6	17
20	13.37	120.23	7.04	38.59	7.04	11	22
25	16.14	145.21	8.51	46.61	8.51	13	26
30	18.84	169.43	9.93	54.39	9.93	15	31
35	21.46	193.03	11.31	61.96	11.31	18	35
40	24.03	216.11	12.66	69.37	12.66	20	39
45	26.54	238.75	13.99	76.64	13.99	22	44
50	29.02	261.01	15.29	83.79	15.29	24	48
55	31.46	282.93	16.58	90.82	16.58	26	52
60	33.86	304.54	17.84	97.76	17.84	28	55
65	36.23	325.88	19.09	104.61	19.09	30	59
70	38.58	346.97	20.33	111.38	20.33	32	63
75	40.89	367.82	21.55	118.07	21.55	33	67
80	43.19	388.46	22.76	124.70	22.76	35	71
85	45.46	408.91	23.96	131.26	23.96	37	75
90	47.71	429.16	25.15	137.76	25.15	39	78
95	49.95	449.25	26.32	144.21	26.32	41	82
100	52.16	469.17	27.49	150.60	27.49	43	85
105	54.36	488.95	28.65	156.95	28.65	44	89
110	56.54	508.57	29.80	163.25	29.80	46	93
115	58.71	528.06	30.94	169.51	30.94	48	96
120	60.86	547.42	32.07	175.72	32.07	50	100
125	63.00	566.66	33.20	181.90	33.20	51	103
130	65.13	585.77	34.32	188.03	34.32	53	107
135	67.24	604.78	35.44	194.13	35.44	55	110
140	69.34	623.69	36.54	200.20	36.54	57	114
145	71.43	642.47	37.64	206.23	37.64	59	117
150	73.51	661.16	38.74	212.23	38.74	60	120
155	75.58	679.76	39.83	218.20	39.83	62	124
160	77.63	698.26	40.91	224.14	40.91	63	127
165	79.68	716.68	41.99	230.05	41.99	65	131
170	81.72	735.01	43.07	235.94	43.07	67	134
175	83.75	753.26	44.14	241.80	44.14	68	137
180	85.77	771.43	45.20	247.63	45.20	70	141
185	87.78	789.52	46.26	253.43	46.26	72	144
190	89.78	807.53	47.32	259.22	47.32	73	147
195	91.78	825.47	48.37	264.98	48.37	75	150
200	93.76	843.36	49.41	270.71	49.41	77	154
205	95.74	861.16	50.46	276.43	50.46	78	157
210	97.71	878.88	51.50	282.12	51.50	80	160
215	99.68	896.56	52.53	287.79	52.53	81	163
220	101.64	914.16	53.56	293.45	53.56	83	167
225	103.59	931.71	54.59	299.08	54.59	85	170
230	105.53	949.20	55.62	304.69	55.62	86	173
235	107.47	966.62	56.64	310.29	56.64	88	176
240	109.40	983.99	57.65	315.86	57.65	89	179
245	111.33	1001.31	58.67	321.42	58.67	91	182
250	113.25	1018.57	59.68	326.96	59.68	93	186
255	115.16	1035.78	60.69	332.49	60.69	94	189
260	117.07	1052.93	61.69	337.99	61.69	96	192
265	118.97	1070.04	62.70	343.48	62.70	97	195
270	120.86	1087.10	63.70	348.96	63.70	99	198
275	122.75	1104.10	64.69	354.42	64.69	100	201
280	124.64	1121.06	65.69	359.86	65.69	102	204
285	126.52	1137.98	66.68	365.29	66.68	103	207
290	128.40	1154.84	67.66	370.70	67.66	105	210
295	130.27	1171.67	68.65	376.10	68.65	106	214
300	132.13	1188.44	69.63	381.49	69.63	108	217
310	135.85	1221.87	71.59	392.22	71.59	111	223
320	139.55	1255.14	73.54	402.90	73.54	114	229
330	143.23	1288.24	75.48	413.53	75.48	117	235
340	146.89	1321.19	77.41	424.10	77.41	120	241
350	150.54	1353.99	79.33	434.63	79.33	123	247
360	154.17	1386.65	81.25	445.11	81.25	126	253
370	157.78	1419.16	83.15	455.55	83.15	129	259
380	161.38	1451.55	85.05	465.95	85.05	132	265
390	164.97	1483.80	86.94	476.30	86.94	135	270
400	168.54	1515.92	88.82	486.61	88.82	138	276
>400	168.54	1515.92	88.82	486.61	88.82	138	276

CCC (Criteria Continuous Concentration) = (0.846\*(LN(hardness)))+0.0584  
CMC (Criteria Maximum Concentration) = (0.846\*(LN(hardness)))+2.255  
AMEL (Average Monthly Effluent Limitation) = 1.55\*(minimum 0.527\*CCC, 0.321\*CMC)  
MDEL (Maximum Daily Effluent Limitation) = 3.11\*(minimum 0.527\*CCC, 0.321\*CMC)  
Hardness = hardness of the receiving water at the time the discharge is sampled  
LTA = Long-term average  
CV = 0.60

SONOMA WEST HOLDINGS INC.  
WASTEWATER TREATMENT FACILITY, PLANT NO. 2  
ORDER NO. R1-2010-0019  
NPDES NO. CA0023655

**Appendix E-4. Sonoma West Wastewater Treatment Facility, Plant No. 2 Final Zinc Effluent Limitations.**

Hardness mg/L as CaCO3	CCC 4-Day Average (ug/L)	CMC 1-Hour Average (ug/L)	0.527*CCC	0.321*CMC	Lowest LTA	AMEL (ug/L)	MDEL (ug/L)
5	9.47	9.47	4.99	3.04	3.04	4.7	9.4
10	17.03	17.03	8.97	5.47	5.47	8.5	17
15	24.01	24.01	12.65	7.71	7.71	12	24
20	30.64	30.64	16.15	9.84	9.84	15	31
25	37.02	37.02	19.51	11.88	11.88	18	37
30	43.20	43.20	22.77	13.87	13.87	21	43
35	49.23	49.23	25.94	15.80	15.80	24	49
40	55.12	55.12	29.05	17.69	17.69	27	55
45	60.91	60.91	32.10	19.55	19.55	30	61
50	66.60	66.60	35.10	21.38	21.38	33	66
55	72.20	72.20	38.05	23.18	23.18	36	72
60	77.72	77.72	40.96	24.95	24.95	39	78
65	83.18	83.18	43.83	26.70	26.70	41	83
70	88.57	88.57	46.67	28.43	28.43	44	88
75	93.90	93.90	49.48	30.14	30.14	47	94
80	99.18	99.18	52.27	31.84	31.84	49	99
85	104.40	104.40	55.02	33.51	33.51	52	104
90	109.58	109.58	57.75	35.18	35.18	55	109
95	114.72	114.72	60.46	36.83	36.83	57	115
100	119.82	119.82	63.14	38.46	38.46	60	120
105	124.87	124.87	65.81	40.08	40.08	62	125
110	129.89	129.89	68.45	41.70	41.70	65	130
115	134.88	134.88	71.08	43.30	43.30	67	135
120	139.83	139.83	73.69	44.89	44.89	70	140
125	144.75	144.75	76.28	46.47	46.47	72	145
130	149.64	149.64	78.86	48.04	48.04	74	149
135	154.51	154.51	81.43	49.60	49.60	77	154
140	159.34	159.34	83.97	51.15	51.15	79	159
145	164.15	164.15	86.51	52.69	52.69	82	164
150	168.93	168.93	89.03	54.23	54.23	84	169
155	173.69	173.69	91.54	55.76	55.76	86	173
160	178.43	178.43	94.03	57.28	57.28	89	178
165	183.14	183.14	96.52	58.79	58.79	91	183
170	187.83	187.83	98.99	60.29	60.29	93	188
175	192.51	192.51	101.45	61.79	61.79	96	192
180	197.16	197.16	103.90	63.29	63.29	98	197
185	201.79	201.79	106.34	64.77	64.77	100	201
190	206.40	206.40	108.77	66.25	66.25	103	206
195	210.99	210.99	111.19	67.73	67.73	105	211
200	215.57	215.57	113.60	69.20	69.20	107	215
205	220.12	220.12	116.00	70.66	70.66	110	220
210	224.66	224.66	118.40	72.12	72.12	112	224
215	229.19	229.19	120.78	73.57	73.57	114	229
220	233.70	233.70	123.16	75.02	75.02	116	233
225	238.19	238.19	125.53	76.46	76.46	119	238
230	242.67	242.67	127.88	77.90	77.90	121	242
235	247.13	247.13	130.24	79.33	79.33	123	247
240	251.58	251.58	132.58	80.76	80.76	125	251
245	256.01	256.01	134.92	82.18	82.18	127	256
250	260.43	260.43	137.25	83.60	83.60	130	260
255	264.84	264.84	139.57	85.01	85.01	132	264
260	269.23	269.23	141.88	86.42	86.42	134	269
265	273.61	273.61	144.19	87.83	87.83	136	273
270	277.98	277.98	146.49	89.23	89.23	138	278
275	282.33	282.33	148.79	90.63	90.63	140	282
280	286.68	286.68	151.08	92.02	92.02	143	286
285	291.01	291.01	153.36	93.41	93.41	145	291
290	295.33	295.33	155.64	94.80	94.80	147	295
295	299.64	299.64	157.91	96.18	96.18	149	299
300	303.94	303.94	160.17	97.56	97.56	151	303
310	312.50	312.50	164.69	100.31	100.31	155	312
320	321.02	321.02	169.18	103.05	103.05	160	320
330	329.50	329.50	173.65	105.77	105.77	164	329
340	337.94	337.94	178.09	108.48	108.48	168	337
350	346.34	346.34	182.52	111.18	111.18	172	346
360	354.71	354.71	186.93	113.86	113.86	176	354
370	363.04	363.04	191.32	116.54	116.54	181	362
380	371.34	371.34	195.69	119.20	119.20	185	371
390	379.60	379.60	200.05	121.85	121.85	189	379
400	387.83	387.83	204.39	124.49	124.49	193	387
>400	387.83	387.83	204.39	124.49	124.49	193	387

CCC (Criteria Continuous Concentration) = (0.8473\*LN(hardness))+0.884  
CMC (Criteria Maximum Concentration) = (0.8473\*LN(hardness))+0.884  
AMEL (Average Monthly Effluent Limitation) = 1.55\*(minimum 0.527\*CCC,0.321\*CMC)  
MDEL (Maximum Daily Effluent Limitation) = 3.11\*(minimum 0.527\*CCC,0.321\*CMC)  
Hardness = hardness of the receiving water at the time the discharge is sampled  
LTA = Long-term average  
CV = 0.60

**ATTACHMENT F – FACT SHEET**

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## Attachment F – Fact Sheet

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

### I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

**Table F-1. Facility Information**

<b>WDID</b>	1B8202OSON
<b>Discharger</b>	Sonoma West Holdings, Incorporated
<b>Name of Facility</b>	Wastewater Treatment Facility, Plant No. 2
<b>Facility Address</b>	2064 Highway 116 North
	Sebastopol, CA 95472
	Sonoma County
<b>Facility Contact, Title and Phone</b>	Mike Babbini, Real Estate Manager (707) 829-4612
<b>Authorized Person to Sign and Submit Reports</b>	Same as above.
<b>Mailing Address</b>	2064 Highway 116 North, Sebastopol CA, 95472
<b>Billing Address</b>	2064 Highway 116 North, Sebastopol CA, 95472
<b>Type of Facility</b>	Multi-tenant Food and Beverage Processing, Packaging, Storage and Warehousing Facility
<b>Major or Minor Facility</b>	Minor
<b>Threat to Water Quality</b>	2
<b>Complexity</b>	B
<b>Pretreatment Program</b>	No
<b>Reclamation Requirements</b>	Producer
<b>Facility Design Flow</b>	0.17 and 0.37 million gallons per day (mgd) - average monthly and maximum daily land application rates 0.026 and 0.048 mgd – average monthly and daily maximum discharge rates to surface water at Discharge Point 001
<b>Facility Permitted Flow</b>	0.17 and 0.37 million gallons per day (mgd) - average monthly and maximum daily land application rates 0.026 and 0.048 mgd – average monthly and daily maximum discharge rates to surface water at Discharge Point 001

<b>Watershed</b>	Russian River Hydrologic Unit
<b>Receiving Water</b>	Barlow Creek, tributary to the Russian River via Atascadero Creek and Green Valley Creek
<b>Receiving Water Type</b>	Inland surface water

- A. Sonoma West Holdings, Incorporated, (hereinafter Discharger) is the owner and operator of the Sonoma West Holdings, Incorporated Wastewater Treatment Facility, Plant No. 2 (hereinafter Facility). The Facility is a multi-tenant food and beverage processing, packaging, storage and warehousing facility.

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

- B. The treatment facility discharges treated wastewater to Barlow Creek, tributary to Atascadero Creek, tributary to Green Valley Creek, and thence the Russian River, all waters of the United States, and is currently regulated by Regional Water Board Order No. R1-2003-0059, which was adopted on November 5, 2003 and expired on November 5, 2008. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements and NPDES permit are adopted pursuant to this Order.
- C. The Discharger filed a Report of Waste Discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on June 13, 2008. Site visits were conducted on September 19, 2008 and August 25, 2009 to observe operations and collect additional data to develop permit limitations and conditions.

## II. FACILITY DESCRIPTION

The Sonoma West Wastewater Treatment Facility, Plant No. 2, was previously operated as an apple processing facility under the name of Vacu-Dry Company. The process wastewater treatment system was specifically designed and operated for this type of activity and land application was the primary disposal method. Under the previous Order, the average process wastewater flow was 175,000 gpd with maximum flows of up to 370,000 gpd during apple processing operations.

In 1999, the Discharger sold its proprietary process and ceased apple processing. The facility has since been marketed as a multi-tenant food and beverage processing facility and leases space to several commercial enterprises. As of January 2009, the facility had twenty seven tenants including eleven wineries, seven storage units, six food and beverage processors, two cell towers, and a transportation business office. Tenants are limited by Sonoma West Holdings, Inc. to wine, beverage, and food processing businesses. Meat processing businesses, businesses producing or

utilizing hazardous wastes, and businesses not generating an organic waste stream, such as vehicle maintenance and light or heavy industry, are prohibited.

Peak wastewater flows are generated during the fall months corresponding with the local grape harvest. Based on the Discharger's Annual Reports from 2003 through 2009, all tenants are currently generating a total of approximately 26,000 gpd of process wastewater with a peak flow of approximately 48,000 gpd. Domestic wastewater from tenant facilities is also collected and treated onsite, with equipment having a design treatment capacity of 6,000 gpd, and then land applied. In accordance with NPDES regulations at 40 CFR 122.45 (b), limitations and conditions of the Order which address discharges to surface water at Discharge Point 001 are based on these actual flow figures (0.026 mgd average and 0.048 mgd maximum).

The Order retains maximum rates of application of process wastewater to land of 0.17 mgd (average) and 0.37 mgd (daily maximum) from the previous permit. The Regional Water Board understands that these figures have been determined by the Discharger to represent the maximum amount of process wastewater that can be land applied onsite while maintaining protection of local surface and groundwaters and preventing conditions of nuisance. The migration of any pollutants from land application areas to local surface water, the demonstration of a statistically significant degradation of groundwater, or the creation of nuisance conditions by the land application of wastewater will be viewed as caused by discharges that exceed the assimilative capacity of the land application areas and are in violation of the Order. Because the average and maximum land application rates were determined by the Discharger at a time when the facility was processing apples exclusively, and the Discharger is currently land applying wastewaters of different origin, the Regional Water Board expects the Discharger to adhere to those limits on land application rates or to whatever lower limits may be necessary to protect local surface and groundwater and to prevent nuisance. The description of maximum land application rates for process wastewater of 0.17 (monthly average) and 0.37 mgd (daily maximum) by the Order will not be viewed as reason or a permissible excuse for violations of other terms and conditions of the Order.

In September 2008, the Discharger notified the Regional Water Board of its intent to accept process wastewaters from offsite wineries and food and beverage processors. The Order acknowledges the Regional Water Board's approval of this practice but establishes several terms and conditions for the monitoring and control of the practice. Regional Water Board staff will be particularly attentive to the nature of offsite wastes accepted and to the Discharger's efforts to protect local surface and groundwater quality from and prevent nuisance conditions attributable to pollutants in the offsite wastes accepted. If appropriate, a prohibition against the acceptance of offsite wastewaters will be considered during enforcement actions taken by the Regional Water Board for violations of terms or conditions of the Order.

## **A. Description of Wastewater and Biosolids Treatment or Controls**

The design and operation of the process wastewater treatment system is specifically suited to treat organic wastes from beverage and food operations. The system is not designed to treat process wastewater from other types of industrial activity. Therefore, the permit contains provisions restricting the types of waste that may ultimately be treated by the centralized process wastewater treatment system. A schematic drawing of the process and domestic wastewater treatment systems has been included in Attachment B.

The process wastewater treatment system is comprised of a segregated process wastewater collection sewer within each building, which collects wastewater through trench drains and sumps, a centralized collection sump, rotary screen for large solids removal, a second settling sump equipped with overflow weir, and a third sump where oil and grease can be removed if necessary. Process wastewaters flow by gravity from the third sump to an irrigation sump and are pumped either to overland flow treatment fields, the primary treatment pond (transfer pond), or the aerated storage pond (Lake Davis).

The Discharger uses seven benches for land application of process wastewater. (A bench is a plot of ground that has been modified with spray irrigation facilities and contoured to facilitate irrigation runoff collection). These benches are used as overland flow treatment fields included in the wastewater treatment process and are the primary means of treatment of process wastewater during the dry season. Bench Nos. 1, 2, 3, and 7 occupy 16.2 acres, while Bench Nos. 4, 5, and 6 occupy 7.6 acres. Tailwater from the portion of Bench No. 1 that is applied with process wastewater, and tailwater from Benches Nos. 2, and 3 flows by gravity to the transfer pond while tailwater from Bench 7 requires pumping. From the transfer pond, process wastewater can be pumped either to the benches or to the aerated storage pond (Lake Davis). All process tailwater is pumped to the aerated storage pond. All benches are used to grow pasture grasses and are principally used during the summer dry season when direct discharge to Barlow Creek is prohibited. During times of heavy precipitation or when the benches are saturated, process wastewater is pumped directly to the aerated storage pond. The minimum level of treatment of process wastewater includes screening of solids and oil/water separation at all times, land application of wastewater to the benches for discharges to land, and aeration in the storage pond for discharges to surface waters. Provisions governing the application of process wastewater have been included in this permit.

The 6-acre storage pond (Lake Davis) has a capacity of 15 million gallons and is equipped with an aeration system. Process wastewater collected in the storage pond can be disposed of in two ways. Process wastewater can flow by gravity back to the transfer pond where it can be pumped to the benches for irrigation or,

during the wet season of the year, treated effluent in compliance with permit conditions may be discharged directly to Barlow Creek. The Discharger has previously documented that the facility has sufficient capacity to hold all process wastewater generated during both dry and wet seasons, except during extreme storm events. During storm events while the facility is not discharging to the benches, storm water runoff from Bench Nos. 1 through 7 may be discharged to Barlow Creek if the following criteria are met: (1) the first one inch of stormwater runoff is captured and returned to Lake Davis and (2) prior to storm water runoff discharge to Barlow Creek, a sample is collected for analysis as described in the Monitoring and Reporting Program.

The facility's domestic wastewater treatment system is designed to provide treatment for a peak flow of 6,000 gpd and an average flow of 2,720 gpd, equivalent to a peak employee day of 400 full time employees and an average employee day of 182 employees. Domestic wastewater is collected in five septic tanks where settling and anaerobic treatment occurs, and then flows to a lined and aerated domestic wastewater pond. Domestic wastewater is filtered and disinfected with chlorine prior to being applied to Bench No. 1. Domestic tailwater from Bench No. 1 is retained by a constructed berm, which prevents commingling of domestic and process tailwaters, and is allowed to percolate and evaporate. Commingling of treated domestic wastewater and treated process wastewater is prohibited. Runoff from all benches directly to Barlow Creek can occur during storm events, when discharge to land is not occurring and certain other protective permit conditions, described above, are met.

The Discharger has complied with all setback requirements in the Water Quality Control Plan, North Coast Region (Basin Plan), through conducting application and percolation tests to determine the appropriate application rates and by construction of a downgradient berm for Bench No. 1 to ensure that domestic tailwater is not commingled with process tailwater from the other benches.

The facility's cold storage equipment is not currently in use, however, it may be put back into service at any time. If the Discharger decides to reinstate this operation, it shall notify the Regional Water Board prior to commencing such activities. Monitoring for Temperature and COD from Discharge Point 001 are only necessary if the cold storage equipment has been used and discharged into the wastewater system. .

## **B. Discharge Points and Receiving Waters**

Between October 1<sup>st</sup> and May 15<sup>th</sup> each year, the facility may discharge treated process wastewater to Barlow Creek at Discharge Point 001 (38° 25' 22" N latitude and 122° 51' 04" W longitude.) Barlow Creek is located within the Guerneville

Hydrologic Subarea of the Lower Russian River Hydrologic Area within the Russian River Hydrologic Unit.

The Discharger also land applies treated process wastewater at Discharge Point 002 and reclaims treated domestic wastewater for irrigation at Discharge Point 003. These discharge points are used during the dry season for irrigation of pasture grasses. The Receiving Water Monitoring Locations have been assigned the names RSW-001U and RSW-001D for clarity that they apply to the upstream and downstream receiving waters, respectively, relative to Discharge Point 001.

**C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data**

There have been no discharges of treated process wastewater to Barlow Creek during this permit term. Effluent limitations contained in the existing Order for Discharge Point 001 and for Discharge Point 003 (Monitoring Location REC-001), and representative monitoring data for discharges of treated domestic wastewater effluent at REC-001 from the term of the previous Order are summarized in Table F-2.

Section B.3 of the previous Order established effluent limitations for BOD<sub>5</sub>, TSS, settleable solids, and pH on the wastewater stored in Lake Davis during discharge to the irrigation benches. This Order establishes Discharge Point 002 as the wastewater stored in Lake Davis during discharge to the irrigation benches, and subsequently establishes Monitoring Location STG-001 as the location at which a representative sample can be collected to characterize the wastewater stored in Lake Davis during discharge to the irrigation benches. Therefore, the data submitted to represent wastewater stored in Lake Davis during discharge to the irrigation benches is summarized in Table F-2, as Monitoring Location STG-001.

**Table F-2. Historic Effluent Limitations and Monitoring Data**

Parameter	Units	Effluent Limitation		Monitoring Data 1/3/2007 – 12/26/2007	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
<b>Monitoring Location EFF-001</b>					
<b>No discharges to Barlow Creek have occurred during the previous permit term.</b>					
BOD <sub>5</sub>	mg/L	--	80	--	--
	lbs/day <sup>[1]</sup>	--	525	--	--
TSS	mg/L	--	80	--	--
	lbs/day <sup>[1]</sup>	--	837	--	--
Settleable Solids	ml/L	--	0.2	--	--

SONOMA WEST HOLDINGS INC.  
WASTEWATER TREATMENT FACILITY, PLANT NO. 2  
ORDER NO. R1-2010-0019  
NPDES NO. CA0023655

Parameter	Units	Effluent Limitation		Monitoring Data 1/3/2007 – 12/26/2007	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
pH	s.u.	6.5 - 8.5 at all times		--	--
Temperature	°C	--	27	--	--
Chemical Oxygen Demand	mg/L	--	50	--	--
Cadmium	µg/L	1.8	3.7	--	--
Copper	µg/L	6.2	12.4	--	--
Cyanide	µg/L	4.3	8.5	--	--
Nickel	µg/L	38.3	76.9	--	--
Selenium	µg/L	4.1	8.2	--	--
Zinc	µg/L	53.6	107.5	--	--
Total Coliform Organisms	MPN/10 0ml	--	--	--	--
Turbidity	NTU	--	--	--	--
Total Kjeldahl Nitrogen	mg/L	--	--	--	--
Nitrate-Nitrogen	mg/L	--	--	--	--
Ammonia	mg/L	--	--	--	--
<b>Monitoring Location STG-001 Wastewater in Storage ("Lake Davis")</b>					
BOD <sub>5</sub>	mg/L	--	80	110	110
TSS	mg/L	--	80	165.6	270
Dissolved Oxygen	ml/l	--	--	9.9	11
pH	pH units	--	6.5 – 8.5	--	5.9 – 9.0
Settleable Solids	ml/l	--	1.0	0.7	1.0
<b>Monitoring Location REC-001 Treated Domestic Wastewater to Bermed Area of Irrigation Bench No. 1</b>					
BOD <sub>5</sub>	mg/L	50	80	162	250
TSS	mg/L	50	80	26	120
pH	pH units	--	--	--	5.8 – 9.3

Parameter	Units	Effluent Limitation		Monitoring Data 1/3/2007 – 12/26/2007	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Chlorine Residual	mg/L	--	--	10.0	10.0
Total Kjeldahl Nitrogen	mg/L	--	--	17	17
Total Coliform Organisms	MPN/10 0 ml	23 <sup>1</sup>	240 <sup>2</sup>	226.5	900
Flow	gpd	--	6,000	--	3,256

#### D. Compliance Summary

The Discharger has not discharged effluent to Barlow Creek via Discharge Point 001 since 2000 and has therefore complied with the NPDES portion of the previous Order. The Discharger has, however, exceeded land disposal and reclamation effluent limitations for BOD, TSS, pH and Total Coliform. Groundwater data indicate impacts to groundwater for specific conductance, total dissolved solids, and pH although more sampling is required to fully assess the extent of groundwater impacts. This Order requires more groundwater monitoring to achieve better compliance with Groundwater Limitations in this Order and with Groundwater Quality Objectives in the Basin Plan.

#### E. Planned Changes

In September 2008, the Discharger notified the Regional Water Board of its intent to accept process wastewaters from offsite wineries and food and beverage processors. The Order acknowledges the Regional Water Board's approval of this practice but establishes several terms and conditions for the monitoring and control of the practice. Regional Water Board staff will be particularly attentive to the nature of offsite wastes accepted and to the Discharger's efforts to protect local surface and groundwater quality from and prevent nuisance conditions attributable to pollutants in the offsite wastes accepted. A prohibition against the acceptance of offsite wastewaters will be considered during any enforcement action taken by the

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<sup>1</sup> The median concentration of the results of the bacteriological analyses from samples collected during any calendar month shall not exceed a Most Probable Number (MPN) of 23 per 100 milliliters.

<sup>2</sup> No sample shall exceed an MPN of 240 per 100 milliliters.

Regional Water Board for violations of terms or conditions of the Order, if such violations may be attributable to the acceptance of offsite wastewaters.

### III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section. This section provides supplemental information, where appropriate, for the plans, policies, and regulations relevant to the discharge.

#### A. Legal Authorities

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

#### B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100 through 21177.

#### C. State and Federal Regulations, Policies, and Plans

**1. Water Quality Control Plans.** The Regional Water Quality Control Board (Regional Water Board) adopted a *Water Quality Control Plan for the North Coast Region* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan does not specifically identify beneficial uses for Barlow Creek, but does identify uses for the Russian River, to which Barlow Creek, via Atascadero Creek and Green Valley Creek, is tributary. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the Russian River and its tributaries, including Barlow Creek, the receiving water for this discharge, are as follows:

**Table F-3. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water	Beneficial Uses
001	Barlow Creek, tributary to the Russian River within the Guerneville Hydrologic Subarea of the Russian River Hydrologic Unit	<p>Existing:</p> <ul style="list-style-type: none"> <li>MUN - Municipal and Domestic Supply</li> <li>AGR - Agricultural Supply</li> <li>IND - Industrial Service Supply</li> <li>GWR - Ground Water Recharge</li> <li>FRSH - Freshwater Replenishment</li> <li>NAV - Navigation</li> <li>REC-1 - Water Contact Recreation</li> <li>REC-2 - Non-Contact Water Recreation</li> <li>COMM - Commercial and Sport Fishing</li> <li>WARM - Warm Freshwater Habitat</li> <li>COLD - Cold Freshwater Habitat</li> <li>WILD - Wildlife Habitat</li> <li>RARE - Preservation of Rare, Threatened, or Endangered Species</li> <li>MIGR - Migration of Aquatic Organisms</li> <li>SPWN - Spawning, Reproduction, and/or Early Development</li> <li>EST - Estuarine Habitat</li> </ul> <p>Potential:</p> <ul style="list-style-type: none"> <li>PRO - Industrial Process Supply</li> <li>POW - Hydropower Generation</li> <li>SHELL - Shellfish Harvesting</li> <li>AQUA - Aquaculture</li> </ul>
002 and 003	Groundwater	<ul style="list-style-type: none"> <li>MUN - Municipal and Domestic Supply</li> <li>AGR - Agricultural Supply</li> <li>IND - Industrial Service Supply</li> <li>PRO - Industrial Process Supply</li> <li>FRSH – Freshwater Replenishment to Surface Waters</li> </ul>

In addition to the beneficial uses set out in the Basin Plan, there are several implementation plans that include actions intended to meet water quality objectives and protect beneficial uses of the North Coast Basin. For the Russian River and its tributaries, no point source waste discharges are allowed during the period of May 15 through September 30 and all other periods when the receiving stream's flow is less than 100 times greater than the waste flow. This Order includes Discharge Prohibition III.F that implements this Basin Plan requirement.

The Basin Plan also contains a narrative water quality objective for toxicity that states:

All water shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analysis of species diversity, population density, growth anomalies, bioassay of appropriate duration or other appropriate methods as specified by the Regional Water Board.

The survival of aquatic life in surface waters subjected to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary for other control water that is consistent with the requirements for “experimental water”, as described in *Standard Methods for the Examination of Water and Wastewater* 18<sup>th</sup> Edition (1992). At a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour bioassay.

In addition, effluent limits based upon acute bioassays of effluent will be prescribed. Where appropriate, additional numerical receiving water objectives for specific toxicants will be established as sufficient data becomes available, and source control of toxic substances will be required.

The FRSH beneficial use of groundwater was erroneously not included in the previous Order and has been added to Table 5 in the Order and Table F-3 above to ensure consistency with the Basin Plan.

Requirements of this Order implement the Basin Plan.

- 2. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.
- 3. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation

Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

- 4. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 C.F.R. § 131.21<sup>3</sup>, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.
- 5. Antidegradation Policy.** Section 131.12 requires that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.
- 6. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

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<sup>3</sup> All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

#### **D. Impaired Water Bodies on CWA 303(d) List**

Section 303(d) of the federal CWA requires states to identify waterbodies that do not meet water quality standards and are not supporting their beneficial uses after implementation of technology-based effluent limitations on point sources. Each state must submit an updated list, the 303 (d) List of Impaired Waterbodies, to USEPA by April of each even numbered year. In addition to identifying the waterbodies that are not supporting beneficial uses, the 303 (d) list also identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. The USEPA requires the Regional Water Board to develop total maximum daily loads (TMDLs) for each 303(d) listed pollutant and water body contaminant. TMDLs establish the maximum quantity of a given pollutant that can be added to a water body from all sources without exceeding the applicable water quality standard for that pollutant and determine wasteload allocations (the portion of a TMDL allocated to existing and future point sources) for point sources and load allocations (the portion of a TMDL attributed to existing and future nonpoint sources) for nonpoint sources.

In June 2007, the USEPA provided final approval of the 303(d) list of impaired water bodies prepared by the State. The list identifies the entire Russian River watershed as impaired by sediment, and the cold water fisheries of the Russian River as impaired by temperature. Designated portions of the Russian River, near Healdsburg and Monte Rio, are listed as impaired for indicator bacteria. In addition to the applicable Russian River listings, the Laguna de Santa Rosa watershed also is listed as impaired for low dissolved oxygen, nutrients, and mercury. Pursuant to CWA section 303(d), the Regional Water Board will adopt Total Maximum Daily Loads (TMDLs) to address impairments in 303(d) listed waters. Wasteload allocations identified in TMDLs will be implemented through NPDES permits. The Regional Water Board will consider for adoption TMDLs addressing impairments in the Laguna de Santa Rosa watershed in 2012, and for Russian River impairments in subsequent years.

#### **E. Other Plans, Policies and Regulations**

On February 8, 2005, the Discharger received coverage under State Water Board Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities*, for storm water discharges not regulated under this Order.

#### **IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: section 122.44(a) requires that permits include applicable technology-based limitations and standards; and section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

##### **A. Discharge Prohibitions**

- 1. Discharge Prohibition III.A.** The discharge of any waste not disclosed by the Discharger or not within the reasonable contemplation of the Regional Water Board is prohibited.

This prohibition is based on the Basin Plan, the previous Order (Order No. R1-2003-0059), and State Water Board Order WQO 2002-0012 regarding the petition of WDRs Order No. 01-072 for the East Bay Municipal Utility District and Bay Area Clean Water Agencies. In State Water Board Order No. WQO 2002-0012, the State Water Board found that this prohibition is acceptable in Orders, but should be interpreted to apply only to constituents that are either not disclosed by the Discharger, or are not reasonably anticipated to be present in the discharge and have not been disclosed by the Discharger. It specifically does not apply to constituents known or thought to occur in the discharge but that do not have “reasonable potential” to exceed water quality objectives.

The State Water Board has stated that the only pollutants not covered by this prohibition are those which were “disclosed to the permitting authority and which can be anticipated as part of the discharge....” [In re the Petition of East Bay Municipal Utilities District et al., (State Water Board, 2002, Order No. WQO 2002-0012, p. 24)] In that Order, the State Water Board cited a case which held the Discharger is liable for discharge of pollutants not “within the reasonable contemplation of the permitting authority...” [Piney Run Preservation Assn. v. County Commissioners of Carroll County, Maryland (4<sup>th</sup> Cir. 2001) 268 F. 3d 255, 268.] Thus the State Water Board authority provides that, to be permissible, the constituent discharged (1) must have been disclosed by the Discharger and (2) can be reasonably contemplated by the Regional Water Board.

Whether or not the Discharger reasonably contemplates the discharge of a constituent is not relevant. What matters is whether the Discharger disclosed the constituent to the Regional Water Board or whether the presence of the pollutant in the discharge can otherwise be reasonably contemplated by the Regional Water Board at the time of Order adoption.

2. **Discharge Prohibition III.B.** Creation of pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code is prohibited.

This prohibition is based on section 13050 of the Water Code. It has been retained from Order No. R1-2003-0059.

3. **Discharge Prohibition III.C.** The discharge of waste to land that is not owned or under agreement for use by the Discharger is prohibited, except for use for fire suppression as provided in Title 22, sections 60307 (a) and (b) of the California Code of Regulations.

This prohibition has been retained from Order No. R1-2003-0059. Land used for the application of wastewater must be owned by the Discharger or be under the control of the Discharger by contract so that the Discharger maintains a means for ultimate disposal of treated wastewater.

4. **Discharge Prohibition III.D.** The discharge or reclamation use of untreated or partially treated waste from anywhere within the collection, treatment, or disposal systems is prohibited, except as provided for in Attachment D, Standard Provision G (Bypass).

This prohibition has been retained from the previous Order (Order No. R1-2003-0059) and is based on the Basin Plan to protect beneficial uses of the receiving water from unpermitted discharges, and the intent of the CWC sections 13260 through 13264 relating to the discharge of waste to waters of the State without filing for and being issued an Order. This prohibition applies to spills not related to sanitary sewer overflows (SSOs) and other unauthorized discharges of wastewater within the collection, treatment, and disposal facilities. The discharge of untreated or partially treated wastewater from the collection, treatment, or disposal facility represents an unauthorized bypass pursuant to section 122.41(m) or an unauthorized discharge which poses a threat to human health and/or aquatic life, and therefore is explicitly prohibited by this Order.

5. **Discharge Prohibition III.E.** The discharge of wastewater, other than process wastewater and cold storage defrost wastewater, into the process wastewater treatment system is prohibited.

This prohibition has been retained from the previous Order (Order No. R1-2003-0059). In accordance with section VI. C. 6. e of the Order, the Discharger can accept offsite process wastewaters for onsite treatment and land application.

6. **Discharge Prohibition III.F.** Direct discharge to Barlow Creek is prohibited during the summer dry season (May 15 through September 30). The discharge of domestic waste to Barlow Creek is prohibited at all times.

This prohibition has been modified from the previous Order (Order No. R1-2003-0059). The first seasonal prohibition is a restatement of the Waste Discharge Prohibition established in Chapter 4 of the Basin Plan and is intended to protect water quality and beneficial uses during critical low-flow and high-recreational periods of the year. The prohibition of domestic waste discharges to Barlow Creek is a reiteration of Prohibition III.H.

7. **Discharge Prohibition III.G.** The Discharger shall minimize the discharge of process wastewater to Barlow Creek, specifically limiting discharges to periods when large volumes of wastewater jeopardize the safe operation of the storage pond. During the period of October 1 through May 14 each year, the discharge of process wastewater into Barlow Creek is limited to only excess wastewater as needed to safely operate the aerated storage pond and shall not exceed more than one-percent of the flow of Atascadero Creek as measured at the Occidental Road Bridge. For purposes of this Order, compliance with this discharge prohibition shall be determined as follows:
  - i. The discharge of treated process wastewater shall be adjusted at least once daily to avoid exceeding, to the extent practicable, one percent of the most recent daily flow measurement of Atascadero Creek<sup>4</sup>. Daily flow shall be based on flow meter comparisons reasonably read between the hours of 12:01 am to 12:00 midnight; and
  - ii. In no case shall the total volume of treated process wastewater discharged in a calendar month exceed one percent of the total volume of Atascadero Creek in the same calendar month. At the beginning of the discharge season, the monthly flow volume comparisons shall be based on the date when the discharge commenced to the end of the calendar month. At the end of the discharge season, the monthly flow

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<sup>4</sup> An alternative flow gauging location may be established if it is determined that measurements at an alternative location are more representative of conditions at the point of discharge. In the event that a new gauge station is established, the Monitoring and Reporting Program will be modified to identify the new flow monitoring gauge.

volume shall be calculated from the first day of the calendar month to the date when the discharge ceased for the season.

This prohibition has been retained from the previous Order (Order No. R1-2003-0059) with some clarification of the required timing intervals for flow measurements. This prohibition also references the Surface Receiving Water Study required in Special Provision VI.C.2.c, which is required either to demonstrate compliance with the one percent receiving water flow prohibition in the Basin Plan or to support a request for an exception from the prohibition.

Basin Plan Prohibition No. 4 does not specify how compliance with the one-percent flow requirement should be determined. This Order corrects this oversight and specifies that the Discharger may comply with the one-percent requirement as a monthly average for the surface water discharge season, provided the Discharger makes a reasonable effort to adjust the discharge of treated wastewater to one percent of the most recent daily flow measurement of Atascadero Creek. This modification provides day-to-day operational flexibility for the Discharger while retaining the intent of the prohibition.

8. **Discharge Prohibition III.H.** The discharge of domestic waste, treated or untreated, to surface waters is prohibited.

This prohibition has been retained from the previous Order (Order No. R1-2003-0059). This Prohibition is based on the general objectives of the Basin Plan (no discharge unless necessary) and BPJ, and is consistent with the Basin Plan provision requiring that any municipal wastewater receive advanced treatment prior to discharge (no advanced treatment is currently available at this facility).

9. **Discharge Prohibition III.I.** The discharge of waste classified as “hazardous,” defined in CCR, Title 23, Chapter 15, Section 2521(a) to any part of the domestic and/or process wastewater disposal systems is prohibited.

This prohibition has been modified from the previous Order (Order No. R1-2003-0059) to eliminate the prohibition of designated waste discharges because the domestic and process wastewaters are designated and were never intended to be covered by this prohibition.

10. **Discharge Prohibition III.J.** The reclamation use of treated domestic wastewater shall be restricted to irrigation Bench No. 1 (at Discharge Point 003).

This prohibition has been retained from the previous Order (Order No. R1-2003-0059) and is consistent with not allowing any surface water discharge of domestic wastewater (under Prohibition III. G).

- 11. Discharge Prohibition III.K.** Treated domestic and process wastewaters shall not be applied to the bench irrigation areas within 24 hours of a forecasted rain event, during rainfall, 24 hours after a rainfall event or when soils are saturated.

This prohibition has been retained from the previous Order (Order No. R1-2003-0059).

- 12. Discharge Prohibition III.L.** Treated process wastewater may not be land applied at a rate exceeding 0.37 mgd on any single day or at a rate exceeding 0.17 mgd, as determined from any consecutive 30-day mean daily flow.

This prohibition has been retained from the previous Order (Order No. R1-2003-0059) and is based on the assimilative capacity of the Discharger's land application areas, documented by the Capacity Assessment Report dated July 22, 2003.

- 13. Discharge Prohibition III. M** Cold storage defrost water shall only be discharged to Lake Davis. The direct discharge of cold storage defrost wastewater to Barlow Creek is prohibited.

This prohibition has been retained from the previous Order (Order No. R1-2003-0059).

## **B. Technology-Based Effluent Limitations**

### **1. Scope and Authority**

Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations, require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3. When USEPA has not promulgated technology-based Effluent Limitations Guidelines for a particular industry, the Regional Water Board can establish technology-based requirements using best professional judgment (BPJ) pursuant to 40 CFR 125.3 (c). When using BPJ to establish technology-based limitations, the factors described at 40 CFR 125.3 (d) must be considered.

## 2. Applicable Technology-Based Effluent Limitations (TBELs)

Concentration based effluent limitations for BOD<sub>5</sub>, TSS, and settleable solids at Discharge Point 001 are retained from the previous Order (Order No. R1-2003-0059) and are based on BPJ, and are consistent with the effluent limitations established in the General Waste Discharge Requirements for Discharges of Winery Waste to Land (Regional Water Board Order No. R1-2002-0012). The current tenant mix at this facility is oriented towards wine production. Other tenants also discharge waste streams that can be treated by the existing treatment process. The TBELs for Temperature and COD are retained from the previous permit and are included to cover the potential use of the cold storage process equipment. This equipment is currently not operational, but if it ever gets reinstated, these limits would apply to that discharge stream. Sampling for Temperature and COD at Discharge Point 001 will only be required if the cold storage process is used. These effluent limitations are still considered appropriate for this facility and are retained in this Order. The TBELs for Discharge Point 001 are summarized in Table F-4 below:

**Table F-4. Summary of Technology-Based Effluent Limitations for Discharge Point 001**

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
BOD <sub>5</sub>	mg/L	---	80.
TSS	mg/L	---	80.
Settleable Solids	mL/L-hr	---	0.2
Temperature	°C	--	27
COD	mg/L	--	50

## C. Water Quality-Based Effluent Limitations (WQBELs)

### 1. Scope and Authority

Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where

reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs, when necessary, is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

## **2. Applicable Beneficial Uses and Water Quality Criteria and Objectives**

- a. Beneficial Uses. Beneficial use designations for receiving waters for discharges from the Sonoma West Facility are described in Finding II.H of the Order and section III.C.1 of this Fact Sheet.
- b. Basin Plan Water Quality Objectives. In addition to the specific water quality objectives indicated above, the Basin Plan contains narrative objectives for color, tastes and odors, floating material, suspended material, settleable material, oil and grease, biostimulatory substances, sediment, turbidity, pH, dissolved oxygen, bacteria, temperature, toxicity, pesticides, chemical constituents, and radioactivity (including those chemicals that adversely affect drinking and agricultural water supplies) that apply to inland surface waters, enclosed bays, and estuaries, including Barlow Creek.
- c. State Implementation Plan (SIP), CTR and NTR. Water quality criteria and objectives of 126 priority pollutants applicable to this receiving water are established by the California Toxics Rule (CTR), established by the USEPA at title 40, section 131.38; and the National Toxics Rule (NTR), established by the USEPA at title 40, section 131.36. Criteria for most of the 126 priority pollutants are contained within the CTR and the NTR.

Aquatic life freshwater and saltwater criteria are further identified as criterion maximum concentrations (CMC) and criterion continuous concentrations (CCC). The CTR defines the CMC as the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without deleterious effects and the CCC as the highest

concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects. The CMC is used to calculate an acute or one-hour average numeric effluent limitation and the CCC is used to calculate a chronic or 4-day average numeric effluent limitation. Aquatic life freshwater criteria are used for the reasonable potential analysis (RPA), and for the calculation of effluent limitations for pollutants that showed reasonable potential.

Human health criteria are further identified as “water and organisms” and “organisms only.” “Water and organism” criteria are designed to address risks to human health from multiple exposure pathways. The criteria from the “water and organisms” column of the CTR are applicable here, because the receiving water has the beneficial use designation as a municipal and domestic supply.

At title 22, Division 4, Chapter 15, CCR, the Department of Health Services has established Maximum Contaminant Levels (MCLs) for certain pollutants for protection of drinking water. Chapter 3 of the Basin Plan establishes these MCLs as water quality objectives applicable to receiving water with the beneficial use designation of municipal and domestic supply.

The SIP, which is described in Finding II.J of the Order and section III.C.3 of the Fact Sheet, includes procedures for determining the need for and calculating WQBELs and requires dischargers to submit data sufficient to do so. The Facility has not discharged to Barlow Creek during the previous permit term; therefore, there are no new data with which to conduct the RPA. Existing WQBELs for toxic pollutants (i.e., cadmium, copper, cyanide, nickel, selenium, and zinc) have been retained from the previous Order (Order No. R1-2003-0059) for Discharge Point 001.

### **3. Determining the Need for WQBELs**

#### **a. Surface Waters**

##### **i. Non-Priority Pollutants**

pH. The effluent limitation for pH of 6.5 to 8.5 at Discharge Point 001 is retained from the previous permit. This limitation is based on the water quality objective for all surface waters of the Russian River Hydrologic Unit established in Chapter 3 of the Basin Plan.

ii. Priority Pollutants.

The SIP, statewide policy that became effective on May 22, 2000, establishes procedures to implement water quality criteria from the NTR and CTR and for priority, toxic pollutant objectives established in the Basin Plan. The implementation procedures of the SIP include methods to determine reasonable potential (for pollutants to cause or contribute to excursions above State water quality standards) and to establish numeric effluent limitations, if necessary, for those pollutants showing reasonable potential.

The SIP Section 1.3 requires the Regional Board to use all available, valid, relevant, and representative receiving water and effluent data and information to conduct a reasonable potential analysis (RPA). The Facility did not discharge to Barlow Creek during the term of the previous permit, and no new effluent data was available therefore to conduct a RPA. Without new effluent data, the Regional Water Board could also not re-evaluate the need for WQBELs for cadmium, copper, cyanide, nickel, selenium, and zinc at Discharge Point 001. Effluent limitations at Discharge Point 001 for these pollutants are therefore retained from the previous permit.

b. Ground Water

- i. **Biochemical Oxygen Demand (BOD):** This Order retains an effluent limitation of 80. mg/L from the previous order.
- ii. **Total Suspended Solids:** This Order retains an effluent limitation of 80. mg/L from the previous order.
- iii. **pH:** This Order retains an effluent limitation range of 6.5-8.5 standard units from the previous order.
- iv. **Settleable Solids:** This Order retains an effluent limitation of 1.0 mg/L from the previous order.

4. WQBEL Calculations

A summary of WQBELs established by the Order for Discharge Point 001 is provided in the table below. The effluent limitation for pH is based on the Basin Plan water quality objective for pH for the Russian River Hydrologic Unit. WQBELs for cadmium, copper, cyanide, nickel, selenium, and zinc for Discharge Point 001 have been retained from the previous Order (Order No. R1-2003-0059).

**Table F-5. Summary of Water Quality-Based Effluent Limitations - Discharge Point 001**

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
pH	s.u.	6.5 -8.5 at all times	
Cadmium	µg/L	1.8 <sup>5</sup>	3.7 <sup>4</sup>
Copper	µg/L	6.2 <sup>4</sup>	12 <sup>4</sup>
Cyanide	µg/L	4.3	8.5
Nickel	µg/L	38 <sup>4</sup>	77 <sup>4</sup>
Selenium	µg/L	4.1	8.2
Zinc	µg/L	54 <sup>4</sup>	108 <sup>4</sup>

### 5. Whole Effluent Toxicity (WET) – Discharge Point 001

Effluent limitations for whole effluent, acute and chronic toxicity, protect the receiving water from the aggregate effect of a mixture of pollutants that may be present in effluent. There are two types of WET tests – acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic test is conducted over a longer period of time and may measure mortality, reproduction, and/or growth. The Basin Plan establishes a narrative water quality objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to, or produce other detrimental responses in aquatic organisms. Detrimental responses may include, but are not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota.

The Order retains effluent limitations for acute and chronic, whole effluent toxicity from the previous permit with minor language changes to ensure regional consistency.

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<sup>5</sup> Final effluent limitations are dependent on the receiving water hardness determined at the time of effluent sampling. See Appendix E-1 to E-4 of Attachment E for the full table of hardness-dependent final effluent limitations for cadmium, copper, nickel and zinc.

## **D. Final Effluent Limitations**

### **1. Satisfaction of Anti-Backsliding Requirements**

All effluent limitations in this Order have been retained from the previous Order (Order No. R1-2003-0059) and therefore are at least as stringent as the effluent limitations in the previous Order.

### **2. Satisfaction of Antidegradation Policy**

This Order is consistent with applicable federal and State antidegradation policies, as it does not authorize the discharge of increased concentrations of pollutants or increased volumes of treated wastewater.

### **3. Stringency of Requirements for Individual Pollutants**

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD<sub>5</sub>, COD, TSS, and settleable solids, for Discharge Point 001. Restrictions on these pollutants are discussed in section IV.B in this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Most beneficial uses and water quality objectives contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

In addition, the Regional Water Board has considered the factors in Water Code section 13263, including the provisions of Water Code section 13241, in establishing these requirements.

**a. Final Effluent Limitations – Discharge Point 001**

**Table F-6. Summary of Final Effluent Limitations Discharge Point 001**

Parameter	Units	Effluent Limitations		Basis <sup>6</sup>
		Average Monthly	Maximum Daily	
BOD	mg/L	--	80.	PO and BPJ
TSS	mg/L	--	80.	PO and BPJ
pH	pH units	6.5 – 8.5		PO and BP
Settleable Solids	mL/L	--	0.2	PO and BPJ
Temperature	°C	--	27	PO and BPJ
COD	mg/L	--	50	PO and BPJ
Cadmium	µg/L	1.8	3.6	PO and CTR
Copper	µg/L	6.0	12	PO and CTR
Cyanide	µg/L	4.3	8.5	PO and CTR
Nickel	µg/L	37	75	PO and CTR
Selenium	µg/L	4.1	8.2	PO and CTR
Zinc	µg/L	52	104	PO and CTR

**Acute Toxicity.** There shall be no acute toxicity in treated wastewater as demonstrated by survival of test organisms in 96-hour flow through or static acute toxicity bioassay in undiluted effluent discharged to Barlow Creek. Effluents are considered acutely toxic when there is:

- i. Minimum for any one bioassay: 70 percent survival; and
- ii. Median for any three or more consecutive bioassays: at least 90 percent survival.

Compliance with the acute toxicity effluent limitation shall be determined in accordance with section V.A. of the attached MRP of this Order (Attachment E). The effluent limits for acute toxicity have been reworded for clarity and consistency with the new standard language used in other permits issued in the North Coast Region. Although the means for measuring compliance has changed, the limit itself remains unchanged.

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<sup>6</sup> PO – Previous Order  
BPJ – Best Professional Judgment  
BP – Basin Plan  
CTR – California Toxics Rule

**Chronic Toxicity.** Chronic toxicity in the effluent shall not exceed 1.0 TUc. Compliance with this chronic toxicity effluent limitation shall be determined by the results of toxicity test as specified in Attachment E.

**E. Interim Effluent Limitations – Not Applicable**

**F. Land Discharge Specifications – Discharge Point 002**

The Order retains BOD, TSS, pH, Settleable Solids limitations from the previous Order. The following limitations apply to Discharge Point 002 – for the land application of process wastewater:

**Table F-7. Summary of Final Effluent Limitations Discharge Point 002**

Parameter	Units	Effluent Limitations		Basis
		Maximum Daily	Average Monthly	
BOD <sub>5</sub> (20°C, 5-day)	mg/L	80.	---	PO and BPJ
TSS	mg/L	80.	---	PO and BPJ
pH	Std. units	6.5 – 8.5	---	PO and BPJ
Settleable Solids	mL/L/hr	1.0	---	PO and BPJ

**G. Reclamation Specifications – Discharge Point 003**

The Reclamation Specifications found in section IV.C of the Order conform to requirements contained in the California Code of Regulations, title 22, division 4, chapter 3 for the reclamation use of disinfected secondary effluent. BOD and TSS limits are retained from the previous permit and pH, TDS, Ammonia Nitrogen, Nitrite, Nitrate, Chloride, Sodium, Aluminum and Manganese are included using Best Professional Judgment for the protection of Water Quality Objectives for agricultural supply and primary and secondary MCLs.

**Table F-8. Summary of Final Effluent Limitations Discharge Point 003**

Parameter	Units	Effluent Limitations		Basis
		Maximum Daily	Average Monthly	
BOD <sub>5</sub>	mg/L	80.	50.	PO and BPJ
TSS	mg/L	80.	50.	PO and BPJ
pH	Std. units	6.5 – 8.5	---	BPJ and Secondary MCL for taste, corrosion and deposits

**Flow.** The maximum daily flow of domestic waste to the domestic wastewater treatment system shall not exceed 6,000 gpd and the monthly average flow shall not exceed 2,727 gpd.

The daily maximum flow limitation is retained from the previous permit while the monthly average flow limitation has been added to ensure protection of groundwater quality by limiting the monthly average discharge volume to the assimilative capacity determined by the Discharger in the Capacity Assessment Report dated July 22, 2003.

**Bacteria.** Disinfected effluent discharged from the wastewater treatment plant to the Russian River shall not contain total coliform bacteria in excess of the following concentrations:

1. The number of total coliform bacteria shall not exceed a Most Probable Number (MPN) of 23 per 100 mL in more than one sample in any 30-day period, and
2. No single sample shall exceed an MPN of 240 total coliform bacteria per 100 mL.

## V. RATIONALE FOR RECEIVING WATER LIMITATIONS

### A. Surface Water

CWA section 303(a-c) requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Regional Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that “[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional [Water] Board will apply to regional waters in order to protect the beneficial uses.” The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains Receiving Surface Water Limitations based on the Basin Plan numerical and narrative water quality objectives for biostimulatory substances, bacteria, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity.

### B. Groundwater

1. The beneficial uses of the underlying ground water are municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, and freshwater replenishment to surface waters.

Groundwater limitations are required to protect the beneficial uses of the underlying groundwater. This limitation is retained from the previous permit with the addition of “statistically” to clarify how to measure the significance of groundwater quality degradation.

2. State Water Board Resolution No. 68-16, requires, in part, that whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality water will be maintained until it is demonstrated to the state that any changes will be consistent with maximum benefit to the people of the state, will not unreasonably affect beneficial uses of such water, and will not result in water quality less than prescribed in the policies.

## **VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS**

Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and State requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

### **A. Influent Monitoring**

Influent monitoring requirements for flow and BOD<sub>5</sub> are retained from the previous permit.

### **B. Effluent Monitoring**

Effluent monitoring requirements from the previous Order are retained at Monitoring Location EFF-001 for: flow, pH, temperature, chlorine residual, BOD<sub>5</sub>, TSS, settleable solids, total coliform bacteria, cadmium, copper, cyanide, nickel, selenium, zinc, turbidity, total kjeldahl nitrogen, nitrate-nitrogen, ammonia, and acute toxicity. These monitoring requirements are necessary to determine compliance with prohibitions and/or effluent limitations established by the Order with the exceptions of chlorine residual, which is retained because chlorine is used for disinfection by some tenants and has the potential to persist in the effluent, and the additional annual monitoring of CTR constituents, which will facilitate the determination of reasonable potential during the next permit adoption. The annual effluent monitoring requirement for chronic toxicity has also been retained from the previous Order. This monitoring requirement enables the Regional Water Board to assess compliance with the Basin Plan’s narrative

water quality objective for toxicity that is applicable to all receiving waters of the Region.

### **C. Whole Effluent Toxicity Testing Requirements**

Whole effluent toxicity (WET) limitations and monitoring protect the receiving water quality from the aggregate effect of a mixture of pollutants in the effluent. Acute toxicity testing measures mortality in 100 percent effluent over a short test period and chronic toxicity testing is conducted over a longer time period and may measure mortality, reproduction, and/or growth. This Order includes effluent limitations for acute and chronic toxicity; therefore, monitoring for these parameters is required to determine compliance with these effluent limitations. The acute and chronic toxicity tests shall be conducted without modifications for ammonia toxicity.

### **D. Land Discharge Monitoring**

Effluent monitoring requirements from the previous Order are retained for the treated process wastewater effluent to be land applied at the effluent storage pond (monitoring Location STG-001) for: BOD<sub>5</sub>, TSS, dissolved oxygen, pH, settleable solids, and total coliform bacteria. A new Monitoring location LND-001 has been added to enables sampling of process wastewater that does not go to Lake Davis. Monitoring of Aluminum, and Manganese has been added at LND-001 to facilitate a reasonable potential analysis in the next permit. The basis for collecting data to determine the reasonable potential of the wastewater to exceed Groundwater Quality Objectives derives from the Basin Plan requirements for the protection of groundwater quality and associated Beneficial Uses, which in this case include domestic and municipal drinking water supply. The secondary MCLs for aluminum and manganese are included by reference in Table 3-2 of the Basin Plan and the Groundwater Quality Objective Section of the Basin Plan is currently being amended by Staff so this data collection corresponds with the prospective direction of the objectives.

### **E. Reclamation Monitoring**

Effluent monitoring requirements from the previous Order are retained at Monitoring Location REC-001 for: flow, BOD<sub>5</sub>, TSS, pH, chlorine residual, total coliform bacteria. These monitoring requirements are necessary to determine compliance with prohibitions and effluent limitations established by the Order. Monitoring of Aluminum, and Manganese has been added to facilitate a reasonable potential analysis in the next permit. The basis for collecting data to determine the reasonable potential of the wastewater to exceed Groundwater Quality Objectives derives from the Basin Plan requirements for the protection of groundwater quality and associated Beneficial Uses, which in this case include domestic and municipal

drinking water supply. The secondary MCLs for aluminum and manganese are included by reference in Table 3-2 of the Basin Plan and the Groundwater Quality Objective Section of the Basin Plan is currently being amended by Staff so this data collection corresponds with the prospective direction of the objectives.

## F. Receiving Water Monitoring

1. Surface Water. Receiving water monitoring requirements for turbidity, dissolved oxygen, pH and hardness are retained from the previous Order.

Hardness. Because the toxicity of certain metals is hardness dependent (i.e., as hardness decreases, metals toxicity increases), monitoring of hardness in the receiving water is required on a monthly basis to allow calculation of water quality objectives and effluent limitations that are hardness dependent. Monitoring of hardness in the receiving water should coincide with compliance monitoring for the hardness dependent metal with effluent limitations (copper) established by this Order. If there is no flow in the receiving water, the Discharger shall determine the hardness of the effluent.

2. Groundwater. The groundwater monitoring requirements established by this Order are based on the Discharger's *Groundwater Monitoring and Reporting Plan*, with a modification to the sampling period requirements, and are required to determine the impact of land application of treated domestic and process wastewater on areal groundwater. The *Groundwater Monitoring and Reporting Plan* specifies sampling during the dry and wet seasons, but this order specifies that sampling shall be performed in September for the dry season and March for the wet season. Specifying the sampling month facilitates compliance determination for Regional Board Staff and provides year-to-year data consistency for analysis. This order also increases the sampling frequency from once every three years to annually for all Title 22 Pollutants<sup>7</sup> in order to better assess the impacts to groundwater from the process wastewater disposal and domestic wastewater reclamation. This order also specifies that this annual monitoring shall occur in August, during the dry season, because that is most representative of when discharge to land occur and when impacts could be expected.

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<sup>7</sup>The term Title 22 Pollutants shall include all chemicals listed in the Basin Plan Groundwater Objectives, including all chemicals with primary and secondary maximum contaminant levels listed in Title 22 of the California Code of Regulations. These chemicals are regulated for the protection of the municipal and domestic supply beneficial uses.

## G. Other Monitoring Requirements

Monitoring requirements for bench storm water runoff during storm events, prior to discharging to Barlow Creek, and monitoring requirements for determination of solid waste generation, are retained from the previous Order.

## VII. RATIONALE FOR PROVISIONS

### A. Standard Provisions

**Federal Standard Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

**2. Regional Water Board Standard Provisions.** In addition to the federal Standard Provisions (Attachment D), the Discharger shall comply with the Regional Water Board Standard Provisions provided in Standard Provisions VI.A.2.

- a. Order Provision VI.A.2.a identifies the State's enforcement authority under the Water Code, which is more stringent than the enforcement authority specified in the federal regulations [e.g., 40 CFR sections 122.41(j)(5) and (k)(2)].
- b. Order Provision VI.A.2.b requires the Discharger to notify Regional Water Board staff, orally and in writing, in the event that the Discharger does not comply or will be unable to comply with any Order requirement. This provision requires the Discharger to make direct contact with a Regional Water Board staff person.

- c. Order Provision VI.A.2.c requires the Discharger to file a petition with, and receive approval from, the State Water Board Division of Water Rights prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse. This requirement is mandated by Water Code section 1211.

## **B. Special Provisions**

### **1. Reopener Provisions**

- a. **Standard Revisions (Special Provisions VI.C.1.a).** Conditions that necessitate a major modification of a permit are described in section 122.62, which include the following:
  - i. When standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision. Therefore, if revisions of applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such revised standards.
  - ii. When new information that was not available at the time of permit issuance would have justified different permit conditions at the time of issuance.
- b. **Reasonable Potential (Special Provisions VI.C.1.b).** This provision allows the Regional Water Board to modify, or revoke and reissue, this Order if present or future investigations demonstrate that the Discharger governed by this Permit is causing or contributing to excursions above any applicable priority pollutant criterion or objective, or adversely impacting water quality and/or the beneficial uses of receiving waters.
- c. **Whole Effluent Toxicity (Special Provisions VI.C.1.c).** This Order requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity through a TRE. This Order may be reopened to include a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity limitation based on that objective.
- d. **303(d)-Listed Pollutants (Special Provisions VI.C.1.d).** This provision allows the Regional Water Board to reopen this Order to modify existing

effluent limitations or add effluent limitations for pollutants that are the subject of any future TMDL action.

- e. **Water Effects Ratios (WERs) and Metal Translators (Special Provisions VI.C.1.e).** This provisions allows the Regional Water Board to reopen this Order if future studies undertaken by the Discharger provide new information and justification for applying a water effects ratio or metal translator to a water quality objective for one or more priority pollutants.
- f. **Recycled Water Policy (Special Provisions VI.C.1.f).** On February 3, 2009, the State Water Board adopted the Recycled Water Policy (State Water Board Resolution No. 2009-0011) for the purpose of increasing the use of recycled water from municipal wastewater sources in a manner that implements state and federal water quality laws. The Recycled Water Policy provides direction to the regional water boards regarding the appropriate criteria to be used in issuing permits for recycled water projects. The Recycled Water Policy became effective on May 14, 2009.

## 2. Special Studies and Additional Monitoring Requirements

- a. **Toxicity Reduction Evaluations (Special Provisions VI.C.2.a).** The SIP requires the use of short-term chronic toxicity tests to determine compliance with the narrative toxicity objectives for aquatic life in the Basin Plan. Attachment E of this Order requires chronic toxicity monitoring for demonstration of compliance with the narrative toxicity objective.

In addition to WET monitoring, this provision requires the Discharger to submit to the Regional Water Board an initial investigative TRE Work Plan for approval by the Executive Officer, to ensure the Discharger has a plan to immediately move forward with the initial tiers of a TRE, in the event effluent toxicity is encountered in the future. The TRE is initiated by evidence of a pattern of toxicity demonstrated through the additional effluent monitoring provided as a result of an accelerated monitoring program.

**TRE Guidance.** The Discharger has prepared a TRE Work Plan in accordance with USEPA guidance. Numerous guidance documents are available, as identified below:

- i. *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants*, (EPA/833B-99/002), August 1999.

- ii. *Generalized Methodology for Conducting Industrial TRES*, (EPA/600/2-88/070), April 1989.
  - iii. *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures*, Second Edition, EPA 600/6-91/005F, February 1991.
  - iv. *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I*, EPA 600/6-91/005F, May 1992.
  - v. *Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting acute and Chronic Toxicity*, Second Edition, EPA 600/R-92/080, September 1993.
  - vi. *Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity*, Second Edition, EPA 600/R-92/081, September 1993.
  - vii. *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, EPA-821-R-02-012, October 2002.
  - viii. *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, EPA-821-R-02-013, October 2002.
  - ix. *Technical Support Document for Water Quality-based Toxics Control*, EPA/505/2-90-001, March 1991
- b. Groundwater Monitoring Program (Special Provisions VI.C.2.b).** This provision is required to address the Regional Water Board concern about the impact of land application of treated process and domestic wastewater effluent on groundwater quality within the influence of the discharge.
- c. Surface Receiving Water Study (Special Provisions VI.C.2.c).** This provision is required to address the Regional Water Board concern about the impact of surface water discharges on Barlow and Atascadero Creeks.

### **3. Best Management Practices and Pollution Prevention**

- a. Facility-Wide Operational Best Management Practices (BMPs) Manual.** This provision is retained from the previous Order to ensure that

waste that is incompatible with the Facility's treatment system does not enter the system.

- b. Pollutant Minimization Plan.** Provision VI.C.3.a is included in this Order as required by section 2.4.5 of the SIP. The Regional Water Board includes standard provisions in all NPDES permits requiring development of a Pollutant Minimization Program when there is evidence that a toxic pollutant is present in the effluent at a concentration greater than an applicable effluent limitation.

#### **4. Construction, Operation, and Maintenance Specifications**

Section 122.41(e) of 40 CFR requires proper operation and maintenance of permitted wastewater systems and related facilities to achieve compliance with permit conditions. An up-to-date operation and maintenance manual, as required by Provision VI.C.4.b of the Order, is an integral part of a well-operated and maintained facility.

#### **5. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable**

#### **6. Other Special Provisions**

##### **a. Solids Disposal and Handling Requirements**

This provision is retained from Order No. R1-2003-0059. The disposal or reuse of wastewater treatment screenings, sludges, or other solids removed from the liquid stream waste is regulated by Parts 257, 258, 501, and 503 of 40 CFR; and the State Water Board promulgated provisions of Title 27, Division 2, of the California Code of Regulations.

##### **b. Aerated or Oxidation Pond System Requirements**

The requirements of this provision for the aerated ponds are retained from the previous permit to ensure proper operation of the ponds, to ensure adequate treatment.

##### **c. New Tenants and Operational Requirements**

This provision is retained from the previous permit. The provision requires the Discharger to ensure that any prospective tenants fall into the category of wine, beverage, and food processing, and that the tenants agree to comply with and implement the Facility-Wide BMP Manual, which ensures that waste that is incompatible with the facility's wastewater treatment system does not enter the system.

**d. Storm Water**

This provision is retained from the previous permit to ensure that the discharge of storm water from the facility grounds, including the land application benches, does not transport pollutants from the industrial process wastewaters to surface waters. The discharger is also covered by the General Industrial Stormwater Permit.

**e. Hauled / Offsite Wastewater**

The Order includes several requirements meant to ensure that the volume and character of wastewaters accepted by the Discharger are compatible with current onsite wastewater treatment and land application practices.

**7. Compliance Schedules – Not Applicable**

**VIII. PUBLIC PARTICIPATION**

The California Regional Water Quality Control Board, North Coast Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Sonoma West Holdings Inc., Wastewater Treatment Facility, Plant No. 2. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

**A. Notification of Interested Parties**

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through posting on the Regional Water Board's Internet site at:

[http://www.waterboards.ca.gov/northcoast/public\\_notices/public\\_hearings/npdes\\_permits\\_and\\_wdrs.shtml](http://www.waterboards.ca.gov/northcoast/public_notices/public_hearings/npdes_permits_and_wdrs.shtml) and through publication in the Press Democrat on February 6, 2010

**B. Written Comments**

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on **March 5, 2010**.

### **C. Public Hearing**

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: April 29, 2010  
Time: 9 a.m., or as soon as possible thereafter as noticed in the final agenda  
Location: Ukiah Valley Conference Center  
200 South School Street  
Ukiah, CA 95482

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is <http://www.waterboards.ca.gov/northcoast> where you can access the current agenda for changes in dates and locations.

### **D. Waste Discharge Requirements Petitions**

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board  
Office of Chief Counsel  
P.O. Box 100, 1001 I Street  
Sacramento, CA 95812-0100

### **E. Information and Copying**

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:00 a.m. and

SONOMA WEST HOLDINGS INC.  
WASTEWATER TREATMENT FACILITY, PLANT NO. 2  
ORDER NO. R1-2010-0019  
NPDES NO. CA0023655

5:00 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling 707-576-2220.

**F. Register of Interested Persons**

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

**G. Additional Information**

Requests for additional information or questions regarding this order should be directed to Kason Grady at 707-576-2682.