ORDER NO. R1-2013-0008
NPDES NO. CA0005932
WDID NO. 1B80020OHUM

WASTE DISCHARGE REQUIREMENTS

FOR THE

CALIFORNIA REDWOOD COMPANY
KORBEL SAWMILL
HUMBOLDT COUNTY

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

Table 1. Permittee Information

Permittee	California Redwood Company
Name of Facility	Korbel Sawmill
Facility Address	1165 Maple Creek Road
	Korbel, CA 95550
	Humboldt County
Type of Facility	Sawmill and Planing Mill (SIC Code 2421) Log Storage and Handling (SIC Code 2411)
Facility Design Flow	Up to 13.6 million gallons per day (MGD)

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Log deck sprinkler water and commingled storm water runoff	40º 52’ 27” N	123° 57’ 25” W	North Fork of the Mad River
002	Process water, cooling water from the milling processes commingled with stormwater from the log yard and hog and fueling areas	--	--	Land Disposal at Irrigation Site

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	May 2, 2013
This Order shall become effective on:	July 1, 2013
This Order shall expire on:	June 30, 2018
The Permittee 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:	September 30, 2017
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

IT IS HEREBY ORDERED, that this Order supersedes those findings and requirements removed from Order No. R1-2002-0037 pursuant to and following the adoption of Amendment Order R1-2013-0011, upon the effective date specified in Table 3. In order to meet the provisions contained in division 7 of the California Water Code (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 Permittee shall comply with the requirements in this Order. This action in no way prevents the Regional Water Quality Control Board from taking any enforcement action for past violations of the previous permit. If any part of this Order is subject to a temporary stay of enforcement, unless otherwise specified, the Permittee shall comply with the analogous portions of the unamended Order No. R1-2002-0037 that was in effect prior to Amendment Order R1-2013-0011, which shall remain in effect for all purposes during the pendency of the stay.

I, Matthias St. John, 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 May 2, 2013.

Original Signed By

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Matthias St. John, Executive Officer

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I. FACILITY INFORMATION

Information describing the Korbel Sawmill (hereinafter Facility), which is owned and operated by California Redwood Company (hereinafter Permittee), is summarized in Table 1 of this Order and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Permittee's permit application.

II. FINDINGS

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

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 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. Basis and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the Permittee's application for permit renewal, monitoring data collected and submitted during the term of the Permittee's previous Order, and other available information. The Fact Sheet (Attachment F) contains information and rationale for the requirements in this Order, and is hereby incorporated into this Order and constitutes the Findings for this Order. Attachments A through E are also incorporated into this Order.

C. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections III.E, III.F, IV.B, IV.C, and V.B of this Order, and sections VI., VII., VIII.B, X.D.2, X.D.3.h, and X.E of the MRP 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.

D. Notification of Interested Parties. The Regional Water Board has notified the Permittee 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 the notification are provided in the Fact Sheet of this Order.

E. 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 disclosed by the Permittee or not within the reasonable contemplation of the Regional Water Board is prohibited.

B. Creation of a pollution, contamination, or nuisance, as defined by section 13050 of the Water Code is prohibited.

C. The discharge of domestic waste, treated or untreated, to surface waters is prohibited.

D. The discharge of wood treatment chemicals or stain control fungicides to surface waters or to groundwater is prohibited.

E. The discharge of waste at any point not described in Finding II of the Fact Sheet or authorized by any State Water Board or other Regional Water Board permit is prohibited.

F. The discharge to surface water of process wastewater from bark removal (other than hydraulic barking as defined in 40 CFR 429.11), sawing, resawing, edging, trimming, planing and machining is prohibited.

G. The discharge of treated process water to the North Fork Mad River or its tributaries is prohibited during the period of May 15 through September 30;

H. During the period of October 1 through May 14 of each year, discharges of process water shall not exceed one percent of the flow of the North Fork of the Mad River.

I. The discharge of debris[1] is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

1. Final Effluent Limitations – Discharge Point No. 001 (Discharge to North Fork Mad River)

a. The Permittee shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-

[1] Debris is defined in Attachment A.

001 (previously identified as SN001) as described in the attached Monitoring and Reporting Program (Attachment E):

Table 4. Effluent Limitations – Discharge Point 001

Parameter	Units	Effluent Limitations			
		Average Monthly[1]	Maximum Daily[1]	Instantaneous Minimum[1]	Instantaneous Maximum[1]
pH	standard units	--	--	6.5	8.5
Copper, Total Recoverable	µg/L	4.9	9.7	--	--
Lead, Total Recoverable	µg/L	1.5	2.9	--	--

[1] See Definitions in Attachment A and Compliance Determination discussion in section VII of this Order.

b. Acute Toxicity. There shall be no acute toxicity in the effluent discharged to the North Fork of the Mad River at Discharge Point No. 001. The Permittee will be considered compliant with this limitation when the survival of aquatic organisms in a 96-hour bioassay of undiluted waste complies with the following:

i. Minimum for any one bioassay: 70 percent survival; and

ii. Median for any three or more consecutive bioassays[2]: at least 90 percent survival.

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

B. Interim Effluent Limitations

This section is not applicable as the Order does not include any interim effluent limitations. In addition, interim effluent limitations for California Toxics Rule (CTR) constituents may no longer be included in NPDES permits after May 18, 2010.

C. Land Discharge Specifications

1. Runoff from the land application area must be captured and returned to the treatment facilities or spray fields.

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[2] 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. The median 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.

2. Public contact with effluent shall be precluded through such means as fences, signs, and other acceptable alternatives.

3. Areas irrigated with effluent shall be managed to prevent breeding of mosquitoes. More specifically:

   a. There shall be no standing water in the disposal area 24 hours after wastewater is applied. Where standing water in the land application area results from maintenance and operation of system flushing and repair activities, this period may extend to 72 hours, provided the activities are carried out under best management practices.

   b. Ditches not serving as wildlife habitat should be maintained free of emergent, marginal, and floating vegetation.

4. Discharges to the land application area shall be managed to minimize erosion.

D. Reclamation Specifications

This section is not applicable to the Permittee as treated wastewater is not reclaimed at this time.

V. RECEIVING WATER LIMITATIONS

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are required to be addressed as part of this Order. However, receiving water conditions not in conformance with the limitation are not necessarily a violation of this Order. Compliance with receiving water limitations shall be measured at monitoring locations described in the MRP (Attachment E). The Regional Water Board may require an investigation to determine cause and culpability prior to asserting a violation has occurred.

Discharges from the Facility shall not cause the following in the receiving waters:

A. Surface Water Limitations

1. The discharge shall not cause the dissolved oxygen concentration of the receiving water to be depressed below 7.0 mg/L. In the event that the receiving waters are determined to have dissolved oxygen concentrations of less than 7.0 mg/L, the discharge shall not depress the dissolved oxygen concentration below the existing level.

2. The discharge shall neither 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 the 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, but not limited to, 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 cause bottom deposits 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 receiving waters 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 a measurable temperature change in the receiving water at any time unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses.

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 shall not cause bioaccumulation of pesticide, fungicide, wood treatment chemical, or

other toxic pollutant concentrations in bottom sediments or aquatic life to levels that are harmful to human health.

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 receiving water 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 receiving waters to contain radionuclides in concentrations which are deleterious to human, plant, animal or aquatic life, nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal or indigenous aquatic life.

B. Groundwater Limitations

1. The collection, treatment, storage, and disposal of wastewater or recycled water shall not cause or contribute to a statistically significant degradation of groundwater quality unless a technical evaluation is performed that demonstrates that any degradation that could reasonably be expected to occur, after implementation of all regulatory requirements and reasonable best management practices, will not violate groundwater quality objectives or cause impacts to beneficial uses of groundwater.

2. The collection, storage, and use of wastewater or recycled water shall not cause alterations in groundwater that result in contaminant concentrations that cause nuisance or adversely affect beneficial uses.

3. The collection, treatment, storage, and/or use of wastewater or recycled water shall not cause alterations of groundwater that result in chemical concentrations in excess of limits specified in California Code of Regulations, title 22 section 64435 Tables 2 and 3, limits specified in title 22 section 64444.5, or the Basin Plan.

4. The collection, treatment, storage, and disposal of wastewater or recycled water shall not cause groundwater to contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Permittee shall comply with all Standard Provisions included in Attachment D of this Order.

2. **Regional Water Board Standard Provisions.** The Permittee shall comply with the following Regional Water Board standard provisions. In the event there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply.

   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 Permittee to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Permittee to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

   In the event the Permittee does not comply or will be unable to comply for any reason, with any prohibition, interim or final effluent limitation, land discharge 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, sanitary sewer overflow, irrigation runoff, etc., that results in a discharge to a drainage channel or a surface water, the Permittee shall notify Regional Water Board staff within 24 hours and report orally and in writing to the Regional Water Board staff all unauthorized spills of waste. Spill notification and reporting shall be conducted in accordance with section X.E of the Monitoring and Reporting Program.

B. Monitoring and Reporting Program (MRP)

The Permittee shall comply with the MRP included as Attachment E to this Order, and future revisions thereto.

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, or has the reasonable potential to cause or contribute to, an excursion above a water quality criterion or objective applicable to the receiving water.

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 an applicable total maximum daily load (TMDL) (see Fact Sheet section III.C) program is adopted, this Order may be reopened and effluent limitations for the pollutant(s) that are the subject of the TMDL will be modified or imposed to conform this Order to the TMDL requirements.

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, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable. If the Permittee 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.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

i. **Whole Effluent Toxicity.** In addition to a limitation for whole effluent acute toxicity, the MRP of this Order requires routine monitoring for whole effluent chronic toxicity to determine compliance with the Basin Plan's narrative water quality objective for toxicity. As established by the MRP, if either of the

effluent limitations for acute toxicity is exceeded (a single sample with less than 70% survival or a three sample median of less than 90% survival) or if the chronic toxicity monitoring trigger of either a single sample maximum of 1.6 chronic toxicity unit (TUc) or a monthly median of 1.0 TUc (where TUc = 100/NOEC)[3] is exceeded, the Permittee shall conduct accelerated monitoring as specified in section V of the MRP.

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 Permittee pursuant to Section VI.C.2.a.ii of this Order, below.

ii. Toxicity Reduction Evaluations (TRE) Workplan. The Permittee shall prepare and submit to the Regional Water Board Executive Officer a TRE workplan within 90 days of the effective date of this Order. This plan shall be reviewed at least once every 5 years and updated as necessary in order to remain current and applicable to the discharge and discharge facilities. The Permittee shall notify the Regional Water Board of this review and submit any revision of the TRE workplan with each future Report of Waste Discharge.

The TRE workplan shall describe the steps the Permittee intends to follow if toxicity is detected, and should include at least the following items:

(a) A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

(b) A description of the facility's methods of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in the operation of this Facility.

(c) If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).

iii. Toxicity Reduction Evaluations (TRE) Implementation. 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 testing, required by Sections V.A.7 and V.B.9 of

[3] This Order does not allow any credit for dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 100% effluent.

the MRP, observed to exceed either the acute or chronic toxicity parameter.

(b) The TRE shall be conducted in accordance with the Permittee's TRE 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. The Permittee shall notify the Regional Water Board of this determination.

(e) The Permittee may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. TIEs shall be conducted in accordance with current technical guidance and reference material, including, at a minimum, the Permittee 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 Permittee 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 Permittee's actions and efforts to identify and control or reduce sources of consistent toxicity.

b. Best Practical Treatment or Control (BPTC) Work Plan. If, at any time land discharge monitoring results show that the discharge of waste is threatening to cause or has caused groundwater to contain waste constituents in concentrations statistically greater than background water quality, the Permittee shall submit, within 6 months, a BPTC Evaluation Work Plan that sets forth a scope and schedule for a systematic and comprehensive technical evaluation of each

component of the facilities' waste management system to determine best practicable treatment or control for each the waste constituents of concern. The work plan shall include a preliminary evaluation of each component of the waste management system and propose a time schedule for completing the comprehensive technical evaluation. The schedule to complete the evaluation shall be as short as practicable, and shall not exceed 1 year.

c. **Downstream Monitoring Location (RSW-002) Proposal.** By **August 1, 2013**, the Permittee shall propose for approval by the Executive Officer a new monitoring location downstream of Discharge Point 001 that is representative of the instream effects of the discharge on the North Fork Mad River. To be representative, RSW-002 shall be unaffected by the influence of other discharges and hydrologic inputs (i.e. in the North Fork Mad River upstream of the confluence with Hatchery Creek).

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

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

The Permittee 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, but not quantified (DNQ) when the effluent limitation is less than the method 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 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;

iv. 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 submitted as part of the Annual Facility Report due March 1st to the Regional Water Board and shall include:

(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.

c. Debris and Sediment Control Best Management Practices

i. BMPs for Woody Material. The discharge of woody material such as heartwood or sapwood, bark, twigs, branches, wood chips, or sawdust that will pass through a 1.0-inch diameter round opening shall be reduced to the maximum extent practicable by the implementation of BMPs approved by the Executive Officer. By **October 1, 2013** the Permittee shall submit a list of updated BMPs and a recommended monitoring program to the Executive Officer for approval. Once approved, the list of BMPs must be implemented to the maximum extent practicable. The Permittee may seek changes to the list of approved BMPs by submitting a written request for approval by the Executive Officer.

4. Construction, Operation and Maintenance Specifications

a. The Permittee 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 Permittee 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 Permittee only when necessary to achieve compliance with the conditions of this Order.

b. The Permittee shall maintain an updated Operation and Maintenance (O&M) Manual for the Facility. The Permittee shall update the O&M Manual, as necessary, to conform to changes in operation and maintenance of the Facility. The O&M Manual shall be readily available to operating personnel onsite and for review by state or federal inspectors. The O&M Manual shall include the following.

i. Description of the Facility's organizational structure 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 Permittee will be able to comply with requirements of this Order.

vi. Description of preventive (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.

c. Settling Basin Operating Requirements

i. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.

ii. Basins shall be managed to prevent breeding of mosquitoes. In particular,

(a) An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.

(b) Weeds shall be minimized, and

(c) Vegetation, debris, and dead algae shall not accumulate on the water surface.

5. Special Provisions for Municipal Facilities (POTWs Only)

This section is not applicable to the Permittee.

6. Other Special Provisions

a. Solids Disposal and Handling Requirements

Collected solids removed from liquid wastes shall be disposed of in a proper manner approved by the Executive Officer and consistent with the Consolidated Regulations for treatment, storage, Processing, or Disposal of Solid Waste, as set forth in California Code of Regulations, title 27, section 20005, *et seq.* (i.e. at a solid waste facility for which waste discharge requirements have been prescribed by a Regional Water Board) or in a manner approved by the Regional Water Board. For purposes of this provision:

(a) "Woodwaste" includes bark, rock, and/or soil from the surface or perimeter of a log deck.

(b) "Waste Piles" include windrows, fills, or dikes of woodwaste wherein visually identifiable material of woody origin may be found at depths greater than one foot below the surface.

(c) "Waste Storage" occurs whenever a waste pile remains on the property more than 180 days.

(d) "Waste Treatment" includes burning of waste piles.

The storage of basin sediments shall be done in a manner to prevent nuisance, pollution or impairment of beneficial uses of waters of the United States.

Any proposed change in basin sediment practices shall be reported to the Executive Officer at least 90 days in advance of the change.

7. Compliance Schedules

This section is not applicable to the Permittee.

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 Permittee 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 Permittee 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 Permittee 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 Permittee 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 Permittee will be considered out of compliance for that calendar month. The Permittee 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 Permittee 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 Permittee 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 Permittee 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 (μ): 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: Σx 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: 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.

BMPs: means "best management practices." Best management practices means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Carcinogenic Pollutants: substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV): 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.

Debris: The term "debris" means woody material such as bark, twigs, branches, heartwood or sapwood that will not pass through a 2.54 cm (1.0 in) diameter round opening and is present in the discharge from a wet storage facility.

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

Dilution Credit: 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.

Effective Concentration (EC): a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Karber. EC25 is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.

Effluent Concentration Allowance (ECA): 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: 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: the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries: 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.

Inhibition Concentration (IC): the IC25 is typically calculated as a percentage of effluent. It is the level at which the organisms exhibit 25 percent reduction in biological measurement such as reproduction or growth. It is calculated statistically and used in chronic toxicity testing.

Inland Surface Waters: 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).

Land Application Area: the area of land to which Discharge Point 002 discharges upgradient from any stormwater conveyances.

Maximum Daily Effluent Limitation (MDEL): 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: 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): 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): 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: 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): those sample results less than the laboratory's MDL.

Ocean Waters: 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: substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP): 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: 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.

Publicly Owned Treatment Works (POTW): a treatment works as defined in section 212 of the Clean Water Act (CWA), which is owned by a State or municipality as defined by section 502(4) of the CWA. [Section 502(4) of the CWA defines a municipality as a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes). This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Clean Water Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

Reporting Level (RL): the ML (and its associated analytical method) used for reporting and compliance determination. 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: 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.

Sludge: residual solids and semi solids from the treatment of water, wastewater, and other liquids. It does not include liquid effluent discharged from such treatment processes.

Sewage Sludge: any sludge, as defined above, from the onsite domestic wastewater system.

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

Standard Deviation (σ): a measure of variability that is calculated as follows:

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

where:

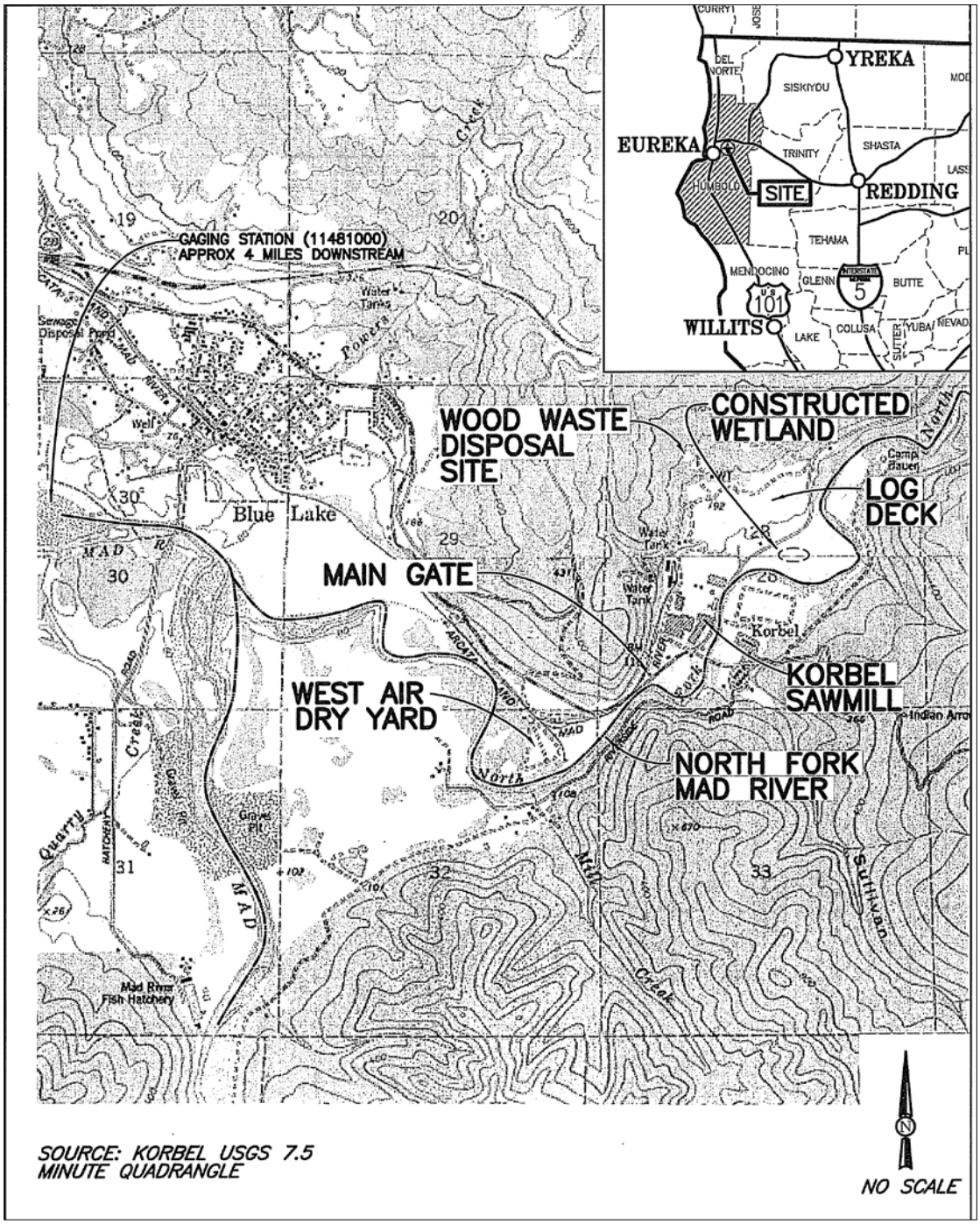
x is the observed value;

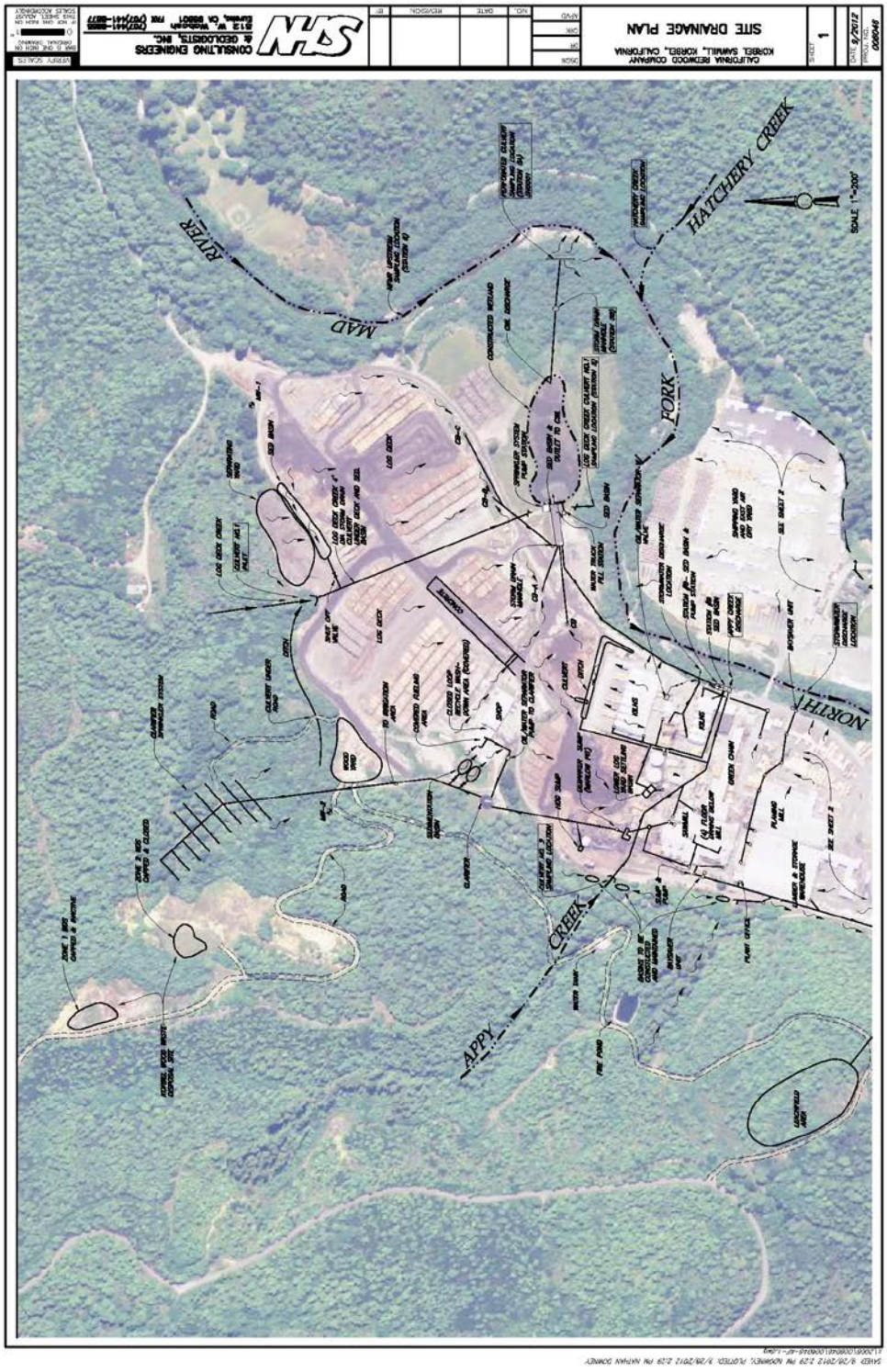
μ is the arithmetic mean of the observed values; and

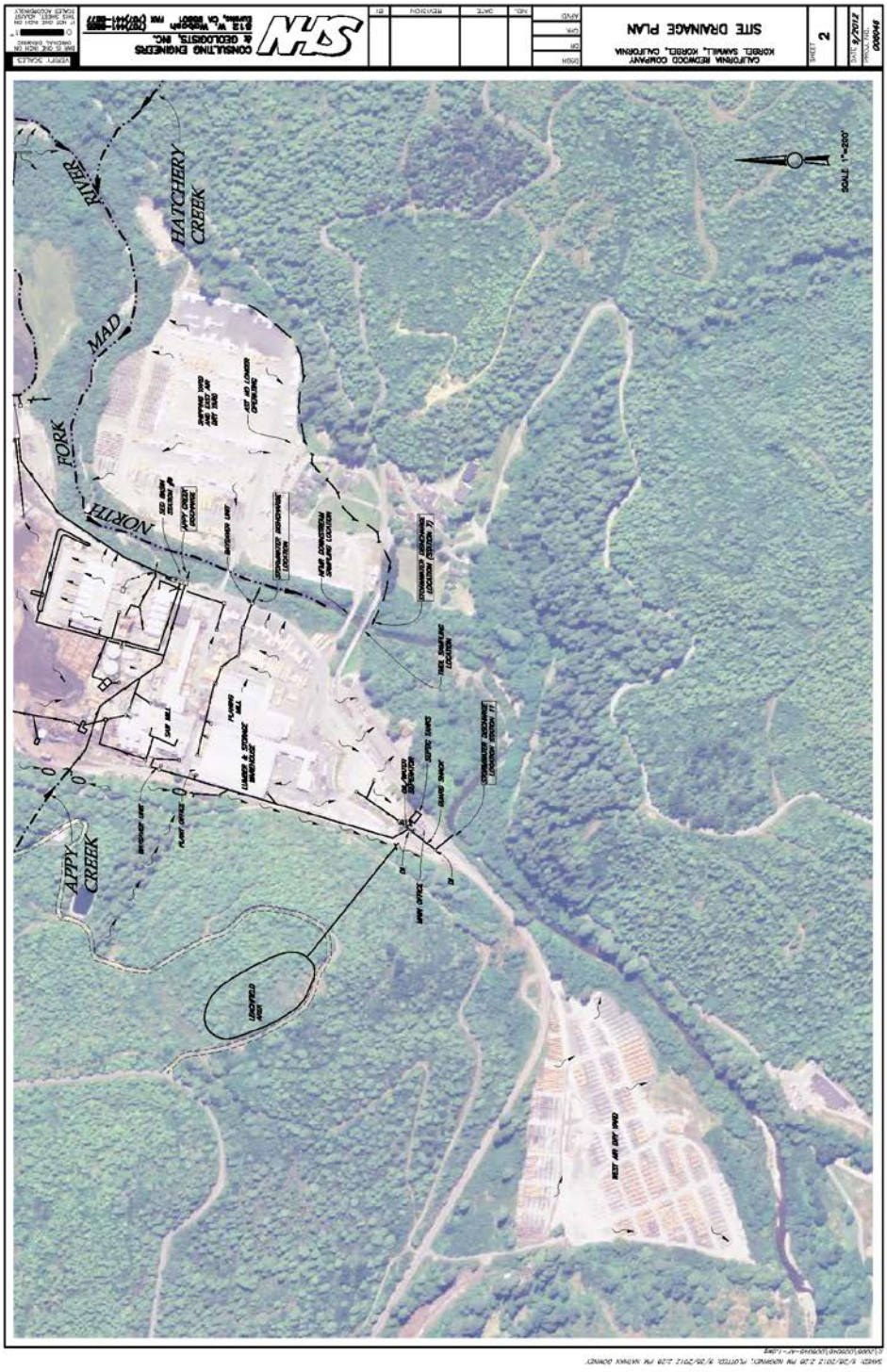
n is the number of samples.

Toxicity Reduction Evaluation (TRE): 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.)

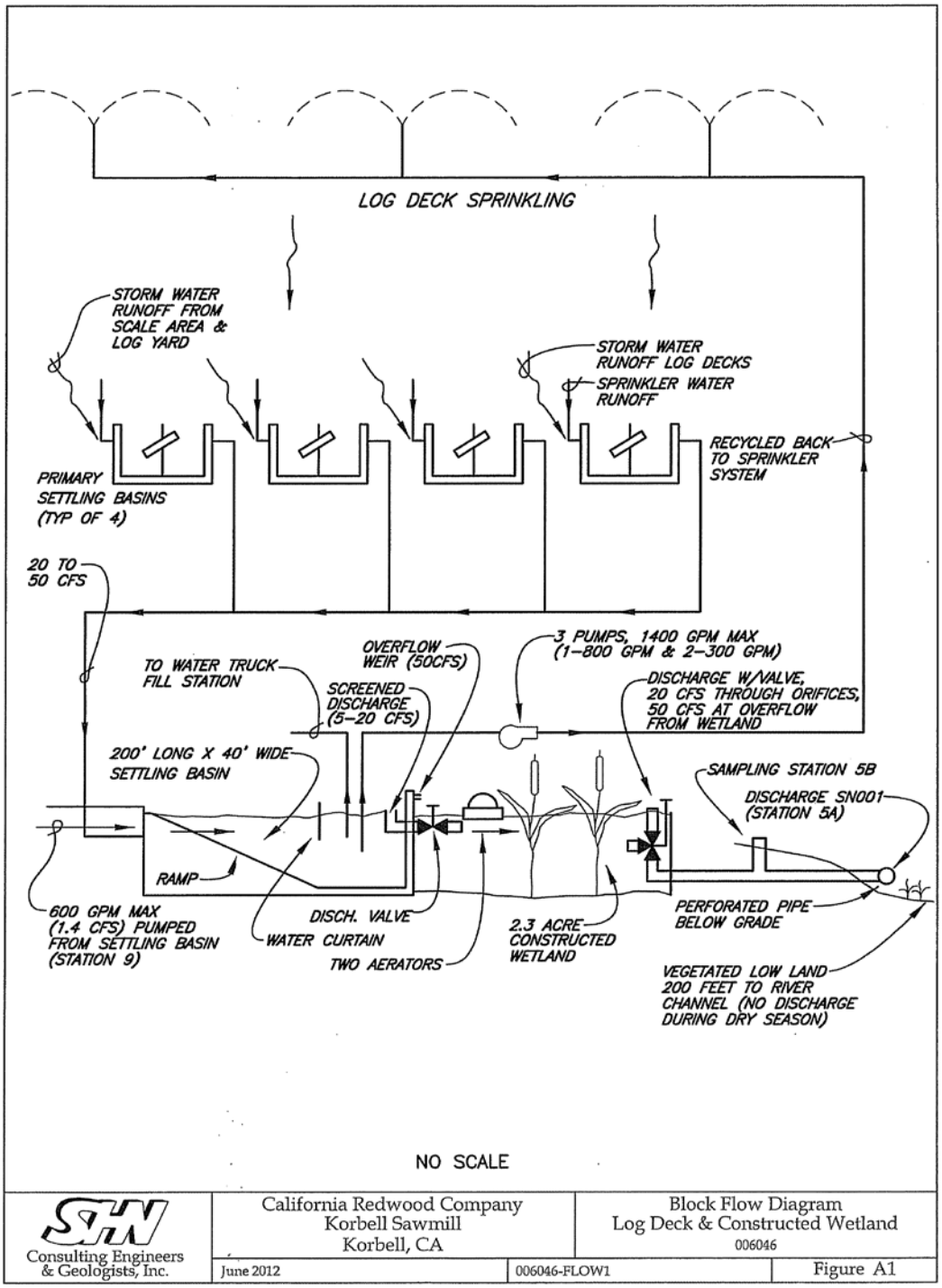
ATTACHMENT B – MAP

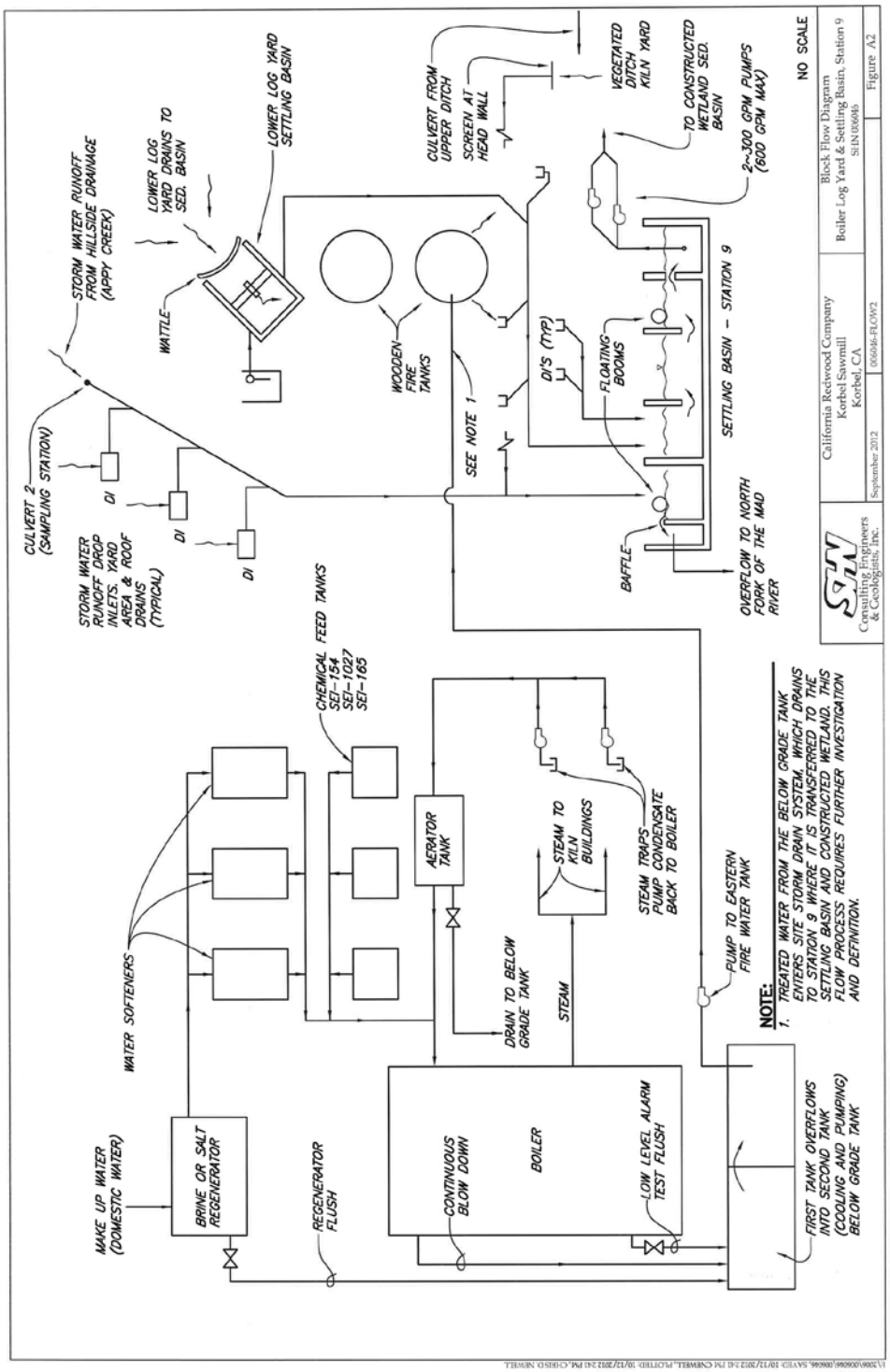



SITE DRAINAGE PLAN
CALIFORNIA REDWOOD COMPANY
KORBEL SAWMILL, KORBEL, CALIFORNIA
CONSULTING ENGINEERS
& GEOLOGISTS, INC.
SCALE 1"=200'
HATCHERY CREEK
MAD RIVER
NORTH FORK
APPY CREEK


CALIFORNIA REDWOOD COMPANY
KORBEL SAWMILL, KORBEL, CALIFORNIA
SITE DRAINAGE PLAN
SHEET 2
9/26/12
SCALE: 1"=200'
CONSULTING ENGINEERS & GEOLOGISTS, INC.
913 W. WASHOUGH
EUREKA, CA 95501
(707)441-8855
FAX (707)441-8877
NORTH FORK MAD RIVER
HATCHERY CREEK
APPY CREEK
LUMBER & STORAGE WAREHOUSE
PLANING MILL
DRY MILL
PLANT OFFICE
WAREHOUSE UNIT
SEDIMENT DISCHARGE LOCATION
SEDIMENT DISCHARGE LOCATION (SECTION 7)
SEDIMENT DISCHARGE LOCATION (SECTION 11)
SEPTIC TANKS
SAND SHACK
WAY OFFICE
WEST AIR DRY YARD
LOGGED AREA

ATTACHMENT C – FLOW SCHEMATIC




STORM WATER RUNOFF FROM HILLSIDE DRAINAGE (APPY CREEK)
LOWER LOG YARD DRAINS TO SED. BASIN
LOWER LOG YARD SETTLING BASIN
WATTLE
WOODEN FIRE TANKS
SEE NOTE 1
CULVERT FROM UPPER DITCH
SCREEN AT HEAD WALL
VEGETATED DITCH KILN YARD
TO CONSTRUCTED WETLAND SED. BASIN
2~300 GPM PUMPS (600 GPM MAX)
NO SCALE
DI'S (TYP)
FLOATING BOOMS
SETTLING BASIN - STATION 9
CULVERT 2 (SAMPLING STATION)
DI
STORM WATER RUNOFF DROP INLETS. YARD AREA & ROOF DRAINS (TYPICAL)
BAFFLE
OVERFLOW TO NORTH FORK OF THE MAD RIVER
CHEMICAL FEED TANKS
SEI-154
SEI-1027
SEI-165
AERATOR TANK
STEAM TO KILN BUILDINGS
STEAM TRAPS PUMP CONDENSATE BACK TO BOILER
PUMP TO EASTERN FIRE WATER TANK
WATER SOFTENERS
DRAIN TO BELOW GRADE TANK
STEAM
NOTE:
1. TREATED WATER FROM THE BELOW GRADE TANK ENTERS SITE STORM DRAIN SYSTEM, WHICH DRAINS TO STATION 9 WHERE IT IS TRANSFERRED TO THE SETTLING BASIN AND CONSTRUCTED WETLAND. THIS FLOW PROCESS REQUIRES FURTHER INVESTIGATION AND DEFINITION.
MAKE UP WATER (DOMESTIC WATER)
BRINE OR SALT REGENERATOR
REGENERATOR FLUSH
CONTINUOUS BLOW DOWN
BOILER
LOW LEVEL ALARM TEST FLUSH
FIRST TANK OVERFLOWS INTO SECOND TANK (COOLING AND PUMPING) BELOW GRADE TANK
Consulting Engineers & Geologists, Inc.
California Redwood Company
Korbel Sawmill
Korbel, CA
September 2012
006046-FLOW2
Block Flow Diagram
Boiler Log Yard & Settling Basin, Station 9
SIN 005046
Figure A2

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Permittee 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 CFR § 122.41(a).)

2. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants 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 CFR § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Permittee 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 CFR § 122.41(c).)

C. Duty to Mitigate

The Permittee 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 CFR. § 122.41(d).)

D. Proper Operation and Maintenance

The Permittee 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 Permittee 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 Permittee only when necessary to achieve compliance with the conditions of this Order. (40 CFR § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR § 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 CFR § 122.5(c).)

F. Inspection and Entry

The Permittee 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 CFR § 122.41(i); Water Code, § 13383):

1. Enter upon the Permittee 's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 CFR § 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 CFR § 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 CFR § 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 CFR § 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 CFR § 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 CFR § 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Permittee 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 CFR § 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Permittee for bypass, unless (40 CFR § 122.41(m)(4)(i)):

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 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 CFR § 122.41(m)(4)(i)(B)); and

c. The Permittee submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.6 below. (40 CFR § 122.41(m)(4)(i)(C).)

4. Burden of Proof. In any enforcement proceeding, the Permittee seeking to establish the bypass defense has the burden of proof.

5. 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 CFR § 122.41(m)(4)(ii).)

6. Notice

a. Anticipated bypass. If the Permittee 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 CFR § 122.41(m)(3)(i).)

b. Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR § 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 Permittee. 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 CFR § 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 CFR § 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR § 122.41(n)(3)):

a. An upset occurred and that the Permittee can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));

b. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));

c. The Permittee submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and

d. The Permittee complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR § 122.41(n)(3)(iv).)

3. Burden of proof. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof. (40 CFR § 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 Permittee for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR § 122.41(f).)

B. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the Permittee must apply for and obtain a new permit. (40 CFR § 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 Permittee and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 CFR § 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 CFR § 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 CFR § 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 Permittee '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 Permittee 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 CFR § 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and

6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi).)

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

1. The name and address of any permit applicant or Permittee (40 CFR § 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 CFR § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Permittee 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 Permittee shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); Water 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 CFR § 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 CFR § 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 CFR § 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 CFR § 122.22(b)(2)); and

c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 CFR § 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 CFR § 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 CFR § 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 CFR § 122.22(l)(4).)

2. If the Permittee 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 SMR or sludge reporting form specified by the Regional Water Board.. (40 CFR § 122.41(l)(4)(ii).)

3. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR § 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 CFR § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Permittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Permittee 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 CFR § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR § 122.41(l)(6)(ii)):

a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(A).)

b. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B).)

c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [40 CFR § 122.41(l)(6)(ii)(C)]

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 CFR § 122.41(l)(6)(iii).)

F. Planned Changes

The Permittee 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 CFR § 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 as defined in section 122.29(b) (40 CFR § 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 CFR § 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Permittee'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 CFR § 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Permittee 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 CFR § 122.41(l)(2).)

H. Other Noncompliance

The Permittee 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 CFR § 122.41(l)(7).)

I. Other Information

When the Permittee 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 Permittee shall promptly submit such facts or information. (40 CFR § 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 Permittees shall notify the Regional Water Board as soon as they know or have reason to believe (40 CFR 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" (40 CFR 122.42(a)(1)):

   a. 100 micrograms per liter (µg/L) (40 CFR 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 (40 CFR 122.42(a)(1)(ii));

   c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR 122.42(a)(1)(iii)); or

   d. The level established by the Regional Water Board in accordance with 40 CFR 122.44(f). (40 CFR 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" (40 CFR 122.42(a)(2)):

   a. 500 micrograms per liter (µg/L) (40 CFR 122.42(a)(2)(i));

   b. 1 milligram per liter (mg/L) for antimony (40 CFR 122.42(a)(2)(ii));

   c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR 122.42(a)(2)(iii)); or

   The level established by the Regional Water Board in accordance with section 122.44(f). (40 CFR 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) at 40 CFR 122.48 requires that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. California Water Code (Water Code) sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This Monitoring and Reporting Program (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 Permittee 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.

D. Compliance and reasonable potential monitoring analyses shall be conducted using commercially available and reasonably achievable detection limits that are lower than the applicable effluent limitation. If no Minimum Level (ML) value is below the effluent limitations, the lowest ML shall be selected as the Reporting Level (RL). Table E-1 lists the test methods the Permittee may use for compliance and reasonable potential monitoring to analyze priority pollutants with effluent limitations.

Table E-1. Test Methods and MLs for Priority Pollutants

CTR#	Constituent	Types of Analytical Methods MLs (µg/L)				
		Colorimetric	Gas Chromatography (GC)	Gas Chromatography/ Mass Spectroscopy (GCMS)	Inductively Coupled Plasma/ Mass Spectroscopy (ICPMS)	Stabilized Platform Graphite Furnace Atomic Absorption
6	Copper	---	---	---	0.5	2
7	Lead	--	---	---	0.5	N/A

II. MONITORING LOCATIONS

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

Table E-2. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Water supply to the log deck sprinklers.
001	EFF-001	Process wastewater discharged from the constructed wetland to the North Fork Mad River [previously identified as Station 5A or 5B (SN001)].
002	SPR-001	Location where a representative sample of the facility's effluent can be obtained prior to discharge to the land application area.
--	RSW-001	Upstream sampling is located in the North Fork Mad River at the water hole upstream of the constructed wetland discharge [previously identified as Station 6].
--	RSW-002	Receiving water monitoring location in the North Fork Mad River downstream of Discharge Point 001. According to Special Provision VI.C.2.c of this Order, the Permittee shall propose a location for RSW-002 for approval by the Executive Officer.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

The Permittee shall install flow meters at the Facility by December 31, 2013, and begin monitoring log deck sprinkler feed at INF-001 in January 2014 as follows:

Table E-3. Influent Monitoring – Monitoring Location INF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	gallons	Meter	Continuous	--

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

The Permittee shall establish flow rating curves at the wetland inlet weir by October 31, 2013, and at the discharge outlet structure by August 31, 2014. The Permittee shall begin recording effluent flow on September 1, 2014. The Permittee shall monitor process wastewater discharged from the constructed wetland prior to contact with receiving

water at Monitoring Location EFF-001. Samples shall be collected and analyzed, if discharge is occurring from the constructed wetland, as follows:

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

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	gallons	Meter	Continuous	--
Dissolved Oxygen	mg/L	Grab	Monthly	Standard Methods[1]
pH	standard units	Grab	Monthly	Standard Methods
Temperature	°F or °C	Grab	Monthly	Standard Methods
Turbidity	NTU	Grab	Monthly	Standard Methods
Color	Color Units	Grab	Monthly	Standard Methods
Total Suspended Solids (TSS)	mg/L	Grab	Monthly	Standard Methods
Settleable Solids	mg/L	Grab	Monthly	Standard Methods
Chemical Oxygen Demand (COD)	mg/L	Grab	Monthly	Standard Methods
Debris	N/A	Visual	Monthly	N/A
Hardness, Total (as $CaCO_3$)[2]	mg/L	Grab	Monthly	Standard Methods
Copper	µg/L	Grab	Monthly	Standard Methods
Lead	µg/L	Grab	Monthly	Standard Methods
Acute Toxicity [3]	% Survival	Grab	Annually	See Section V.A below
Chronic Toxicity [3]	TUc	Grab	Annually	See Section V.B below
Chronic Toxicity (narrative)	Passed/Triggered			--
All CTR Pollutants[4,5,6]	µg/L	Grab	1x/5 years	Standard Methods
Detected CTR Pollutants [7]	µg/L	Grab	Annually	Standard Methods

1. In accordance with the current edition of Standard Methods (Std Method) for the Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in section Part 136.
2. Monitoring of the effluent for hardness shall be conducted concurrently with receiving water monitoring for hardness.
3. Whole effluent acute and chronic toxicity shall be monitored in accordance with the requirements of section V of this Monitoring and Reporting Program.
4. CTR pollutants are those pollutants identified in the California Toxics Rule at 40 CFR 131.38. For priority pollutants, the methods must meet the lowest minimum level (ML) specified in Attachment 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP, see section III.B.3 of the Fact Sheet). In accordance with Section 2.4 of the SIP, the Permittee shall report the ML and MDL for each sample result. Where no methods are specified for a given pollutant, the Permittee shall use methods approved by the Regional Water Board. The laboratory's current MDL shall be determined by the procedure found in 40 CFR 136 (revised as of May 14, 1999).
5. Monitoring receiving water for hardness shall be conducted concurrently with effluent monitoring for any hardness dependent metals contained among the CTR pollutants.
6. The samples tested for the full set of CTR pollutants shall commence prior to May 1, 2017.
7. Detected CTR pollutants are those CTR Pollutants that have been previously detected in the effluent.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity Testing

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

1. **Test Frequency.** The Permittee shall conduct acute WET testing in accordance with the schedule established by this MRP while discharging at Discharge Point 001, as summarized in MRP section IV.A and Table E-4, above.

2. **Sample Type.** For 96-hour static renewal or 96-hour static non-renewal testing, the effluent samples shall be grab samples collected at Monitoring Location EFF-001.

3. **Test Species.** Test species for acute WET testing shall be a vertebrate, the rainbow trout, *Oncorhynchus mykiss* and an invertebrate, the water flea, *Ceriodaphnia dubia*, for at least the first two suites of tests conducted within 24 months after the effective date of the Order. After this screening period, monitoring shall be conducted annually using the most sensitive species. At least once every five years, the Permittee shall re-screen with the two species listed above and continue monitoring with 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, 5th 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. The control of pH in acute toxicity tests is allowed, provided the test pH is maintained at the effluent pH measured at the time of sample collection, 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.

6. **Test Failure.** If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Permittee 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 Permittee 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 Permittee shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with section VI.C.2.a.ii 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 Permittee shall contact the Executive Officer within 21 days with a plan to demonstrate compliance with the effluent limitation.

8. **Notification.** The Permittee shall notify the Regional Water Board verbally within 72 hours and in writing within 14 days after the receipt of test results exceeding the acute toxicity effluent limitation during regular or accelerated monitoring. The notification will describe actions the Permittee 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.** The acute toxicity test results shall include the contracting laboratory's complete report provided to the Permittee and shall be in accordance with section 12 (Report Preparation) of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. The submitted report shall clearly identify the test results.

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

B. Chronic Toxicity Testing

The Permittee shall conduct chronic toxicity testing to demonstrate compliance with the Basin Plan's water quality objective for toxicity. The Permittee shall meet the following chronic toxicity testing requirements:

1. **Test Frequency.** The Permittee shall conduct annual chronic WET testing in accordance with the schedule established by this MRP while discharging at Discharge Point 001, as summarized in MRP section IV.C.1 and Table E-4, above.

2. **Sample Type.** Effluent samples from Monitoring Location EFF-001 shall be grab samples. For toxicity tests requiring renewals, grab samples collected on consecutive days are required. When tests are conducted off-site, a minimum of three samples shall be collected, in accordance with USEPA test methods.

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). Initial testing for the first two suites of tests, shall include the three species listed above. After this screening period, monitoring shall be conducted annually using the most sensitive species. At least once every five years, the Permittee shall rescreen with the three species listed above, and continue to monitor with the most sensitive species.

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 acute toxicity report submitted to the Regional Water Board. The control of pH in chronic toxicity tests is allowed, provided the test pH is maintained at the pH of the receiving water measured at the time of sample collection, 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, and a control. 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 Permittee shall re-sample and re-test as soon as possible, not to exceed 14 days following notification of test failure.

8. **Notification.** The Permittee shall notify the Regional Water Board verbally within 72 hours and in writing within 14 days after the receipt of test results exceeding the chronic toxicity trigger during regular or accelerated monitoring.

9. **Accelerated Monitoring Requirements.** If the result of any chronic toxicity test exceeds the chronic toxicity monitoring trigger of 1.6 TUc as a single sample result or 1.0 TUc as a monthly median, as specified in section VI.C.2.a. of the Order, and the testing meets all test acceptability criteria, the Permittee shall initiate accelerated monitoring. Accelerated monitoring shall consist of four additional effluent samples and dilution series (specified in number 5 above) – with one test for each test species showing toxicity results exceeding the toxicity trigger. Accelerated monitoring tests shall be conducted approximately every week over a 4 week period.

   Testing shall commence within 14 days of receipt of initial sample results which indicated an exceedance of the chronic toxicity trigger. If the discharge will cease before the additional samples can be collected, the Permittee 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 four consecutive accelerated monitoring tests do not exceed the chronic toxicity trigger of 1.6 TUc as a single sample result or 1.0 TUc as a monthly median, the Permittee 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 Permittee initiate a TRE.

   b. If the source(s) of the toxicity is easily identified (i.e. temporary plant upset), the Permittee 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 Permittee ma

10. If the result of any accelerated toxicity test exceeds an effluent limitation or monitoring trigger, the Permittee 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 Permittee shall submit a report to the Regional Water Board including, at a minimum:

a. Specific actions the Permittee took to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;

b. Specific actions the Permittee took to mitigate the impact of the discharge and prevent the recurrence of toxicity;

c. Recommendations for further actions to mitigate continued toxicity, if needed; and

d. A schedule for implementation of recommended actions.

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

C. Chronic Toxicity Reporting

1. Routine Reporting. Chronic toxicity monitoring results shall be submitted with the monthly self-monitoring report for the month that chronic toxicity monitoring was performed.

a. WET test reports shall include the contracting laboratory's complete report provided to the Permittee and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals and this MRP. The WET test report shall contain a narrative report that includes details about WET test procedures and results, including the following:

i. Receipt and handling of the effluent sample that includes a tabular summary of initial water quality characteristics;

ii. The source and make-up of the lab control/diluent water used for the test;

iii. Any manipulations done to lab control/diluent and effluent such as filtration, nutrient addition, etc.;

iv. Identification of any reference toxicant testing performed;

v. Tabular summary of test results for control water and each effluent dilution and statistics summary to include calculation of NOEC, TUc and IC25;

vi. Identification of any anomalies or nuances in the test procedures or results; and

vii. Summary and conclusions section.

viii. WET test results shall include, at a minimum, for each test:

(a) Sample date(s);

(b) Test initiation date;

(c) Test species;

(d) End point values for each dilution (e.g., number of young, growth rate, percent survival);

(e) NOEC value(s) in percent effluent;

(f) IC15, IC25, IC40, and IC50 values (or EC15, EC25…etc.) in percent effluent;

(g) TUc values (100/NOEC);

(h) Mean percent mortality (±s.d.) after 96 hours in 100 percent effluent (if applicable);

(i) NOEC and LOEC values for reference toxicant test(s);

(j) IC50 or EC50 value(s) for reference toxicant test(s);

(k) Available water quality measurements for each test (e.g., pH, DO, temperature, conductivity, hardness, salinity, ammonia);

(l) Statistical methods used to calculate endpoints;

(m) The statistical output page, which includes the calculation of percent minimum significant difference (PMSD); and

(n) 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.

b. In addition to the WET report, the Permittee shall submit a compliance summary that includes an updated chronology of chronic toxicity test results expressed in NOEC and TUc, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency (routine, accelerated, or TRE). Each compliance summary report shall clearly identify whether or not the effluent

discharge is below the chronic toxic monitoring trigger and, in the event that the effluent discharge exceeds a single sample or median chronic toxicity trigger, the status of efforts (e.g., accelerated monitoring, TRE, TIE)to identify the source of chronic toxicity as required by section V.B.9 of this MRP.

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.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – FORESTED LAND SPRAY IRRIGATION

A. Monitoring Location SPR-001

1. The Permittee shall install flow monitoring devices by December 31, 2013, and begin flow monitoring in January 2014. When discharging to land, the Permittee shall monitor discharges to the spray forested land spray irrigation area at SPR-001 as follows:

Table E-5. Effluent Monitoring – Monitoring Location SPR-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	gallons	Meter	Continuous	--
pH	standard units	Grab	Annually[1]	Standard Methods[2]
Oil and Grease	mg/L	Grab	Annually[1]	Standard Methods
Arsenic	mg/L	Grab	Annually[1]	Standard Methods
Cadmium	mg/L	Grab	Annually[1]	Standard Methods
Chromium, Total	mg/L	Grab	Annually[1]	Standard Methods
Copper	mg/L	Grab	Annually[1]	Standard Methods
Lead	mg/L	Grab	Annually[1]	Standard Methods
Mercury	mg/L	Grab	Annually[1]	Standard Methods
Nickel	mg/L	Grab	Annually[1]	Standard Methods

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Selenium	mg/L	Grab	Annually[1]	Standard Methods
Silver	mg/L	Grab	Annually[1]	Standard Methods
Zinc	mg/L	Grab	Annually[1]	Standard Methods

1. Annual monitoring shall cease after two sampling events if all available data is nondetect.
2. In accordance with the current edition of Standard Methods (Std Method) for the Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in section Part 136.

VII. RECLAMATION MONITORING REQUIREMENTS

This section is not applicable to the Permittee as treated wastewater is not discharged to or applied to land for the purpose of reclamation. The Permittee disposes of treated wastewater to land, thus the Permittee has Land Discharge Monitoring Requirements rather than Reclamation Monitoring Requirements. This section of the NPDES permit is not applicable to the Permittee.

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Monitoring Location RSW-001

1. The Permittee shall monitor the North Fork Mad River at Monitoring Location RSW-001, upstream of the discharge point, when discharging to surface water as follows:

Table E-6. Receiving Water Monitoring – Monitoring Location RSW-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab	Monthly	Standard Methods[1]
pH	standard units	Grab	Monthly	Standard Methods
Color	Color Units	Grab	Monthly	Standard Methods
Temperature	°F or °C	Grab	Monthly	Standard Methods
Turbidity	NTU	Grab	Monthly	Standard Methods
Chemical Oxygen Demand	mg/L	Grab	Monthly	Standard Methods
Hardness, Total (as $CaCO_3$)	mg/L	Grab	Quarterly	Standard Methods
All CTR Pollutants[2]	µg/L	Grab	1x/5 years[3]	Standard Methods
Detected	µg/L	Grab	Annually	Standard Methods

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
CTR Pollutants				

1. In accordance with the current edition of Standard Methods (Std Method) for the Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in section Part 136.
2. Those pollutants identified by the California Toxics Rule (CTR) at section 131.38. Monitoring shall occur simultaneously with receiving water monitoring for CTR pollutants and hardness required by section VIII.A.1 of this MRP.
3. The samples tested for the full set of CTR pollutants shall commence prior to May 1, 2017.

B. Monitoring Location RSW-002

1. The Permittee shall monitor the North Fork Mad River at Monitoring Location RSW-002, downstream of the discharge point, when discharging to surface water as follows:

Table E-7. Receiving Water Monitoring – Monitoring Location RSW -002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab	Monthly	Standard Methods[1]
pH	standard units	Grab	Monthly	Standard Methods
Color	Color Units	Grab	Monthly	Standard Methods
Temperature	°F or °C	Grab	Monthly	Standard Methods
Turbidity	NTU	Grab	Monthly	Standard Methods
Chemical Oxygen Demand	mg/L	Grab	Monthly	Standard Methods

1. In accordance with the current edition of Standard Methods (Std Method) for the Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in section Part 136.

IX. OTHER MONITORING REQUIREMENTS – NOT APPLICABLE

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

2. **Schedules of Compliance**. If applicable, the Permittee 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 Permittee shall describe the reasons for noncompliance and a specific date when compliance will be achieved. The Permittee 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. The Permittee shall submit electronic Self-Monitoring Reports (eSMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal. The Permittee shall maintain sufficient staffing and resources to ensure it submits eSMRs that are complete and timely. This includes provision of training and supervision of individuals (e.g., Permittee personnel or consultant) on how to prepare and submit eSMRs.

2. The Permittee shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Permittee shall submit monthly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Permittee monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. All monitoring results reported shall be supported by the inclusion of the complete analytical report from the laboratory that conducted the analyses.

4. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	First day of second calendar month following month of sampling
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following month of sampling
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	First day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January through March April through June July through September October through December	First day of second calendar month following end of quarter
Semi-annually	Closest of January 1 or July 1 following (or on) permit effective date	January through June July through December	September 1, each year March 1, each year
Annually	January 1 following (or on) permit effective date	January 1 through December 31	March 1, each year
1x/5years	Permit effective date	All	First day of second calendar month following month of sampling

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

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

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

   b. Sample results less than the 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.

   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.

   c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

d. Permittees 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 Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

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

a. The Permittee shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The reported data shall include calculation of all effluent limitations that require averaging, taking of a median, or other computation. The Permittee is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Permittee shall electronically submit the data in a tabular format as an attachment. During periods of land discharge, the reports shall certify "land discharge".

b. The Permittee shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify:

i. Facility name and address;

ii. WDID number;

iii. Applicable period of monitoring and reporting;

iv. Violations of the WDRs (identified violations must include a description of the requirement that was violated and a description of the violation);

v. Corrective actions taken or planned; and

vi. The proposed time schedule for corrective actions.

c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the CIWQS Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). In the event that paper submittal of SMRs is required, the Discharge shall submit the SMR to the address listed below:

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

C. Discharge Monitoring Reports (DMRs) – Not Applicable

DMRs are only required for facilities designated as major dischargers. The Permittee is a minor discharger.

D. Other Reports

1. The Permittee shall report the results of any special studies, acute and chronic toxicity testing, TRE/TIE, PMP, and Pollution Prevention Plan required by Special Provisions – VI.C.2 and VI.C.3 of this Order.

2. **Annual Report.** The Permittee 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 Permittee 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 taken or planned, which may be needed to bring the discharge into full compliance with the Order.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section II.B of the Order, the Regional Water Board incorporates this Fact Sheet as findings of the Regional Water Board supporting the issuance 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 Permittee. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Permittee.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the California Redwood Company – Korbel Sawmill.

Table F-1. Facility Information

WDID	1B80020OHUM
Permittee	California Redwood Company
Name of Facility	Korbel Sawmill
Facility Address	1165 Maple Creek Road
	Korbel, CA 95550
	Humboldt County
Facility Contact, Title and Phone	Robert Vogt, Environmental Manager, (707) 268 - 3042
Authorized Person to Sign and Submit Reports	Robert Vogt, Environmental Manager, (707) 268 - 3042
Mailing Address	P.O. Box 1089
	Arcata, CA 95518
	Humboldt County
Billing Address	Same as Mailing Address
Type of Facility	Sawmill (SIC code 2421)
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Pretreatment Program	Not Applicable
Reclamation Requirements	Not Applicable
Facility Permitted Flow	13.6 million gallons per day (mgd)
Facility Design Flow	
Watershed	North Fork Mad Hydrologic Subarea
Receiving Water	North Fork Mad River
Receiving Water Type	Inland Surface Water

A. California Redwood Company, formerly known as Simpson Timber Company, (hereinafter Permittee) is the owner and operator of the Korbel Sawmill (hereinafter Facility), as shown on Attachment B.

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 Permittee herein.

B. Discharges from the Facility are currently regulated under Order No. R1-2002-0037 and National Pollutant Elimination Permit No. CA0005932, which was adopted on May 16, 2002 and expired on May 16, 2007 but has been administratively extended until this Order takes effect.

C. The Permittee filed a Report of Waste Discharge and submitted an application for renewal of its WDRs and NPDES permit on October 26, 2006. On April 10, 2012, Regional Water Board staff requested additional information and a revised Report of Waste Discharge. Supplemental information was submitted on July 2, 2012. The permit application was deemed complete on September 20, 2012.

II. FACILITY DESCRIPTION

The Permittee owns and operates the Korbel Sawmill, a large log sawmill where Redwood and Douglas Fir logs are used for lumber manufacturing. The Facility, in the community of Korbel, Humboldt County, California is directly adjacent to the North Fork of the Mad River (tributary to the Mad River) as shown in Attachment B. The Facility consists of a paved log yard, sawmill, planer mill, debarker, sorter, anitstain wood treatment process, dry kiln, fuel storage areas, and equipment maintenance areas. Lumber, log storage yards, and lumber manufacturing operations occur on approximately 112 acres. On site operations include: sawmilling operations, lumber planning, lumber drying in kilns with an associated boiler water system, lumber storage and shipping, wet and dry log decking and sorting, and by-product generation. The Facility has two wastewater management systems; commingled process water and storm water that discharges to the North Fork of the Mad River at Discharge Point 001 is covered by the NPDES portions of this Order, while all other wastewaters that discharge to upslope forested lands at Discharge Point 002 are covered under the WDR portions of this Order.

The NPDES discharges at 001 originate from water that is applied to logs that are stacked to form log decks in a process called wet decking within a portion of the Facility known as the log yard. In this process, water is applied to log decks via sprinkler heads from an on-site water supply well up to 24 hours per day to prevent whole logs from drying out and cracking. This activity results in the generation of log yard runoff. Storm water runoff from the log deck commingles with the log deck sprinkler water that has contacted raw materials, such as logs, bark, soil, and gravel. This commingled process water runoff collects in ditches

that empty into primary concrete catch basins, which then empty into a larger concrete settling basin that empties into a constructed wetland.

Storm water runoff from the dry decked lower log yard combines with process water from the kiln and boiler areas (collecting boiler blowdown) in a collection system that drains to a settling basin (identified as Station 9). This commingled process and storm water empties into the second chamber of Station 9, which has concrete baffle walls and absorbent booms; water flows into the third and fourth chambers, then to the pump station where it gets transferred to the large concrete settling basin that empties into the constructed wetland. The effluent from the constructed wetland discharges into the North Fork of the Mad River at Discharge Point 001 during storm events that exceed the wetland storage capacity.

The WDR discharges to land at Discharge Point 002 consist of cooling water discharged from the mill processes and storm water runoff from around the hog and fueling areas, which are collected in sumps and sedimentation basins. Cooling water from the saws commingles with storm water that collects in the below grade drainage systems located within and outside the sawmill and re-mill building; below and outside the head rig; below the barked log infeed; below the debarker; below the screen at the Marlow pit; at the hog sump; and from the fueling area drain oil/water separator. Settling and screening occurs in the catch basins, and storm water runoff from around the hog and fueling areas is then pumped to the 190,000 gallon clarifier where these wastewaters are treated. The clarifier has a skimming system that overflows into a tank. The clarifier has two drains with manual valves, which are normally closed, that can be used for maintenance and repair. The clarifier is drained approximately every 8 to 10 years to two vegetated settling basins that contain most, if not all of the water; however some clarifier wastewater drainage could discharge to a vegetated ditch that drains into surface waters that connect to the creek. In the application materials, the Permittee has committed to redirecting any clarifier drainage wastewater from this vegetated ditch to the yard, where it will be recaptured and pumped back to the clarifier in a closed loop. Under normal operation, the treated water from the clarifier is pumped up to the forested lands where it is land applied using a sprinkler irrigation system through Discharge Point 002.

On October 5, 2012, the Permittee enrolled the Site under the *State Water Resources Control Board Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001 and Waste Discharge Requirement for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities* (hereinafter the General Industrial Storm Water Permit) for all other discharges of storm water from the Facility.

Domestic wastewater from the sawmill facility and offices discharges into septic tanks, and the effluent is pumped to a subsurface leachfield system located on the northern hillside above the mill.

Associated with the sawmill is the Korbel Woodwaste Disposal Site (WDS) located on the hillside about 0.25 miles northwest of the Korbel mill. The site was formerly used exclusively for the disposal of non-hazardous woodwaste (woody debris, soil and gravel), which was generated during log-deck cleanup operations. All log-deck cleanup materials are now taken to the separating yard and separated into hog fuel and non-combustible waste (gravel and soil fines). The gravel is reused at the facility and a bulb farm uses the soil fines. The WDS is permitted under separate Order No. R1-2002-0037 as amended by Amendment Order No. R1-2013-0011.

A. Description of Wastewater Treatment or Controls

Storm water runoff and log-deck sprinkler water that has contacted raw materials is conveyed from approximately 42 acres of log-deck and scale yard area, through ditches and culverts into the primary catch basins. At the log-deck and scale yard areas, four primary catch basins are used to remove the larger woody debris and the heavier sediment contained in the commingled process water runoff. The commingled process water then flows into the larger concrete settling/stilling basin. Storm water runoff from the lower log yard and drainage inlets from the kiln and boiler areas drain into Station 9, a concrete settling basin and pump station, where the treated water is then transferred into the larger concrete settling/stilling basin.

At the log deck materials separating yard, water is used in the separation process. During the dry months, water from a hydrant is used and the runoff is captured in a settling basin, and then reused in the separation process. The settling basin has a valve that is opened during the wet season so the area can drain. During the dry months when operating, the valve is closed to prevent discharge to the culvert and the creek. During the wet months, this process is not operational.

From the outlet into the settling/stilling basin, there is 200 feet of settling distance prior to discharging to the constructed wetland. The large concrete settling/stilling basin measures 200 feet long by 40 feet wide; and the depth of the basin varies from 5-feet deep at the western end to approximately 6-feet deep at the eastern/outlet end. A concrete ramp allows for removal of the settled material after draining. A water curtain screen located approximately 10-feet from the outlet prevents lighter floating material from being discharged and a series of K-rails on the bottom of the basin assist in settling out sediment from the commingled process water.

The outlet from the settling/stilling basin is a 12-inch diameter perforated riser pipe with a control valve. The outlet pipe and valve were designed to limit the outflow from the basin to between 5 and 20 cubic feet per second (cfs). Additionally, the outlet riser is surrounded with a cylindrical screen, preventing debris larger than 1-inch from discharging to the constructed wetland.

B. Discharge Points and Receiving Waters

Treated effluent from the constructed wetland discharges into a 5-foot diameter steel riser pipe, which transfers the water to a three-foot diameter perforated outlet culvert. The constructed wetland outflow was designed to be regulated by two ports that are situated inside the 5-foot diameter riser pipe. The smaller pipe, a 6-inch pipe with a modulating valve, was designed to pass flows up to 5 cfs (3.2 MGD). Greater flow will raise the elevation about a foot until a second, larger orifice is encountered. This larger orifice is sized to pass 20 cfs (12.9 MGD). Treated effluent is discharged from the constructed wetland through the perforated culvert at Discharge point 001 entering the North Fork Mad River at 40° 52' 22" N latitude, and 123 57' 35" W longitude.

Discharge Point 002, consisting of cooling water discharged from the milling processes and stormwater runoff from around the hog and fueling areas is treated in a 300,000 gallon clarifier. After treatment, the water is pumped to the forested land application area north of the mill. The land application area consists of several sprinkler risers, approximately 3-4 feet above grade; that spray in an approximate 10-foot diamond pattern onto maintained grass areas situated within the forest.

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

1. Effluent limitations contained in Order No. R1-2002-0037 for discharges from Discharge Point No. 001 (Monitoring Location EFF-001, identified as sample location SN001) and representative monitoring data from the term of Order No. R1-2002-0037 are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitations		Monitoring Data (January 2003 – December 2011)[1]	
		Average Monthly	Maximum Daily	Average Monthly	Maximum Daily
Acute Toxicity	% Survival	--	[2]	--	100
pH	standard units	--	6.5 – 8.5	--	6.0 – 7.3

[1] Monitoring data in this table represents data collected at Discharge Point 001 (sample location SN001) from the constructed wetland. This data was submitted with the Report of Waste Discharge.
[2] There shall be no acute toxicity in the effluent. The Permittee will be considered in compliance with this limitation when the survival of aquatic organisms in a 96-hour bioassay of undiluted waste complies with the following:
a. Minimum for any one bioassay: 70 percent survival.
b. Median for any three or more consecutive bioassays: at least 90 percent survival.

D. Compliance Summary

During the term of the previous Order, the Permittee experienced violations of pH effluent limitations and deficient monitoring violations for pH and dissolved oxygen sample analyses outside of the maximum holding time. The Regional Water Quality Control Board (Regional Water Board) has not yet adopted any enforcement actions against the Permittee.

Table F-3. Compliance Summary

Date of Violation	Exceeded Parameter	Units	Effluent Limitations	Reported Concentration
Various dates between May 16, 2002 and May 2, 2013	pH and Dissolved Oxygen sample holding times	---	---	---
February 2009	pH	Standard units	6.5 – 8.5	6.4
January 2009	pH	Standard units	6.5 – 8.5	6.4
December 2008	pH	Standard units	6.5 – 8.5	6.3
November 2008	pH	Standard units	6.5 – 8.5	6.1
April 2008	pH	Standard units	6.5 – 8.5	6.4
February 2008	pH	Standard units	6.5 – 8.5	6.4
11/12/2007	pH	Standard units	6.5 – 8.5	6.4
April 2007	pH	Standard units	6.5 – 8.5	6.4
December 2006	pH	Standard units	6.5 – 8.5	6.4
November 2006	pH	Standard units	6.5 – 8.5	6.2
March 2006	pH	Standard units	6.5 – 8.5	6.4
February 2006	pH	Standard units	6.5 – 8.5	6.4
January 2006	pH	Standard units	6.5 – 8.5	6.2
December 2005	pH	Standard units	6.5 – 8.5	6.4
May 2005	pH	Standard units	6.5 – 8.5	6.4
April 2005	pH	Standard units	6.5 – 8.5	6.3
January 2005	pH	Standard units	6.5 – 8.5	6.4
10/27/2004	pH	Standard units	6.5 – 8.5	6.3
4/2/2003	pH	Standard units	6.5 – 8.5	6.4
2/17/2003	pH	Standard units	6.5 – 8.5	6.4

E. Planned Changes

The Permittee plans to complete a disposal study to determine the fate and transport of facility process waters (industrial wastewater) that are discharged through the land disposal system. The study will include the investigation of the following: the location of the land disposal system relative to nearby surface water features; site-specific lithology;

depth to groundwater including seasonal variations; seasonal groundwater gradients; transmissivity of area soil; wastewater application rates including seasonal variations; quality of wastewater; and concentration gradients of targeted wastewater constituents. If the disposal study demonstrates that wastewater pollutants discharged through the land disposal system reach surface waters or are impacting groundwaters, the Permittee will propose alternatives to comply with the discharge prohibitions for process water discharges.

The Permittee is continuing to evaluate its water quality discharge from the log deck and constructed wetland treatment locations. Activities at the log deck associated with existing best management practices (BMPs) and new BMPs are being performed. If additional BMPs and improvements are necessary the Permittee will implement modifications to these measures during the permit term.

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. California Environmental Quality Act (CEQA)

Under California Water Code (Water Code) section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA (commencing with section 21100) of division 13 of the Public Resources Code. Accordingly, this exemption from CEQA applies to the Regional Water Board's action to adopt those portions of the Order that regulate NPDES discharges.

This action also involves the re-issuance of waste discharge requirements for an existing facility that discharges treated wastewater to land via spray irrigation. The Regional Water Board's action in approving those parts of the Order that regulate WDR-related discharges is also exempt from CEQA as an existing facility for which no expansion of design flow is being permitted at the time of the lead agency's determination pursuant to title 14, California Code of Regulations (CCR), section 15301.

B. 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. 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. The Basin Plan, at page 2-18.00, establishes beneficial uses for groundwater as municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, and freshwater supply. Thus, beneficial uses applicable to the North Fork Mad River and area groundwater within the North Fork Hydrologic Subarea are:

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	North Fork Mad River – Mad River Hydrologic Unit - North Fork Hydrologic Subarea	<u>Existing:</u> Municipal and domestic water supply (MUN) Agricultural supply (AGR) Industrial service supply (IND) Industrial process supply (PRO) Groundwater recharge (GWR) Freshwater replenishment (FRESH) Navigation (NAV) Water contact recreation (REC-1) Non-contact water recreation (REC-2) Commercial and Sport fishing (COMM) Cold freshwater habitat (COLD) Wildlife habitat (WILD) Preservation of rare, threatened or endangered species (RARE) Migration of aquatic organisms (MIGR) Spawning, reproduction and/or early development (SPWN) <u>Potential:</u> Hydropower generation (POW) Aquaculture (AQUA)
002	Groundwater	<u>Existing:</u> Municipal and domestic water supply (MUN) Agricultural supply (AGR) Industrial water supply (IND) American Native Culture (CUL) <u>Potential:</u> Industrial process supply (PRO) Aquaculture (AQUA)

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 Coastal Basin. For the North Fork Mad River and its tributaries, no point source waste discharges are allowed from May 15 through September 30 and during all other periods when the waste discharge flow is greater than one percent of the receiving stream's flow.

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 federal 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. **Compliance Schedules and Interim Requirements.** The provision in section 2.1 of the SIP that allowed for the use of compliance schedules and interim limitations in an NPDES permit for CTR constituents ended on May 18, 2010. Based on a discharger's request and demonstration that it is infeasible to comply with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in a cease and desist order or time schedule order adopted by the Regional Water Board. The State Water Board adopted Resolution No. 2008-0025 on April 15, 2008, titled Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits, which includes compliance schedule policies for pollutants that are not addressed by the SIP. This Policy became effective on August 27, 2008.

   The State Water Board adopted Resolution No. 2008-0025 on April 15, 2008, titled Policy for Compliance Schedules in National Pollutant Discharge Elimination System

Permits, which includes compliance schedule policies for pollutants that are not addressed by the SIP. This Policy became effective on August 27, 2008.

This Order does not include a compliance schedule.

5. **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 CFR § 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.

6. **Antidegradation Policy.** 40 CFR 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 40 CFR 131.12 and State Water Board Resolution No. 68-16. As discussed in detail in section IV.D.2 of this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

7. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) restrict 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.

8. **Endangered Species Act.** This Order does not authorize an 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 Permittee is responsible for meeting all requirements of the applicable Endangered Species Act.

C. 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 CWA requires development of a total maximum daily load (TMDL) 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) and load allocations (the portion of a TMDL attributed to existing and future nonpoint sources).

On October 11, 2011, the USEPA provided final approval of the 2008-2010 303(d) list of impaired water bodies prepared by the State. The list identifies the entire Mad River watershed as impaired by excess sediment and turbidity. Pursuant to CWA section 303(d), TMDLs are developed to address impairing pollutants in 303(d) listed waters, and are then implemented in part through provisions of NPDES permits. In 1992, EPA added the Mad River to California's 303(d) impaired water list due to elevated sedimentation/siltation and turbidity, as part of listing the entire Mad River basin. The North Coast Regional Water Quality Control Board (Regional Board) has continued to identify the Mad River, and tributaries, as impaired in subsequent listing cycles, the latest in 2010.

Aspects of the sediment impairing the North Fork Mad River include settleable solids, suspended solids, and turbidity. The impact of settleable solids results when they collect on the bottom of a waterbody over time, making them a persistent or accumulative constituent. The impact of suspended solids and turbidity, by contrast, results from their concentration in the water column.

On December 21, 2007, USEPA approved the Mad River Total Maximum Daily Loads for Sediment and Turbidity. In the Mad River basin, turbidity levels are closely linked with suspended sediment load. The TMDL identified that almost all sources of sediment in the Mad River watershed are from diffuse, nonpoint sources. Sediment is the pollutant for both the sediment and the turbidity TMDLs. Turbidity can be measured directly in the stream, but the pollutant causing the exceedance of the turbidity water quality standards in the Mad River watershed is fine sediment, or the suspended sediment load. The sediment and turbidity TMDLs are set equal to the loading capacity of the Mad River watershed. The TMDLs are the estimate of the total amount of sediment, from both

natural and human-caused sources, that can be delivered to streams in the watershed without exceeding applicable water quality standards.

EPA set the TMDLs at 120 percent of natural sediment loading for Mad River watershed. This approach to setting sediment TMDLs has been used in most of the watersheds in the North Coast of California. It is based on the assumption that a certain amount of loading greater than what is natural is acceptable, and will still result in meeting water quality standards. Prior TMDL studies of the relationship between sediment loading rates and fish habitat effects found that many North Coast waters supported healthy fish habitat conditions during periods in which sediment loads were up to 125% of natural loading rates. For the Mad River TMDL, EPA set the TMDLs more conservatively, at 120 percent of natural loading rates, in order to ensure that the turbidity water quality standard is met (i.e., that "turbidity shall not be increased more than 20 percent above naturally occurring background levels").

The TMDL identifies the Korbel Sawmill Complex NPDES permits as not allowing process water discharges to surface waters and, as a result, does not apply waste load allocations (WLAs) to the Facility. The Facility does, however, discharge process water to surface waters at Discharge Point 001. Review of the TMDL WLAs for other point source dischargers indicates that the WLAs for TSS and SeS were developed using limitations for these substances from the existing facility NPDES permits. However, Order No. R1-2002-0037 for the Facility did not contain any existing limitations for TSS or SeS. The TMDL WLA for turbidity, on the other hand, was derived from the Water Quality Objective for turbidity in the Basin Plan. As a result, the only TMDL WLA applicable to the Facility is for turbidity, which is consistent with the existing receiving water limitation from Order No. R1-2002-0037 that was based on the Basin Plan. The receiving water limitation is an appropriate mechanism to implement the WLA because the allocation is the net increase in receiving water turbidity over naturally occurring background level. In addition, Section VI.C.3.c.i of this Order contains requirements to develop debris and sediment control BMPs, which will further reduce sediment discharges from 001. The receiving water limitation for turbidity and the sediment control BMP requirements in this Order are consistent with the Mad River TMDL.

D. Other Plans, Policies and Regulations

1. 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 Permittee must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. The State Water Board retains the jurisdictional authority to enforce such requirements under Water Code section 1211.

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 (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where a reasonable potential to exceed those criteria exist.

A. Discharge Prohibitions

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

   This prohibition is based on the Basin Plan, the previous permit, and State Water Board Order WQO No. 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 Permittee, or are not reasonably anticipated to be present in the discharge but have not been disclosed by the Permittee. It specifically does not apply to constituents in the discharge 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 Ordering and … can be reasonably contemplated*." [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 Permittee is liable for the discharge of pollutants "*not within the reasonable contemplation of the permitting authority <u>….whether spills or otherwise</u>…*" [*Piney Run Preservation Assn. v. County Commissioners of Carroll County, Maryland* (4th 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 Permittee and (2) can be reasonably contemplated by the Regional Water Board.

   Whether or not the Permittee reasonably contemplates the discharge of a constituent is not relevant. What matters is whether the Permittee 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, and has been retained from Order No. R1-2002-0037.

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

   This prohibition is based on the Basin Plan policy on the control of water quality with respect to on-site waste treatment and disposal practices, and has been retained from Order No. R1-2002-0037.

4. **Discharge Prohibition III.D.** The discharge of wood treatment chemicals or stain control fungicides to surface waters or groundwater is prohibited.

   This prohibition is retained from Order No. R1-2002-0037.

5. **Discharge Prohibition III.E.** The discharge of waste at any point not described in Finding II of the Fact Sheet or authorized by any State Water Board or other Regional Water Board permit is prohibited.

   This is a general prohibition that allows the Permittee to discharge waste only in accordance with waste discharge requirements. It is based on Sections 301 and 402 of the federal CWA and CWC Section 13263. This prohibition has been retained from Order No. R1-2002-0037.

6. **Discharge Prohibition III.F.** The discharge of process wastewater from bark removal (other than hydraulic barking as defined in 40 CFR 429.11), sawing, resawing, edging, trimming, planing and machining to surface water is prohibited.

   The Permittee operates a "sawmills and planing mill" operation, which is subject to Effluent Limitations Guidelines and Standards for the Sawmills and Planing Mills Subcategory of the Timber Products Processing Point Source Category (40 CFR Part 429, Subpart K). This subpart applies to discharges to waters of the United States from the timber products processing procedures that include all or part of the following operations: bark removal (other than hydraulic barking as defined in 40 CFR 429.11), sawing, resawing, edging, trimming, planing and machining. Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control

technology (BPT): There shall be no discharge of process wastewater pollutants into navigable waters. Therefore, this Order prohibits discharges of process wastewater from these activities to surface water.

7. **Discharge Prohibition III.G.** The discharge of wastewater effluent from the Facility to the North Fork of the Mad River or its tributaries is prohibited during the period from May 15 through September 30 of each year.

   This prohibition is retained from the previous Order, and is required by the Basin Plan. The Basin Plan prohibits discharges to the North Fork Mad River and its tributaries during the period of May 15 through September 30 (Chapter 4, North Coastal Basin Discharge Prohibition No. 3). The original intent of this prohibition was to prevent the contribution of wastewater to the baseline flow of the North Fork Mad River during the period of the year when the North Fork Mad River and its tributaries experience the heaviest water-contact recreation use.

8. **Discharge Prohibition III.H.** During the period from October 1 through May 14, discharges of treated wastewater shall not exceed 1 percent of the flow of North Fork Mad River.

   This prohibition is retained from the previous Order and is required by the Basin Plan (Chapter 4, North Coastal Basin Discharge Prohibition No. 3). The Basin Plan prohibits discharges to the North Fork Mad River and its tributaries when the waste discharge flow is greater than one percent of the receiving water's flow

9. **Discharge Prohibition III.I.** The discharge of debris (as defined in Attachment A) is prohibited.

   This prohibition is applied based on 40 CFRPart 429 Subpart I, which prohibits the discharge of debris to surface waters.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44 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 Effluent Limitations Guidelines and Standards for the Wet Storage Subcategory and the Sawmills and Planing Mills Subcategory of the Timber Products Processing Point Source Category (40 CFR Part 429, Subparts A, I, and K).

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

1. BPT represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

2. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

3. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including five-day biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

4. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and section 125.3 of the Code of Federal Regulations authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in section 125.3.

2. Applicable Technology-Based Effluent Limitations

The Permittee operates a "wet deck" log storage operation and a "sawmills and planing mills" operation. Therefore, effluent limitations established in the Timber Products Processing Point Source Category (40 CFR Part 429) are applicable to the discharge. Specifically, Subpart A (Barking Subcategory), Subpart I (Wet Storage Subcategory), and Subpart K (Sawmills and Planing Mills Subcategory) apply.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to these subparts must achieve the following effluent limitations representing

the degree of effluent reduction attainable by the application of BPT. The following effluent limitations apply to Discharge Point No. 001:

a. **Barking.** There shall be no discharge of process wastewaters from mechanical barking operations to surface waters.

b. **Wet Storage.** There shall be no debris discharged and the pH shall be within the range of 6.0 to 9.0 at all times. "Debris" means woody material such as bark, twigs, branches, heartwood or sapwood that will not pass through a 2.54 cm (1.0 in) diameter round opening and is present in the discharge from a wet storage facility.

c. **Sawmills and Planing Mills.** There shall be no discharge of process wastewater pollutants into navigable waters. As discussed in section IV.A.6 of this Fact Sheet, this Order prohibits discharges of process water from sawmill and planing mill activities.

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. This Order contains requirements that are necessary to meet applicable water quality standards. The rationale for these requirements is discussed in this Fact Sheet.

40 CFR 122.44(d)(1)(i) requires 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. A reasonable potential analysis (RPA) demonstrated reasonable potential for discharges from the Facility to cause or contribute to exceedances of copper and lead. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, 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 40 CFR 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 Facility are presented in section III.B.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 that apply to inland surface waters, enclosed bays, and estuaries, including the North Fork Mad River and its tributaries. For waters designated for use as domestic or municipal supply (MUN), the Basin Plan establishes as applicable water quality criteria the Maximum Contaminant Levels (MCLs) established by CDPH for the protection of public water supplies at title 22 of the CCR section 64431 (Inorganic Chemicals) and section 64444 (Organic Chemicals).

   c. **SIP, CTR and NTR.** Water quality criteria and objectives applicable to this receiving water are established by the California Toxics Rule (CTR), established by the USEPA at 40 CFR 131.38; and the National Toxics Rule (NTR), established by the USEPA at 40 CFR 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 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 1-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 were used for the RPA, and for the calculation of effluent limitations for copper and lead.

      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 CTR were used for the RPA because the Basin Plan identifies that the receiving water, the North Fork Mad River, has the beneficial use designation of municipal and domestic supply. Effluent limitations were not

necessary for any constituents based on criteria for the protection of human health.

The SIP, which is described in section III.B.3 of this Fact Sheet, includes procedures for determining the need for, and the calculation of, WQBELs and requires dischargers to submit data sufficient to do so.

At title 22, division 4, chapter 15 of the CCR, CDPH has established MCLs for certain pollutants for the protection of drinking water. Chapter 3 of the Basin Plan establishes these MCLs as water quality objectives applicable to receiving waters with the beneficial use designation of municipal and domestic supply.

Attachment F-1 includes a summary of RPA results for all priority toxic pollutants, with water quality criteria/objectives that are applicable to the North Fork Mad River.

3. Determining the Need for WQBELs

NPDES regulations at 40 CFR 122.44 (d) require effluent limitations to control all pollutants which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard.

a. Non-Priority Pollutants

i. **pH.** This Order includes instantaneous minimum and maximum effluent limitations for pH of 6.5 and 8.5 standard units, respectively, which are more stringent than required by 40 CFR Part 429, Subpart I. The effluent limitation for pH of 6.5 to 8.5 is retained from Order No. R1-2002-0037 and applies to discharges to the North Fork Mad River. This limitation is based on the water quality objective for all surface waters of the North Coast Region established in Chapter 3 of the Basin Plan.

ii. **Toxicity.** See section IV.C.5 below.

b. Priority Pollutants

The SIP 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.

Section 1.3 of the SIP requires the Regional Water Board to use all available, valid, relevant, and representative receiving water and effluent data and information to conduct an RPA. For this RPA, the Regional Water Board used effluent monitoring generated from one sampling event on May 9, 2012 for all of the CTR pollutants.

Hardness

The CTR and the NTR contain water quality criteria for seven metals that vary as a function of hardness, i.e., the lower the hardness, the lower the water quality criteria. The hardness-dependent metals criteria with associated limits in this Order include copper and lead.

Effluent limitations must be set using a reasonable worst-case condition in order to protect beneficial uses for all discharge conditions. The SIP does not address how to determine hardness for application to the equations for the protection of aquatic life when using hardness-dependent metals criteria. It simply states, in Section 1.2, that the criteria shall be properly adjusted for hardness using the hardness of the receiving water. The CTR requires that, for waters with a hardness of 400 mg/L (as CaCO3), or less, the actual ambient hardness of the surface water must be used. It further requires that the hardness values used must be consistent with the design discharge conditions for design flows and mixing zones (See 40 CFR 131.38(c)(4)(i)). The CTR does not define whether the term "ambient", as applied in the regulations, necessarily requires the consideration of the upstream as opposed to downstream hardness conditions.

State Water Board Order No. WQ-2008-0008 (City of Davis) further interpreted the SIP by stating "…the regional water boards have considerable discretion in the selection of hardness. Regardless of which method is used for determining hardness, the selection must be protective of water quality criteria, given the flow conditions under which a particular hardness exists….Regardless of the hardness used, the resulting limits must always be protective of water quality under all flow conditions."

The point in the receiving water affected by the discharge is downstream of the discharge. As the effluent mixes with the receiving water, the hardness of the receiving water can change. Therefore, where reliable, representative data are available, it is appropriate to use the ambient hardness downstream of the discharge that is a mixture of the effluent and receiving water for the determination of the CTR hardness-dependent metals criteria.

A 2006 Study (Emerick, R.W.; Booroum, Y.; & Pedri, J.E., 2006. California and National Toxics Rule Implementation and Development of Protective Hardness Based Metal Effluent Limitations, WEFTEC, Chicago, Ill.) demonstrates that using

the lowest recorded receiving water hardness for establishing water quality criteria is not always protective of the receiving water under various mixing conditions (e.g., when the effluent hardness is less than the receiving water hardness).

The 2006 study evaluated the relationships between hardness and the CTR metals criterion that is calculated using the CTR metals equation. The equation describing the total recoverable regulatory criterion, as established in the CTR, is as follows:

CTR Criterion = WER x $e^{(m[\ln(H)]+b)}$ (Equation 1)

Where:

WER = water effect ratio
H = Hardness
b = metal- and criterion-specific constant
m = metal- and criterion-specific constant

In accordance with the CTR, the default value for the WER is 1. A discharger-specific WER study must be conducted in order to use a WER value other than 1. The constants "m" and "b" are specific to both the metal under consideration, and the type of total recoverable criterion (i.e., acute or chronic). The metal-specific values for these constants are provided in the CTR at paragraph (b)(2), Table 1.

The relationship between hardness and the resulting criterion in Equation 1 can exhibit either a downward –facing (i.e., concave downward) or an upward-facing (i.e., concave upward) curve depending on the values of the criterion-specific constants. The curve shapes for acute and chronic criteria for the metals are as follows:

Concave Downward Metals: copper.

For those contaminants where the regulatory criteria exhibit a concave downward relationship as a function of hardness, any mixture of receiving water that is compliant with water quality objectives for that metal and effluent that is compliant with water quality objectives for that metal will always result in a mixture that is compliant with water quality objectives and use of the lowest recorded effluent hardness for establishment of water quality objectives is fully protective of all beneficial uses regardless of whether the effluent or receiving water hardness is higher. Use of the lowest recorded effluent hardness is also protective under all possible mixing conditions between the effluent and the receiving water (i.e., from high dilution to no dilution).

Because this Order requires compliance with effluent limitations at the end of the discharge pipe, effluent hardness is an appropriate and protective hardness to use in adjusting the water quality criteria for the Concave Downward metals. The reasonable worst-case ambient hardness can be estimated by using the lowest effluent hardness. Concave Downward metals that exhibit reasonable potential is copper. The water quality criteria for these metals were calculated for this Order using Equation 1 and a reported effluent hardness of 68 mg/L as CaCO3, based on a single sample obtained by the Permittee on May 9, 2012.

Concave Upward Metals: lead.

For Concave Upward metals, the 2006 Study demonstrates that due to a different relationship between hardness and the metals criteria, the effluent and upstream receiving water can be in compliance with the CTR criteria, but the resulting mixture may be out of compliance. The 2006 Study provides a mathematical approach to calculate the final effluent limitations for Concave Upward metals that is protective of aquatic life in all areas of the receiving water affected by the discharge, under all discharge and receiving water flow (see Equation 2, below).

To be consistent with this methodology, the reasonable worst-case upstream receiving water hardness, the lowest observed effluent hardness, and assuming no receiving water assimilative capacity for metals (i.e., ambient background metals concentrations are at their respective CTR criterion), was used in Equation 4 for determining whether reasonable potential exists for the Concave Upward metals. Equation 2 is not used in place of the CTR equation (Equation 1). Rather, Equation 2, which is derived using the CTR equation, is used as a direct approach for calculating the ECA. The CTR equation has been used to evaluate the receiving water downstream of the discharge at all discharge and flow conditions to ensure the ECA is protective.

Where:

$$\text{Effluent Concentration Allowance} = \left(\frac{m(H_e - H_{rw})\left(e^{m\{\ln(H_{rw})\}+b}\right)}{H_{rw}} \right) + e^{m\{\ln(H_{rw})\}+b} \qquad \text{(Equation 2)}$$

m, b = criterion specific constants (from CTR)
He = lowest observed effluent hardness
Hrw = reasonable worst-case upstream receiving water hardness

Based on a single sample collected on May 9, 2012, the effluent hardness is 68 mg/L, while the upstream receiving water hardness is 30 mg/L. In this case, the reasonable worst-case upstream receiving water hardness to use in Equation 2 to calculate the ECA is 30 mg/L. Using the procedures discussed above to calculate

the ECA for all Concave Up metals showing reasonable potential will result in WQBELs that are protective under all potential effluent receiving water conditions (high flow to low flow) and under all known hardness conditions.

To conduct the RPA, Regional Water Board staff identified the maximum effluent concentration (MEC) and maximum background (B) concentration for each priority, toxic pollutant from effluent and receiving water data provided by the Permittee, and compared this information to the most stringent applicable water quality criterion (C) for each pollutant with applicable water quality criteria from the NTR, CTR, and the Basin Plan. Section 1.3 of the SIP establishes three triggers for a finding of reasonable potential.

Trigger 1. If the MEC is greater than C, there is reasonable potential, and an effluent limitation is required.

Trigger 2. If B is greater than C, and the pollutant is detected in effluent (MEC > ND), there is reasonable potential, and an effluent limitation is required.

Trigger 3. After a review of other available and relevant information, a permit writer may decide that a WQBEL is required. Such additional information may include, but is not limited to: the facility type, the discharge type, solids loading analyses, lack of dilution, history of compliance problems, potential toxic impact of the discharge, fish tissue residue data, water quality and beneficial uses of the receiving water, CWA 303 (d) listing for the pollutant, and the presence of endangered or threatened species or their critical habitat.

c. Reasonable Potential Determination

The RPA demonstrated reasonable potential for discharges from the Facility to cause or contribute to exceedances of applicable water quality criteria for copper and lead. Reasonable potential could not be determined for all pollutants, as there are not applicable water quality criteria for all pollutants. The RPA determined that there is either no reasonable potential or there was insufficient information to conclude affirmative reasonable potential for the remainder of the 126 priority pollutants.

The following table summarizes the RPA for each priority pollutant that was reported in detectable concentrations in the effluent or the receiving water. The MECs, most stringent water quality objectives/water quality criteria (WQO/WQC), and background concentrations (B) used in the RPA are presented, along with the RPA results (Yes or No and which trigger) for each toxic pollutant analyzed. No other pollutants with applicable, numeric water quality criteria from the NTR, CTR, and the Basin Plan were measured above detectable concentrations during

the monitoring events conducted by the Permittee. Attachment F-1 to this Order summarizes the RPA for all 126 priority pollutants.

Table F-5. Summary of RPA Results

CTR #	Priority Pollutants	C or Most Stringent WQO/WQC (µg/L)	MEC or Minimum DL (µg/L)[1]	B or Minimum DL (µg/L)[9]	RPA Results[2]
1	Antimony	6	0.14	0.03	No
2	Arsenic	10	5	0.28	No
3	Beryllium	4	< 0.06	< 0.06	No
5b	Chromium, Total	11	11	0.54	No
6	Copper[3]	6.7	9.1	0.93	Yes (Trigger 1)
7	Lead[4]	0.69	2	0.11	Yes (Trigger 1)
8	Mercury	0.050	0.02	0.0017	No
9	Nickel[3]	38	15	0.92	No
10	Selenium	5	< 0.11	0.16	No
11	Silver	2.1	0.02	< 0.02	No
13	Zinc[3]	86	18	< 0.70	No
39	Toluene	150	0.19	< 0.95	No

[1] The Maximum Effluent Concentration (MEC) or maximum background concentration (B) is the actual detected concentration unless it is preceded by "<", in which case the value shown is the minimum detection level as the analytical result was reported as not detected (ND).

[2] RPA Results:
= Yes, if MEC > WQO/WQC, or B > WQO/WQC and MEC is detected;
= No, if MEC and B are < WQO/WQC or all effluent data are undetected;
= Undetermined (Ud).

[3] Water Quality Criteria for copper, nickel, and zinc are based on an effluent hardness concentration of 68 mg/L and haves been converted to the total recoverable copper, nickel and zinc fractions, respectively, using conversion factors in the CTR.

[4] Water Quality Criteria for lead are based on a receiving water hardness concentration of 30 mg/L and have been converted to the total recoverable lead fraction using conversion factors in the CTR.

4. WQBEL Calculations

Final WQBELs for copper and lead have been determined using the methods described in Section 1.4 of the SIP.

Step 1: For each priority pollutant that demonstrate reasonable potential, identify the applicable water quality criterion/objectives for the pollutant(s), and adjust the criterion or objective, if applicable. This step is described in sections IV.C.3.b and IV.C.3.c, above.

Step 2: To calculate the effluent limits, an effluent concentration allowance (ECA) is calculated for each pollutant found to have reasonable potential using the following equation, which takes into account dilution and background concentrations:

ECA = C + D (C – B), where

C = the applicable water quality criterion (adjusted for receiving water hardness and expressed as the total recoverable metal, if necessary)

D = the dilution credit (here D = 0, as the discharge does not qualify for a dilution credit)

B = the background concentration

Because no credit for dilution is being allowed, D=0, and the ECA is equal to the applicable criterion (ECA = C).

Step 3: For each ECA based on an aquatic life criterion/objective (i.e., copper and lead), the long term average discharge condition (LTA) is determined by multiplying the ECA by a factor (multiplier), which adjusts the ECA to account for effluent variability. The multiplier depends on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the values of the CV. When the data set contains less than 10 sample results, or when 80 percent or more of the data set is reported as non-detect (ND), the CV is set equal to 0.6. Derivation of the multipliers is presented in section 1.4 of the SIP.

From Table 1 of the SIP, the acute and chronic ECA multipliers for calculating LTAs at the 99th percentile occurrence probability for copper and lead are shown in the table below. The LTAs are determined as follows.

Table F-6. Determination of Long Term Averages

Pollutant	ECA		ECA Multiplier		LTA (µg/L)	
	Acute	Chronic	Acute	Chronic	Acute	Chronic
Copper	9.7	6.7	0.321	0.527	3.13	3.54
Lead	46.1	1.80	0.321	0.527	14.79	0.95

Step 4: WQBELs, including an average monthly effluent limitation (AMEL) and a maximum daily effluent limitation (MDEL) are calculated using the most limiting (lowest) LTA. The LTA is multiplied by a factor that accounts for averaging periods and exceedance frequencies of the effluent limitations, and for the AMEL, the effluent monitoring frequency. Here the CV for each of the pollutants is set equal to 0.60, respectively, and the sampling frequency is set equal to 4 (n = 4). The 99th percentile

occurrence probability was used to determine the MDEL multiplier and a 95th percentile occurrence probability was used to determine the AMEL multiplier. From Table 2 of the SIP, the MDEL multipliers and the AMEL multipliers were determined as shown in the table below. Final WQBELs for copper and lead are determined as follows.

Table F-7. Determination of Final WQBELs Based on Aquatic Life Criteria

Pollutant	Lowest LTA (µg/L)	MDEL Multiplier	AMEL Multiplier	AMEL (µg/L)	MDEL (µg/L)
Copper	3.13	3.11	1.55	4.9	9.7
Lead	0.95	3.11	1.55	1.5	2.9

The final effluent limits presented above for copper are based on an effluent hardness of 68 mg/L. The final effluent limits presented above for lead are based on a receiving water hardness of 28 mg/L and an effluent hardness of 68 mg/L. All effluent limitations were calculated using a water effects ratio of 1.0 and default dissolved-to-total metal translators to convert water quality objectives from dissolved to total recoverable.

Step 5: When the most stringent water quality criterion/objective is a human health criterion/objective (as for arsenic and mercury), the AMEL is set equal to the ECA. From Table 2 of the SIP, when CV = 0.6 and n = 4, the MDEL multiplier at the 99th percentile occurrence probability equals 3.11, and the AMEL multiplier at the 95th percentile occurrence probability equals 1.55. The MDEL for protection of human health is calculated by multiplying the ECA by the ratio of the MDEL multiplier to the AMEL multiplier and the AMEL is equivalent to the ECA.

This Order does not establish WQBELs based on human health criterion/objectives.

Summary of Water Quality-based Effluent Limitations
Discharge Point No. 001

Table F-8. Summary of Water Quality-based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Minimum Median of Three Consecutive Bioassays
pH	standard units	--	--	6.5	8.5	--
Copper	µg/L	4.9	9.7	--	--	--
Lead	µg/L	1.5	2.9	--	--	--
Acute Toxicity	% Survival	--	--	70	--	90

5. Whole Effluent Toxicity (WET)

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.

WET requirements are derived from the CWA and the Basin Plan. The Basin Plan establishes a narrative water quality objective for toxicity that states "*All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, or aquatic life*." 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 existing Order contains acute toxicity limitations in accordance with the Basin Plan, which requires that average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests be at least 90 percent, with no single test having less than 70 percent survival. For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Permittee to conduct WET testing for acute and chronic toxicity, as specified in the MRP (Attachment E, section V).

The Basin Plan states "… effluent limits based upon acute bioassays of effluent will be prescribed." USEPA Region 9 provided guidance for the development of acute toxicity effluent limitations in the absence of numeric water quality objectives for toxicity in its document titled "Guidance for NPDES Permit Issuance", dated February 1994. In section B.2 "Toxicity Requirements", the USEPA document states that, "In the absence of specific numeric water quality objectives for acute and chronic toxicity, the narrative criterion, 'no toxics in toxic amounts', applies. Achievement of the narrative criterion, as applied herein, means that ambient waters shall not demonstrate for acute toxicity: 1) less than 90 percent survival, 50 percent of the time, based on the monthly median, or 2) less than 70 percent survival, 10 percent of the time, based on any monthly median."

Notification requirements for acute and chronic WET testing include a 72 hour verbal notification requirement and a 14 day written report requirement, if test results indicate toxicity. The 14 day written notification is established in the USEPA WET Guidance documents cited in the MRP. The 72 hour verbal notification requirement is being added to provide the Regional Water Board with knowledge of the toxicity in advance of the written report. The 72 hour requirement is intended to give the Permittee sufficient time to make a telephone call to Regional Water Board staff and

accounts for non-working days (e.g., weekends). Verbal notification of WET test exceedances may be left by voice mail if the Regional Water Board staff person is not immediately available by telephone.

a. Acute Aquatic Toxicity

Consistent with Order No. R1-2002-0037, this Order includes an effluent limitation for acute toxicity in accordance with the Basin Plan, which requires that the average survival of test organisms in undiluted effluent for any three consecutive 96-hour bioassay tests be at least 90 percent, with no single test having less than 70 percent survival.

The Order also implements federal guidelines (Regions 9 and 10 Guidelines for Implementing Whole Effluent Toxicity Testing Programs) by requiring dischargers to conduct acute toxicity tests on a fish species and on an invertebrate to determine the most sensitive species. According to the USEPA manual, Methods for Estimating the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (EPA/600/4-90/-27F), the acceptable vertebrate species for the acute toxicity test are the fathead minnow, *Pimephales promelas* and the rainbow trout, *Oncorhynchus mykiss*. The acceptable invertebrate species for the acute toxicity test are the water flea, *Ceriodaphnia dubia*, *Daphnia magna*, and *D. pulex*. The Permittee tests its effluent for acute toxicity using the rainbow trout, Oncorhynchus mykiss. During the term of the previous Order, the Permittee consistently maintained compliance with the acute toxicity limitation. All annual tests 2003 through 2010 have shown 100% survival.

b. Chronic Aquatic Toxicity

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. The SIP requires that the Permittee demonstrate the presence or absence of chronic toxicity using tests on the fathead minnow, *Pimephales promelas*, the water flea, *Ceriodaphnia dubia*, and the freshwater alga, *Selenastrum capricornutum*. Attachment E of this Order requires annual chronic WET monitoring to demonstrate compliance with the narrative toxicity objective.

The Permittee initiated chronic toxicity testing during the previous permit term on May 9, 2006, for three indicator species *Ceriodaphnia Dubia*, *Pimephales promelas*, and *Selanastrum capricornutum*. There were no statistically significant reductions in the survival or reproduction response for *Ceriodaphnia Dubia* or *Pimephales promelas*, however, the laboratory control water for *Ceriodaphnia Dubia* did not pass any of the test acceptability criteria. There was a statistically

significant reduction in the growth response of *Selanastrum capricornutum* with an associated TUc of >1.

Chronic toxicity effluent limitations have not been included in the Order for consistency with the SIP, which implements narrative toxicity objectives in Basin Plans and specifies use of a numeric trigger for accelerated monitoring and implementation of a Toxicity Reduction Evaluation (TRE) in the event that persistent toxicity is detected. The SIP contains implementation gaps regarding the appropriate form and implementation of chronic toxicity limits. This has resulted in a petition for State Water Board review of a NPDES permit in the Los Angeles Region that contained numeric chronic toxicity effluent limitations. To address the petition, the State Water Board adopted WQO 2003-0012 directing its staff to revise the toxicity control provisions in the SIP. The State Water Board states the following in WQO 2003-012, "In reviewing this petition and receiving comments from numerous interested persons on the propriety of including numeric effluent limitations for chronic toxicity in NPDES permits for publicly-owned treatment works, that discharge to inland waters, we have determined that this issue should be considered in a regulatory setting, in order to allow for full public discussion and deliberation. We intend to modify the SIP to specifically address the issue. We anticipate that review will occur within the next year. We therefore decline to make a determination here regarding the propriety of the final numeric effluent limitations for chronic toxicity contained in these permits." The process to revise the SIP is underway. Proposed changes include clarifying the appropriate form of effluent toxicity limits in NPDES permits and general expansion and standardization of toxicity control implementation related to the NPDES permitting process. Since the toxicity control provisions in the SIP are under revision, it is infeasible to develop numeric effluent limitations for chronic toxicity at this time. The SIP revision may require a permit modification to incorporate new statewide toxicity criteria established by the upcoming SIP revision.

However, the State Water Board found in WQO-2003-012 that, while it is not appropriate to include final numeric effluent limitations for chronic toxicity in NPDES permits for POTWs, permits must contain a narrative effluent limitation, numeric benchmarks for triggering accelerated monitoring, rigorous Toxicity Reduction Evaluation (TRE)/Toxicity Identification Evaluation (TIE) conditions, and a reopener to establish numeric effluent limitations for either chronic toxicity or the chemical(s) causing toxicity. This Order includes a reopener that allows the Regional Water Board to reopen the permit and include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE.

To ensure compliance with the narrative effluent limitation and the Basin Plan's narrative toxicity objective, the Permittee is required to conduct chronic WET testing, as specified in the Monitoring and Reporting Program (Attachment E, section V). Furthermore, Special Provision VI.C.2.a of this Order requires the Permittee to investigate the causes of, and identify and implement corrective actions to reduce or eliminate effluent toxicity. If the discharge demonstrates a pattern of toxicity exceeding the numeric toxicity monitoring trigger, the Permittee is required to initiate a Toxicity Reduction Evaluation (TRE) in accordance with an approved TRE workplan. The numeric toxicity monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Permittee is required to perform accelerated chronic toxicity monitoring, as well as the threshold to initiate a TRE if a pattern of effluent toxicity has been demonstrated.

Section V.B.9 of the MRP defines the chronic toxicity monitoring trigger as a single sample result of 1.6 TUc and a monthly median of 1.0 TUc, and section V.C.1.g of the MRP requires TUc to be calculated as 100/NOEC for purposes of determining if the Permittee's effluent exceeds the chronic toxicity monitoring trigger. Although the federal requirements may provide for flexibility in determining how to calculate TUc for compliance purposes (e.g., 100/NOEC, 100/IC25, 100/EC25), USEPA Region 9 recommends that effluent limitations and triggers be based on the no observed effect concentration (NOEC) when the permit language and chronic toxicity testing methods incorporate important safeguards that improve the reliability of the NOEC. These safeguards include the use of a dilution series (testing of a series of effluent concentrations) to verify and quantify a dose-response relationship and a requirement to evaluate specific performance criteria in order to determine the sensitivity of each chronic toxicity test. The goal is to demonstrate that each test is sensitive enough to determine whether or not the effluent is toxic or not.

The use of 100/IC25 or 100/EC25 as methods for calculating chronic toxicity are point estimates that automatically allow for a 25 percent effect before calling an effluent toxic. The Basin Plan has a narrative objective for toxicity that requires that "all waters 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." Allowance of a possible 25 percent effect would not meet the Basin Plan's narrative toxicity requirement. In addition, California has historically used the NOEC to regulate chronic toxicity for ocean discharges, thus it is fitting that the same method be used to regulate chronic toxicity in inland surface water discharges.

Because no dilution has been granted for the chronic condition, chronic toxicity testing results exceeding 1.6 chronic toxicity unit (TUc) as a single sample result

and 1.0 TUc as a monthly median demonstrates that the discharge is in violation of the narrative toxicity water quality objective.

If accelerated sampling of the discharge demonstrates a pattern of toxicity exceeding the chronic toxicity trigger, the Permittee is required to initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved TRE work plan to determine whether the discharge is contributing chronic toxicity to the receiving water. Special Provision VI.C.2.a.ii requires the Permittee to submit to the Regional Water Board and maintain a TRE Work Plan for approval by the Executive Officer, to ensure the Permittee 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 provision includes requirements for TRE initiation if a pattern of toxicity is demonstrated.

c. Ammonia-related Toxicity

The chronic toxicity test shall be conducted without modifications to eliminate ammonia toxicity. Ammonia toxicity in water is due mostly to its unionized fraction which is primarily a function of the temperature and the pH of the water being tested. As the pH and temperature increase so does the toxicity of a given concentration of ammonia. In static WET tests, the pH in the test concentrations often increases (drifts) due to the loss of carbon dioxide (CO_2) from the test concentrations as the test chambers are incubated over the test period. This upward drift results in pH values in the test concentrations that often exceed those pH values that could reasonably be expected to be found in the effluent or in the mixing zone under ambient conditions. Unionized ammonia toxicity caused by pH drift is considered to be an artifact of test conditions and is not a true measure of the ammonia toxicity likely to occur as the discharge enters the receiving waters. In order to reduce the occurrence of artifactual unionized ammonia toxicity, it may be necessary to control the pH in toxicity tests, provided 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. This Order authorizes the use of pH control procedures where the procedures are consistent with USEPA methods and do not significantly alter the test water chemistry so as to mask other sources of toxicity.

D. Final Effluent Limitations

1. Satisfaction of 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. In particular, effluent limitation C.3 from Order R1-2002-0037 has been moved to special provisions C.3.c.i of this Order to more appropriately represent the BMP requirements.

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. All effluent limitations, standards, and conditions contained in this Order are at least as (or more) stringent as the effluent limitations in Order No. R1-2002-0037.

3. Satisfaction of Antidegradation Policy

a. Surface Water. 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 beyond that which was permitted to discharge in accordance with the previous Order.

b. Groundwater. The beneficial uses of the underlying ground water are municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, and aquaculture, and Native American cultural uses. Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.

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 the 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.

4. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The terms of this Order meet the minimum federal technology-based effluent limitations for the Wet Storage Subcategory and Sawmills and Planing Mills Subcategory of the Timber Products Processing Point Source Category at 40 CFR Part 429, Subparts I and K. The technology-based effluent limitations consist of restrictions on debris. Restrictions on these pollutants are discussed in section IV.B in this Fact Sheet.

WQBELs 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 WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the SIP, which was approved by USEPA on May 18, 2000. 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). The remaining water quality objectives and beneficial uses implemented by this Order (specifically the addition of the beneficial uses Water Quality Enhancement (WQE), Flood Peak Attenuation/Flood Water Storage (FLD), Wetland Habitat (WET), Native American Culture (CUL), and Subsistence Fishing (FISH)) and the General Objective regarding antidegradation) were approved by USEPA on, March 4, 2005, and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

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.

Summary of Final Effluent Limitations
Discharge Point No. 001

Table F-9. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations				Basis[1]
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Acute Toxicity	% Survival	--	--	70[2]/90[3]	--	BP
Debris	--	--	--	--	[4]	ELG
pH	standard units	--	--	6.5	8.5	ELG,BPJ/BP
Copper, Total Recoverable	µg/L	4.9	9.7	--	--	CTR
Lead, Total Recoverable	µg/L	1.5	2.9	--	--	CTR

Parameter	Units	Effluent Limitations				Basis[1]
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	

[1] BP – Based on water quality objectives contained in the Basin Plan.
ELG – Based on the effluent limitation guidelines for industrial dischargers contained in 40 CFR Part 429.
CTR - Based on water quality criteria contained in the California Toxics Rule and applied as specified in the SIP.
[2] Minimum for any one bioassay.
[3] Median for any three or more consecutive bioassays.
[4] There shall be no debris (as defined in Attachment A) discharged.

1. There shall be no discharge of process wastewaters from mechanical barking operations.

E. Interim Effluent Limitations

This section is not applicable to the Permittee since the Order does not contain interim effluent limitations.

F. Land Discharge Specifications

1. Scope and Authority

Section 13263 of the Water Code requires the Regional Water Board to prescribe requirements for proposed discharges, existing discharges, or material change in an existing discharge based upon the conditions of the disposal area or receiving waters upon or into which the discharge is made or proposed. The prescribed requirements shall implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Water Code section 13241. In prescribing requirements, the Regional Water Board is not obligated to authorize the full waste assimilation capacities of the receiving water.

Water Code section 13241 requires the Regional Water Board to establish water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and prevention of nuisance, recognizing that it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses. The Basin Plan establishes water quality objectives specific to the North Coast Region for the protection of past, present, and probable future beneficial uses of water. Factors required for consideration during development of applicable water quality objectives, such as the characteristics of the hydrologic unit under consideration, economic considerations, and other factors required in accordance with section 13241 were considered during the Basin

Planning and adoption process. The Regional Water Board considered the factors set forth in Water Code section 13241, including the consideration of past, present, and probable future beneficial uses of the receiving water, which the Regional Water Board anticipates to be the same as set forth in the Basin Plan.

2. Applicable Beneficial Uses and Water Quality Objectives

a. Beneficial Uses. Beneficial use designations for groundwater established in the Basin Plan include MUN, AGR, IND, PRO (potential), AQUA (potential), and CUL.

b. Water Quality Objectives. The Basin Plan contains narrative objectives for tastes and odors, bacteria, radioactivity, and chemical constituents (including those chemicals that adversely affect agricultural water supply) that apply to groundwater.

3. Land Discharge Specifications – Discharge Point 002

Narrative land discharge specifications have been included to protect the beneficial uses of the receiving waters. This Order establishes monitoring of the wastewater land applied to determine compliance with the Basin Plan numerical and narrative water quality objectives for identified pollutants of concern.

G. Reclamation Specifications

This section is not applicable to the Permittee as treated wastewater is not reclaimed at this time.

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, Native American culture, and aquaculture to surface waters.

2. Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.

3. Discharges from the Facility shall not cause exceedance of applicable water quality objectives or create adverse impacts to beneficial uses of groundwater.

4. The Basin Plan requires that waters designated for use as MUN shall not contain concentrations of chemical constituents in excess of the limits specified in title 22, division 4, chapter 15, article 4.1, section 64435, and article 5.5, section 64444 of the CCR.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR 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 (MRP) establishes monitoring and reporting requirements to implement federal and state requirements. This Monitoring and Reporting Program is provided in Attachment E of this permit. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

A. Influent Monitoring

This Order establishes flow monitoring of the log deck sprinkler feed.

B. Effluent Monitoring

Effluent monitoring requirements from Order No. R1-2002-0037 have been retained for turbidity, pH, color, dissolved oxygen, temperature, total suspended solids, settleable solids, chemical oxygen demand and acute toxicity. Monitoring at Monitoring Location EFF-001 (previously identified as SN001) is required in order to demonstrate compliance with technology-based effluent limitations, demonstrate compliance with WQBELs, and demonstrate that the discharge does not pose reasonable potential for a pollutant to exceed any numeric or narrative water quality objectives. If the discharge to the North Fork Mad River is found to contain levels of any pollutant that poses reasonable potential to exceed any numeric or narrative water quality objective, the Regional Water Board

would propose to develop effluent limitations for that pollutant(s) for discharges to the North Fork Mad River.

The following describes changes to the effluent monitoring requirements from Order No. R1-2002-0037 established by this Order.

1. Two new requirements for effluent flow monitoring have been established in this Order to characterize the discharge flow from the Facility to the North Fork Mad River at EFF-001 and to characterize the wastewater discharge flow to land at SPR-001.

2. A new effluent monitoring requirement for debris has been established in this Order to determine compliance with the effluent limitation for debris. The previous permit had the effluent limitation, but no monitoring to determine compliance.

3. New effluent monitoring requirements for copper and lead have been established in this Order to characterize the effluent and demonstrate compliance with new WQBELs.

4. New effluent monitoring requirements for arsenic, total chromium, mercury, nickel, and zinc have been established in this Order to characterize the effluent and demonstrate that the discharge does not pose reasonable potential for a pollutant to exceed any numeric or narrative water quality objectives.

5. The chronic toxicity monitoring requirement has been increased from once per permit term in the previous Order to annually in this Order to determine compliance with the Basin Plan's narrative water quality objective for toxicity. The one chronic toxicity monitoring event initiated by the Permittee on May 9, 2006, resulted in a statistically significant reduction in the growth response of *Selanastrum capricornutum* with an associated TUc of >1 and a test for *Ceriodaphnia dubia* that failed to pass the test acceptability criteria. This annual monitoring requirement will facilitate the collection of sufficient data to determine whether the discharge has toxic effects on the receiving waters. The increased monitoring frequency is consistent with requirements for similar dischargers within the North Coast Region.

6. A new requirement for effluent hardness monitoring has been established in this Order. The toxicity of certain metals is hardness-dependent (i.e., as hardness decreases, metals toxicity increases). Although the SIP currently requires that receiving water hardness be used to calculate effluent limitations for hardness-based metals, the State Water Board is currently evaluating evidence that more protective effluent limitations may be established utilizing the minimum effluent hardness for certain metals. The collection of effluent hardness data will provide a data set to be utilized in the future for the establishment of some effluent limitations. Monitoring of hardness in the effluent should coincide with compliance monitoring for the hardness-dependent metals.

7. In accordance with Section 1.3 of the SIP, periodic monitoring is required for CTR priority pollutants for which criteria or objectives apply and for which no effluent limitations have been established. Order No. R1-2002-0037 required monitoring for priority pollutants once during the permit term. In order to provide sufficient monitoring to characterize the effluent and conduct a meaningful RPA during the next permit renewal, this Order requires one full set of priority pollutant sampling during the permit term and annual monitoring of those priority pollutants that have been detected in the effluent.

C. Whole Effluent Toxicity Testing Requirements

WET limitations and monitoring requirements are retained from the previous Order and are included in the Order to 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 and monitoring requirements for acute toxicity; as well as monitoring requirements for chronic toxicity to assess compliance with the Basin Plan's narrative water quality objective for toxicity.

D. Land Discharge Monitoring Requirements

New land discharge monitoring has been established to ensure that the discharge to the land disposal area complies with the Land Discharge – Forested Land Spray Irrigation Requirements in section VI.C of this Order. Monitoring is established for flow, pH, TSS, oil and grease, arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver and zinc.

E. Reclamation Monitoring Requirements

This section is not applicable to the Permittee as treated wastewater is not reclaimed at this time.

F. Receiving Water Monitoring

1. Surface Water

a. Consistent with Order No. R1-2002-0037, this Order requires receiving water monitoring at Monitoring Location RSW-001, located at the water hole upstream of the mill site in the North Fork Mad River. Monitoring requirements from Order No. R1-2002-0037 for pH, turbidity, dissolved oxygen, color, temperature, TSS, settleable solids, and chemical oxygen demand have been retained in this Order. These monitoring requirements have been retained to determine compliance with

narrative and numeric water quality objectives for these parameters in the Basin Plan and the receiving water limitations in this Order.

b. Section VI.C.2.c of this Order requires the Permittee to propose a new downstream receiving water monitoring location (RSW-002) that is representative of the effluent impacts to receiving waters and is unaffected by other discharges (i.e. upstream of the confluence of the North Fork Mad River and Hatchery Creek). Table E-2 identifies RSW-002 as the downstream receiving water monitoring location.

c. Because the toxicity of certain metals is hardness dependent (i.e., as hardness decreases, metal toxicity increases), monitoring of hardness in the receiving water is required. Monitoring of hardness shall coincide with the monitoring for hardness dependent metals and priority pollutants.

d. In accordance with Section 1.3 of the SIP, periodic monitoring is required for CTR priority pollutants for which criteria or objectives apply and for which no effluent limitations have been established. Order No. R1-2002-0037 did not require monitoring of CTR pollutants in the receiving water. However, in order to provide sufficient monitoring to characterize the background receiving water and conduct a meaningful RPA during the next permit renewal, this Order requires complete priority pollutant monitoring of the receiving water once per permit term and annual monitoring of those priority pollutants that have been detected in the effluent.

G. Other Monitoring Requirements – Not Applicable

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Permittee must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Permittee. The rationale for the special provisions contained in the Order is provided in section VII.B, below.

40 CFR 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. 40 CFR 123.25(a)(12) allows the state to

omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 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 Permittee 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 Permittee to notify Regional Water Board staff, orally and in writing, in the event that the Permittee does not comply or will be unable to comply with any Order requirement. This provision requires the Permittee to make direct contact with a Regional Water Board staff person.

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 40 CFR 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 Permittee 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 the receiving waters.

c. **Whole Effluent Toxicity (Special Provisions VI.C.1.c).** This Order requires the Permittee 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 numeric 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 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 provision allows the Regional Water Board to reopen this Order if future studies undertaken by the Permittee 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.

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.

In addition to WET monitoring, this provision requires the Permittee to maintain an up-to-date TRE Work Plan for approval by the Executive Officer, to ensure the Permittee 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 obtained as a result of an accelerated monitoring program.

b. **Best Practical Treatment or Control (BPTC) Work Plan**. The discharge at 002 has the potential to impact groundwater quality beneath the land application spray area, but little or no information has been collected to assess compliance with groundwater quality objectives in the Basin Plan. The Permittee plans on studying the land application wastewater discharge to determine if it is impacting groundwater quality. This conditional study ensures compliance with the Antidegradation Policy by requiring the

Permittee to develop a work plan to achieve BPTC if any groundwater impacts are detected

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

   a. **Pollutant Minimization Plan (Special Provisions VI.C.3.a).** Section 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.

   b. **Operation and Maintenance (Special Provisions VI.C.4.a and VI.C.4.b).** 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.

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

   a. **Operation and Maintenance (Special Provisions VI.C.4.a and VI.C.4.b).** 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 for Municipal Facilities (POTWs Only)**

   This section is not applicable to the Permittee.

6. **Other Special Provisions**

   a. **Solids Disposal and Handling Requirements (Special Provisions VI.C.6.a).** This Order establishes solids disposal and handling requirements to ensure that storage and/or disposal of basin sediments and other solids removed from liquid wastes do not impact water quality.

7. **Compliance Schedules**

   This section is not applicable to the Permittee.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, North Coast Region (Regional Water Board) considered the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the California Redwood Company Korbel Sawmill. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board notified the Permittee and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the following 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.

B. Written Comments

Interested persons were invited to submit written comments concerning these tentative WDRs. The comment period was open from February 1, 2013 through March 4, 2013.

C. Public Hearing

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

Date:	**May 2, 2013**
Time:	**9:00 a.m.**
Location:	**Wharfinger Building** **No. 1 Marina Way** **Eureka, California 95550**

When adopting this Order, the Regional Water Board, in the above referenced public meeting, heard and considered all comments pertaining to the discharge.

D. Waste Discharge Requirements Petitions

Any person affected by this action of the Regional Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Water Code section 13320 and title 23, section 2050 of the CCR. The petition must

be received by the State Water Board within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request. In addition to filing a petition with the State Water Board, any person affected by this Order may request the Regional Water Board to reconsider the Order. To be timely, such request must be made within 30 days of the date of this Order. Note that even if reconsideration by the Regional water Board is sought, filing a petition with the State Water Board within the 30-day period is necessary to preserve the petitioner's legal rights. If the Permittee chooses to request reconsideration of this Order or file a petition with the State Water Board, the Permittee must comply with the Order while the request for reconsideration and/or petition is being considered. 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 (ROWD), 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 8:30 a.m. and 4:45 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 Kason.Grady@waterboards.ca.gov or (707) 576-2682.

ATTACHMENT F-1

		Step 2	Step 3				Step 5					Final Result	
Constituent name	C (µg/L) stringent) Criteria (Enter "No Criteria" for no criteria)	Effluent Data Available (Y/N)?	Are all data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant effluent detected max conc (ug/L)	Concentration from the effluent (MEC = detected max value; if all ND & MDL<C then MEC = MDL)	B Available (Y/N)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	RPA Result	Reason
Antimony	6.0	Y	N		0.14	0.14	Y	N		0.03		**No**	MEC<C & B<C
Arsenic	10	Y	N		4.7	4.7	Y	N		0.28		**No**	MEC<C & B<C
Beryllium	4.0	Y	N		0.26	0.26	Y	Y	0.06		N	**No**	Ud;MEC<C & B is ND
Cadmium	1.8	Y	Y	0.04		0.04	Y	Y	0.04		N	**No**	Ud;MEC<C & B is ND
Chromium (III)	151	Y	N		5	5	N					**No**	Ud;MEC<C & B is ND
Chromium (VI) or Total Chromium	11	Y	N		10	10	Y	N		0.54		**No**	MEC<C & B<C
Copper	6.7	Y	N		13	13	Y	N		0.93		**Yes**	MEC>C
Lead	1.9	Y	N		2.4	2.4	Y	N		0.11		**Yes**	MEC>C
Mercury	0.050	Y	N		0.026	0.026	Y	N		0.0017		**No**	MEC<C & B<C
Nickel	38	Y	N		20	20	Y	N		0.92		**No**	MEC<C & B<C
Selenium	5.0	Y	N		0.07	0.07	Y	N		0.16		**No**	MEC<C & B<C
Silver	2.1	Y	N		0.02	0.02	Y	Y	0.02		N	**No**	Ud;MEC<C & B is ND
Thallium	1.7	Y	Y	0.05		0.05	Y	Y	0.05		N	**No**	Ud;MEC<C & B is ND
Zinc	86	Y	N		26	26	Y	Y	0.7		N	**No**	Ud;MEC<C & B is ND
Cyanide	5.2	Y	Y	0.9		0.9	Y	Y	3		N	**No**	Ud;MEC<C & B is ND
Asbestos	7.0	Y	Y	9.9			Y	Y	0.4		N	**No**	UD; effluent data and B are ND
2,3,7,8 TCDD	1.3E-08	Y	Y	5.3E-07			Y	Y	0.000000534		Y	**No**	UD; effluent data and B are ND
Acrolein	320	Y	Y	1.7		1.7	Y	Y	8.5		N	**No**	Ud;MEC<C & B is ND
Acrylonitrile	0.06	Y	Y	0.69			Y	Y	3.4		Y	**No**	UD; effluent data and B are ND
Benzene	1.0	Y	Y	0.18		0.18	Y	Y	0.9		N	**No**	Ud;MEC<C & B is ND
Bromoform	4.3	Y	Y	0.15		0.15	Y	Y	0.75		N	**No**	Ud;MEC<C & B is ND
Carbon Tetrachloride	0.25	Y	Y	0.16		0.16	Y	Y	0.8		Y	**No**	Ud;MEC<C & B is ND
Chlorobenzene	70	Y	Y	0.18		0.18	Y	Y	0.9		N	**No**	Ud;MEC<C & B is ND
Chlorodibromomethane	0.40	Y	Y	0.17		0.17	Y	Y	0.85		Y	**No**	Ud;MEC<C & B is ND
Chloroethane	No Criteria	Y	Y	0.38		No Criteria	Y	Y	1.2		N	**Uo**	No Criteria
2-Chloroethylvinyl ether	No Criteria	Y	Y	0.28		No Criteria	Y	Y	1.4		N	**Uo**	No Criteria
Chloroform	No Criteria	Y	Y	0.19		No Criteria	Y	Y	0.95		N	**Uo**	No Criteria
Dichlorobromomethane	0.56	Y	Y	0.18		0.18	Y	Y	0.8		Y	**No**	Ud;MEC<C & B is ND
1,1-Dichloroethane	5.0	Y	Y	0.19		0.19	Y	Y	0.95		N	**No**	Ud;MEC<C & B is ND
1,2-Dichloroethane	0.38	Y	Y	0.18		0.18	Y	Y	0.9		Y	**No**	Ud;MEC<C & B is ND
1,1-Dichloroethylene	0.057	Y	Y	0.21			Y	Y	1		Y	**No**	UD; effluent data and B are ND
1,2-Dichloropropane	0.52	Y	Y	0.18		0.18	Y	Y	0.9		Y	**No**	Ud;MEC<C & B is ND
1,3-Dichloropropylene	0.50	Y	Y	0.16		0.16	Y	Y	0.8		Y	**No**	Ud;MEC<C & B is ND
Ethylbenzene	300	Y	Y	0.26		0.26	Y	Y	1.3		N	**No**	Ud;MEC<C & B is ND
Methyl Bromide	48	Y	Y	1		1	Y	Y	1		N	**No**	Ud;MEC<C & B is ND
Methyl Chloride	No Criteria	Y	Y	0.2		No Criteria	Y	Y	1		N	**Uo**	No Criteria

		Step 2	Step 3				Step 5					Final Result	
Constituent name	C (ug/L) stringent) Criteria (Enter "No Criteria" for no criteria)	Effluent Data Available (Y/N)?	Are all data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant effluent detected max conc (ug/L)	Concentration from the effluent (MEC) (MEC= detected max value; if all ND & MDL<C then MEC = MDL)	B Available (Y/N)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	RPA Result	Reason
Methylene Chloride	4.7	Y	Y	1		1	Y	Y	1		N	**No**	Ud;MEC<C & B is ND
1,1,2,2-Tetrachloroethane	0.17	Y	Y	0.1		0.1	Y	Y	0.5		Y	**No**	Ud;MEC<C & B is ND
Tetrachloroethylene	0.80	Y	Y	0.19		0.19	Y	Y	0.95		Y	**No**	Ud;MEC<C & B is ND
Toluene	150	Y	N		3.4	3.4	Y	Y	0.95		N	**No**	Ud;MEC<C & B is ND
1,2-Trans-Dichloroethylene	10	Y	Y	0.22		0.22	Y	Y	0.9		N	**No**	Ud;MEC<C & B is ND
1,1,1-Trichloroethane	200	Y	Y	0.19		0.19	Y	Y	0.95		N	**No**	Ud;MEC<C & B is ND
1,1,2-Trichloroethane	0.60	Y	Y	0.16		0.16	Y	Y	0.8		Y	**No**	Ud;MEC<C & B is ND
Trichloroethylene	2.7	Y	Y	0.2		0.2	Y	Y	1		N	**No**	Ud;MEC<C & B is ND
Vinyl Chloride	0.50	Y	Y	0.25		0.25	Y	Y	1.2		Y	**No**	Ud;MEC<C & B is ND
2-Chlorophenol	120	Y	Y	0.98		0.98	Y	Y	0.98		N	**No**	Ud;MEC<C & B is ND
2,4-Dichlorophenol	93	Y	Y	0.99		0.99	Y	Y	0.99		N	**No**	Ud;MEC<C & B is ND
2,4-Dimethylphenol	540	Y	Y	0.87		0.87	Y	Y	0.87		N	**No**	Ud;MEC<C & B is ND
2-Methyl- 4,6-Dinitrophenol	13	Y	Y	0.91		0.91	Y	Y	0.91		N	**No**	Ud;MEC<C & B is ND
2,4-Dinitrophenol	70	Y	Y	0.83		0.83	Y	Y	0.83		N	**No**	Ud;MEC<C & B is ND
2-Nitrophenol	No Criteria	Y	Y	0.89		No Criteria	Y	Y	0.89		N	**Uo**	No Criteria
4-Nitrophenol	No Criteria	Y	Y	0.83		No Criteria	Y	Y	0.83		N	**Uo**	No Criteria
3-Methyl 4-Chlorophenol	No Criteria	Y	Y	0.91		No Criteria	Y	Y	0.91		N	**Uo**	No Criteria
Pentachlorophenol	0.28	Y	Y	0.81			Y	Y	0.81		Y	**No**	UD; effluent data and B are ND
Phenol	21,000	Y	Y	0.69		0.69	Y	Y	0.69		N	**No**	Ud;MEC<C & B is ND
2,4,6-Trichlorophenol	2.1	Y	Y	0.97		0.97	Y	Y	0.97		N	**No**	Ud;MEC<C & B is ND
Acenaphthene	1,200	Y	Y	0.03		0.03	Y	Y	0.03		N	**No**	Ud;MEC<C & B is ND
Acenaphthylene	No Criteria	Y	Y	0.03		No Criteria	Y	Y	0.03		N	**Uo**	No Criteria
Anthracene	9,600	Y	Y	0.03		0.03	Y	Y	0.03		N	**No**	Ud;MEC<C & B is ND
Benzidine	0.00012	Y	Y	5			Y	Y	5		Y	**No**	UD; effluent data and B are ND
Benzo(a)Anthracene	0.0044	Y	Y	0.03			Y	Y	0.03		Y	**No**	UD; effluent data and B are ND
Benzo(a)Pyrene	0.0044	Y	Y	0.03			Y	Y	0.03		Y	**No**	UD; effluent data and B are ND
Benzo(b)Fluoranthene	0.0044	Y	Y	0.03			Y	Y	0.03		Y	**No**	UD; effluent data and B are ND
Benzo(ghi)Perylene	No Criteria	Y	Y	0.03		No Criteria	Y	Y	0.03		N	**Uo**	No Criteria
Benzo(k)Fluoranthene	0.0044	Y	Y	0.03			Y	Y	0.03		Y	**No**	UD; effluent data and B are ND
Bis(2-Chloroethoxy)Methane	No Criteria	Y	Y	0.93		No Criteria	Y	Y	0.93		N	**Uo**	No Criteria
Bis(2-Chloroethyl)Ether	0.031	Y	Y	0.95			Y	Y	0.95		Y	**No**	UD; effluent data and B are ND
Bis(2-Chloroisopropyl)Ether	1,400	Y	Y	0.81		0.81	Y	Y	0.81		N	**No**	Ud;MEC<C & B is ND
Bis(2-Ethylhexyl)Phthalate	1.8	Y	Y	0.95		0.95	Y	Y	0.95		N	**No**	Ud;MEC<C & B is ND
4-Bromophenyl Phenyl Ether	No Criteria	Y	Y	0.97		No Criteria	Y	Y	0.97		N	**Uo**	No Criteria
Butylbenzyl Phthalate	3,000	Y	Y	0.98		0.98	Y	Y	0.98		N	**No**	Ud;MEC<C & B is ND
2-Chloronaphthalene	1,700	Y	Y	0.98		0.98	Y	Y	0.98		N	**No**	Ud;MEC<C & B is ND
4-Chlorophenyl Phenyl Ether	No Criteria	Y	Y	0.91		No Criteria	Y	Y	0.91		N	**Uo**	No Criteria
Chrysene	0.0044	Y	Y	0.03			Y	Y	0.03		Y	**No**	UD; effluent data and B are ND
Dibenzo(a,h)Anthracene	0.0044	Y	Y	0.03			Y	Y	0.03		Y	**No**	UD; effluent data and B are ND
1,2-Dichlorobenzene	600	Y	Y	0.27		0.27	Y	Y	1.4		N	**No**	Ud;MEC<C & B is ND
1,3-Dichlorobenzene	400	Y	Y	0.18		0.18	Y	Y	0.9		N	**No**	Ud;MEC<C & B is ND
1,4-Dichlorobenzene	5.0	Y	Y	0.18		0.18	Y	Y	0.9		N	**No**	Ud;MEC<C & B is ND

		Step 2	Step 3				Step 5					Final Result	
Constituent name	C (µg/L) stringent) Criteria (Enter "No Criteria" for no criteria)	Effluent Data Available (Y/N)?	Are all data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant effluent detected max conc (ug/L)	Concentration from the effluent (MEC) (MEC= detected max value; if all ND & MDL<C then MEC = MDL)	B Available (Y/N)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL) (ug/L)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	RPA Result	Reason
3,3 Dichlorobenzidine	0.040	Y	Y	5			Y	Y	5		Y	**No**	UD; effluent data and B are ND
Diethyl Phthalate	23,000	Y	Y	0.86		0.86	Y	Y	0.85		N	**No**	Ud;MEC<C & B is ND
Dimethyl Phthalate	313,000	Y	Y	0.97		0.97	Y	Y	0.97		N	**No**	Ud;MEC<C & B is ND
Di-n-Butyl Phthalate	2,700	Y	Y	0.91		0.91	Y	Y	0.91		N	**No**	Ud;MEC<C & B is ND
2,4-Dinitrotoluene	0.110	Y	Y	0.96			Y	Y	0.96		Y	**No**	UD; effluent data and B are ND
2,6-Dinitrotoluene	No Criteria	Y	Y	0.98		No Criteria	Y	Y	0.98		N	**Uo**	No Criteria
Di-n-Octyl Phthalate	No Criteria	Y	Y	0.92		No Criteria	Y	Y	0.92		N	**Uo**	No Criteria
1,2-Diphenylhydrazine	0.040	Y	Y	0.9			Y	Y	0.9		Y	**No**	UD; effluent data and B are ND
Fluoranthene	300	Y	Y	0.03		0.03	Y	Y	0.03		N	**No**	Ud;MEC<C & B is ND
Fluorene	1,300	Y	Y	0.03		0.03	Y	Y	0.03		N	**No**	Ud;MEC<C & B is ND
Hexachlorobenzene	0.00075	Y	Y	0.91			Y	Y	0.91		Y	**No**	UD; effluent data and B are ND
Hexachlorobutadiene	0.44	Y	Y	0.92			Y	Y	0.92		Y	**No**	UD; effluent data and B are ND
Hexachlorocyclopentadiene	50	Y	Y	0.9		0.9	Y	Y	0.9		N	**No**	Ud;MEC<C & B is ND
Hexachloroethane	1.9	Y	Y	0.94		0.94	Y	Y	0.94		N	**No**	Ud;MEC<C & B is ND
Indeno(1,2,3-cd)Pyrene	0.0044	Y	Y	0.03			Y	Y	0.03		Y	**No**	UD; effluent data and B are ND
Isophorone	8.4	Y	Y	0.93		0.93	Y	Y	0.93		N	**No**	Ud;MEC<C & B is ND
Naphthalene	No Criteria	Y	Y	0.03		No Criteria	Y	Y	0.03		N	**Uo**	No Criteria
Nitrobenzene	17	Y	Y	0.95		0.95	Y	Y	0.95		N	**No**	Ud;MEC<C & B is ND
N-Nitrosodimethylamine	0.00069	Y	Y	0.88			Y	Y	0.88		Y	**No**	UD; effluent data and B are ND
N-Nitrosodi-n-Propylamine	0.0050	Y	Y	0.97			Y	Y	0.97		Y	**No**	UD; effluent data and B are ND
N-Nitrosodiphenylamine	5.0	Y	Y	0.83		0.83	Y	Y	0.83		N	**No**	Ud;MEC<C & B is ND
Phenanthrene	No Criteria	Y	Y	0.03		No Criteria	Y	Y	0.03		N	**Uo**	No Criteria
Pyrene	960	Y	Y	0.03		0.03	Y	Y	0.03		N	**No**	Ud;MEC<C & B is ND
1,2,4-Trichlorobenzene	5.0	Y	Y	0.98		0.98	Y	Y	0.98		N	**No**	Ud;MEC<C & B is ND
Aldrin	0.00013	Y	Y	0.004			Y	Y	0.004		Y	**No**	UD; effluent data and B are ND
alpha-BHC	0.0039	Y	Y	0.005			Y	Y	0.005		Y	**No**	UD; effluent data and B are ND
beta-BHC	0.014	Y	Y	0.004		0.004	Y	Y	0.004		N	**No**	Ud;MEC<C & B is ND
gamma-BHC	0.019	Y	Y	0.004		0.004	Y	Y	0.004		N	**No**	Ud;MEC<C & B is ND
delta-BHC	No Criteria	Y	Y	0.004		No Criteria	Y	Y	0.004		N	**Uo**	No Criteria
Chlordane	0.00057	Y	Y	0.005			Y	Y	0.005		Y	**No**	UD; effluent data and B are ND
4,4'-DDT	0.00059	Y	Y	0.004			Y	Y	0.004		Y	**No**	UD; effluent data and B are ND
4,4'-DDE	0.00059	Y	Y	0.003			Y	Y	0.003		Y	**No**	UD; effluent data and B are ND
4,4'-DDD	0.00083	Y	Y	0.004			Y	Y	0.004		Y	**No**	UD; effluent data and B are ND
Dieldrin	0.00014	Y	Y	0.004			Y	Y	0.004		Y	**No**	UD; effluent data and B are ND
alpha-Endosulfan	0.056	Y	Y	0.004		0.004	Y	Y	0.004		N	**No**	Ud;MEC<C & B is ND
beta-Endolsulfan	0.056	Y	Y	0.005		0.005	Y	Y	0.005		N	**No**	Ud;MEC<C & B is ND
Endosulfan Sulfate	110	Y	Y	0.005		0.005	Y	Y	0.005		N	**No**	Ud;MEC<C & B is ND
Endrin	0.036	Y	Y	0.005		0.005	Y	Y	0.005		N	**No**	Ud;MEC<C & B is ND
Endrin Aldehyde	0.76	Y	Y	0.005		0.005	Y	Y	0.005		N	**No**	Ud;MEC<C & B is ND
Heptachlor	0.00021	Y	Y	0.005			Y	Y	0.005		Y	**No**	UD; effluent data and B are ND
Heptachlor Epoxide	0.00010	Y	Y	0.004			Y	Y	0.004		Y	**No**	UD; effluent data and B are ND
PCBs sum	0.00017	Y	Y	0.04			Y	Y	0.04		Y	**No**	UD; effluent data and B are ND

		Step 2	Step 3				Step 5					Final Result	
Constituent name	*C (µg/L) stringent) Criteria (Enter "No Criteria" for no criteria)*	*Effluent Data Available (Y/N)?*	*Are all data points non-detects (Y/N)?*	*If all data points ND Enter the min detection limit (MDL) (ug/L)*	*Enter the pollutant effluent detected max conc (ug/L)*	*Concentration from the effluent (MEC) (MEC= detected max value; if all ND & MDL<C then MEC = MDL)*	*B Available (Y/N)?*	*Are all B data points non-detects (Y/N)?*	*If all data points ND Enter the min detection limit (MDL) (ug/L)*	*Enter the pollutant B detected max conc (ug/L)*	*If all B is ND, is MDL>C?*	*RPA Result*	*Reason*
Toxaphene	0.00020	Y	Y	0.2			Y	Y	0.2		Y	**No**	UD; effluent data and B are ND
Total Ammonia	4	N					N					**Ud**	no effluent data & no B
Nitrate (as N)	10,000	N					N					**Ud**	no effluent data & no B
Phosphate (as P)	No Criteria	N				No Criteria	N					**Uo**	No Criteria