

North Coast Regional Water Quality Control Board

**ORDER R1-2014-0003
NPDES NO. CA0005843
WDID No. 1B800510MEN**

**WASTE DISCHARGE REQUIREMENTS
FOR THE
MENDOCINO FOREST PRODUCTS, LLC
UKIAH SAWMILL
MENDOCINO COUNTY**

The following Permittee is subject to waste discharge requirements (WDRs) set forth in this Order:

Table 1. Permittee Information

| | |
|-----------------------------|--|
| Permittee | Mendocino Forest Products, LLC |
| Name of Facility | Ukiah Sawmill |
| Facility Address | 850 Kunzler Ranch Road |
| | Ukiah, CA 95482 |
| | Mendocino 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 Locations

| Discharge Point | Effluent Description | Discharge Point Latitude (North) | Discharge Point Longitude (West) | Receiving Water |
|------------------------|---|---|---|--|
| 001 | Log deck sprinkler water and commingled storm water runoff | 39.18512° | -123.20464° | Hensley Creek, tributary to the Russian River |
| 002 | Boiler blow down to leachfields | 39.18642° | -123.20189° | Groundwater |
| 003 | Recirculation pond land discharge | 39.18731° | -123.20470° | Groundwater |

Table 3. Administrative Information

| | |
|---|--------------------|
| This Order was adopted on: | March 13, 2014 |
| This Order shall become effective on: | May 1, 2014 |
| This Order shall expire on: | April 30, 2019 |
| The Permittee shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than: | September 30, 2018 |
| The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, North Coast Region have classified this discharge as follows: | Minor discharge |

IT IS HEREBY ORDERED, that Waste Discharge Requirements (WDRs) Order No. R1-2002-0086 and Monitoring and Reporting Program (MRP) No. R1-2002-0086, are rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the California Water Code (Water Code) (commencing with section 13000) and regulations and guidelines 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 of this Order. This action in no way prevents the North Coast Regional Water Quality Control Board (Regional Water Board) from taking enforcement action for past violations of the previous permit.

I, Matthias St. John, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, North Coast Region, on March 13, 2014.

 Matthias St. John, Executive Officer

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I. FACILITY INFORMATION

Information describing the Ukiah Sawmill (Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

The Regional Water Board, finds:

- A. Legal Authorities.** This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters.
- B. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes 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 V.B, VI.C.1.g and VI.C.2.c 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 WDRs 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.
- 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.

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 waste at any point not described in Finding II.B. or authorized by any State Water Board or other Regional Water Board permit is prohibited.
- E.** The discharge of wood treatment chemicals or stain control fungicides to surface water or groundwater is prohibited.
- F.** The discharge of process water from the Facility to the Russian River and its tributaries is prohibited during the period from May 15 through September 30 of each year.

- G. During the period from October 1 through May 14, discharges of treated wastewater to Hensley Creek, tributary to the Russian River, shall not exceed one percent of the flow of Hensley Creek, as measured at Monitoring Location RSW-001. For purposes of this Order, compliance with this discharge prohibition shall be determined as follows:
 - 1. In no case shall the total volume of process water discharged in a calendar month exceed one percent of the total volume of Hensley Creek at Monitoring Location RSW-001 in the same calendar month. At the beginning of the discharge season¹, the monthly flow volume comparisons shall be based on the date when the discharge commenced to the end of the calendar month. At the end of the discharge season, the monthly flow volume shall be based on the first day of the calendar month to the date when the discharge ceased for the season.
- H. The discharge of debris² is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point No. 001

1. Final Effluent Limitations – Discharge Point No. 001

- a. The Permittee shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program, Attachment E:

Table 4. Effluent Limitations

| Parameter | Units | Effluent Limitations | | | | |
|-----------|----------------|----------------------|----------------|---------------|-----------------------|-----------------------|
| | | Average Monthly | Average Weekly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum |
| Zinc | µg/L | 6.3 | -- | 12.6 | -- | -- |
| pH | standard units | -- | -- | -- | 6.5 | 8.5 |

- b. **Acute Toxicity.** There shall be no acute toxicity in the effluent discharged to Hensley Creek. 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 bioassays³: at least 90 percent survival.

2. Interim Effluent Limitations – Not Applicable

¹ The discharge season is defined as the period between October 1 and May 14.
² Debris is defined in Attachment A.
³ 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.

B. Land Discharge Specifications – Not Applicable

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, a receiving water condition not in conformance with the limitation is 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.

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. Additionally, the discharge shall not cause the dissolved oxygen content of the receiving water to fall below 10.0 mg/L more than 50 percent of the time, or below 7.5 mg/L more than 10 percent of the time in a calendar year. In the event that the receiving waters are determined to have a dissolved oxygen concentration of less than 7.0 mg/L, the discharge shall not depress the dissolved oxygen concentration below the existing level.
2. The discharge shall not cause the pH of receiving waters to be depressed below 6.5 nor raised above 8.5. Within this range, the discharge shall not cause the pH of the receiving waters to be changed at any time more than 0.5 units from that which occurs naturally.
3. The discharge shall not cause 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 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 receiving waters to contain concentrations of biostimulatory substances that promote objectionable aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses. Compliance with water quality-based effluent limitations for total phosphorus established in sections IV.A.2.d and IV.A.3 and total nitrogen in section IV.A.2.e of this Order will satisfy this requirement.
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 concentrations of pesticides in excess of the limiting concentrations set forth 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 CCR.
14. 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.
15. 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.
16. The discharge shall not cause concentrations of chemical constituents to occur in excess of limits specified in Table 3-2 of the Basin Plan or in excess of more stringent MCLs established for these pollutants in title 22, division 4, chapter 15, articles 4 and 5.5 of the CCR.
17. 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 shall not cause 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 (e.g., title 27) and reasonable best management practices (BMPs), will not violate groundwater quality objectives or cause impacts to beneficial uses of groundwater.
2. The collection, treatment, storage, and disposal of treated wastewater shall not cause alterations of groundwater that result in chemical concentrations in groundwater in excess of limits specified in title 22, division 4, chapter 15, article 4, sections 64431 (Tables 2 and 3) and 64444, and the Basin Plan.
3. The collection, treatment, storage and disposal of the treated wastewater shall not cause levels of radionuclides in groundwater in excess of the limits specified in title 22, division 4, chapter 15, article 5, section 64443 of the CCR.

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.
2. **Regional Water Board Standard Provisions.** The Permittee shall comply with the following provisions. In the event that 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.
 - b. 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, reclamation specification, other specification, or 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, or equivalent release that results in a discharge to a drainage channel or a surface water, the Permittee shall notify Regional Water Board staff within 24 hours of having knowledge of such noncompliance. Spill notification and reporting shall be conducted in accordance with section V.E. of Attachment D and X.E. of the Monitoring and Reporting Program.
 - c. As soon as possible, but no later than twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water, the Permittee shall submit to the Regional Water Board a written certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over the affected water body have been notified of the discharge. Written documentation of the circumstances of the spill event shall be submitted to the Regional Water Board within five (5) days, unless the Regional Water Board waives the confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and to prevent recurrence, including, where applicable, a schedule of implementation. Other types of noncompliance require written notification, as described above, at the time of the normal monitoring report.
 - d. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Permittee must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Water Code § 1211).

B. Monitoring and Reporting Program (MRP) Requirements

The Permittee shall comply with the MRP, and future revisions thereto, in Attachment E.

C. Special Provisions

1. Reopener Provisions

- a. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.
- b. **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.
- c. **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.
- d. **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.
- e. **303(d)-Listed Pollutants.** The Regional Water Board plans to develop and adopt total maximum daily loads (TMDLs) for nitrogen, phosphorus, dissolved oxygen, sediment, and temperature that will specify wasteload allocations (WLAs) for point sources and load allocations (LA) for non-point sources, as appropriate. Following the adoption of these TMDLs by the Regional Water Board, this Order will be reopened and modified to include final QBELs based on applicable WLAs.
- f. **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, with the exception of copper, for which a site-specific WER of 3.42 has been used, as further described in section IV.C.3.b of the Fact Sheet. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when developing effluent limitations for copper. If the Permittee performs studies on additional parameters other than copper to determine site-specific WERs and/or site-specific dissolved-to-total metal translators and submits a report that demonstrates that WER or translator studies were performed in accordance with USEPA or other approved guidance, this Order may be reopened to modify the effluent limitations for the applicable constituents.
- g. **Salt and Nutrient Management Plans (SNMPs).** The Recycled Water Policy adopted by the State Water Board on February 3, 2009, and effective May 14, 2009, recognizes the fact that some groundwater basins in the state contain salts and nutrients that exceed or threaten to exceed water quality objectives in the applicable Basin Plans, and that not all Basin Plans include adequate implementation procedures for achieving or ensuring compliance with the water quality objectives for salt or nutrients. The

Recycled Water Policy finds that the appropriate way to address salt and nutrient issues is through the development of regional or subregional SNMPs rather than through imposing requirements solely on individual recycled water projects. This Order may be reopened to incorporate provisions consistent with any SNMP(s) adopted by the Regional Water Board.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Reduction Requirements -

- i. **Whole Effluent Toxicity.** For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Permittee to conduct acute and chronic whole effluent toxicity (WET) testing, as specified in MRP section V. Furthermore, this Provision requires the Permittee to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the numeric toxicity monitoring trigger during accelerated monitoring established in this Provision, the Permittee is required to initiate a Toxicity Reduction Evaluation (TRE) in accordance with an approved TRE Work Plan, and take actions to mitigate the impact of the discharge and prevent recurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes requirements for the Permittee to develop and submit a TRE Work Plan and includes procedures for accelerated chronic toxicity monitoring and TRE initiation.
- ii. **TRE Work Plan.** Within 90 days of the effective date of this Order, the Permittee shall submit to the Regional Water Board a TRE Work Plan for approval by the Executive Officer. The TRE Work Plan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Work Plan must be developed in accordance with U.S. EPA guidance and be of adequate detail to allow the Permittee to immediately initiate a TRE as required in this Provision.
- iii. **Accelerated Monitoring and TRE Initiation.** When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Permittee shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. The Permittee shall initiate a TRE to address effluent toxicity if any WET testing results exceed the numeric toxicity monitoring trigger during accelerated monitoring.
- iv. **Numeric Toxicity Monitoring Trigger.** The numeric toxicity monitoring trigger to initiate a TRE is 1.0 TU_c (where TU_c = 100/NOEC) as a monthly median of the results of any accelerated toxicity testing. The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Permittee is required to begin accelerated monitoring and initiate a TRE.
- v. **Accelerated Monitoring Specifications.** If the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity testing, the Permittee shall initiate accelerated monitoring within 14-days of notification by the laboratory of the exceedance. Accelerated monitoring shall consist of four chronic toxicity tests conducted once every two weeks using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:

- (a) If the results of four consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Permittee may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity, the Executive Officer may require that the Permittee initiate a TRE.
- (b) If the source(s) of the toxicity is easily identified (e.g., temporary plant upset), the Permittee shall make necessary corrections to the facility and shall continue accelerated monitoring until four consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Permittee may cease accelerated monitoring and resume regular chronic toxicity monitoring.
- (c) If the result of any accelerated toxicity test exceeds the monitoring trigger, the Permittee shall cease accelerated monitoring and begin a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of any test result exceeding the monitoring trigger during accelerated monitoring, the Permittee shall submit a TRE Action Plan to the Regional Water Board including, at minimum:
 - (i) Specific actions the Permittee will take to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;
 - (ii) Specific actions the Permittee will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
 - (iii) A schedule for these actions.

b. Discharge Flow Rate Study

The Permittee shall perform a special study to assure compliance with the Basin Plan's requirement, as described by Section III.H., that discharges to the Russian River and its tributaries receive a minimum dilution of 100 to 1 (receiving water to effluent) at all times during the period when discharges are permitted (October 1 to May 14), as follows:

- i. By July 1, 2014, submit for Executive Officer approval, a workplan for a hydraulic study to determine the ratio of wastewater discharge to receiving water flow at the discharge point in order to ensure compliance with the Basin Plan discharge rate restrictions. The workplan shall include the installation of a continuous instream flow measuring device that will remain in place for future flow monitoring. The workplan proposal shall contain milestones and a time schedule for completion of the study. The study time schedule shall be as short as practicable, and in no case, extend beyond 3 years following the effective date of this Order. The study time schedule shall include provision for the submittal of semi-annual progress reports, and
- ii. By July 1, 2015, submit for Executive Officer approval a report describing the findings and conclusions of the hydraulic study determining the ratio of wastewater discharge to receiving water flow, and
- iii. If the hydraulic study demonstrates that wastewater discharges exceed a dilution ratio of 100:1, by September 1, 2015, the Permittee shall submit a written proposal for Executive Officer approval to study alternatives to comply with the Basin Plan

discharge restrictions. The study plan shall be as short as practicable and contain milestones and a time schedule for selection and implementation of alternative methods. The implementation time schedule shall be as short as practicable and implementation shall be completed no longer than five (5) years from the effective date of this Order,

c. Groundwater Impact Study

The Permittee shall study the impacts to groundwaters from onsite discharges of waste to land, including from the boiler operations, the domestic wastewater systems, and the log deck sprinkling recirculation pond to assure compliance with the Anti-Degradation Policy and Water Quality Objectives for Groundwaters contained in the Basin Plan. The Permittee shall develop and submit a plan for conducting the study by **July 1, 2014**, subject to concurrence by the Regional Water Board Executive Officer. The study shall be performed by **July 1, 2015** and the results of the study shall be submitted to the Regional Water Board by **October 1, 2015**.

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program (PMP)

- i. 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:
 - (a) A sample result is reported as DNQ and the effluent limitation is less than the RL; or
 - (b) 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.
- ii. The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:
 - (a) 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;
 - (b) Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;
 - (c) 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;
 - (d) Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and
 - (e) 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:

- (i) All PMP monitoring results for the previous year;
- (ii) A list of potential sources of the reportable priority pollutant(s);
- (iii) A summary of all actions undertaken pursuant to the control strategy;
and
- (iv) A description of actions to be taken in the following year.

b. Debris and Sediment Control Best Management Practices (BMPs)

- 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 July 1, 2014, the Permittee shall submit a list of updated BMPs and a recommended monitoring program to the Executive Officer for concurrence. 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. This Order (Attachment D, Standard Provision I.D) requires that the Permittee, 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.
- 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

pipng failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.

c. Pond Operating Requirements.

- i. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.
- ii. Ponds 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) – Not Applicable

6. Other Special Provisions

- a. **Storm Water.** For the control of storm water discharge from the site of the wastewater treatment Facility, the Permittee shall seek separate authorization to discharge under the requirements of the State Water Board’s Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (or subsequent renewed versions of the NPDES General Permit CAS000001), which is not incorporated by reference in this Order.
- b. **Solids Disposal and Handling Requirements.**
 - i. Collected screenings, sludges, and other 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). 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.
 - ii. The storage of pond sediments shall be done in a manner to prevent nuisance, pollution or impairment of beneficial uses of Hensley Creek.
 - iii. Any proposed change in pond sediment or sludge disposal or storage practices shall be reported to the Executive Officer at least 90 days in advance of the change.

7. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

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

A. General

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the 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 average monthly effluent limitation 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. Average Weekly Effluent Limitation (AWEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar week exceeds the AWEL for a given parameter, this will represent a single violation, though the Permittee will be considered out of compliance

for each day of that week for that parameter, resulting in 7 days of non-compliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Permittee will be considered out of compliance for that calendar week. The Permittee will only be considered out of compliance for days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

E. 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.

F. 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).

If the Permittee monitors pH continuously, pursuant to 40 CFR 401.17, the Permittee shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (1) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes.

G. 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).

If the Permittee monitors pH continuously, pursuant to 40 CFR 401.17, the Permittee shall be in compliance with the pH limitation specified herein provided that both of the following conditions are satisfied: (1) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (2) no individual excursion from the range of pH values shall exceed 60 minutes.

H. Bacteriological Limitations (Total Coliform)

1. Median. The median is the central tendency concentration of the pollutant. The data set shall be ranked from low to high, ranking the ND concentrations lowest, DNQ determinations next, followed by quantified values. The order of the individual ND and DNQ determinations is not important. The median value is determined based on the number of data points in the set. 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, the median is the average of the two middle values, unless one or both points are ND or DNQ, in which case the median value shall be the lower of the two middle data points. DNQ is lower than a detected value, and ND is lower than DNQ.

2. Compliance with the 7-day median will be determined as a rolling median during periods when sampling occurs more frequently than weekly. During periods when sampling is weekly, this requirement shall apply to each weekly sample.

I. Acute Toxicity Limitations.

Compliance with the three-sample median acute toxicity effluent limitation shall be determined when there is a discharge, by calculating the median percent survival of the three most recent consecutive samples meeting all test acceptability criteria collected from Monitoring Location EFF-002.

J. Chronic Toxicity Triggers

1. When a single chronic toxicity test result is available in a monthly monitoring period, the need for accelerated monitoring will be determined by comparing the single result to the monthly median chronic toxicity trigger of 1.0 TUc.
2. If two or more chronic toxicity test results are available in a monthly monitoring period, the need for accelerated monitoring will be determined by calculating the median of the test results and comparing the calculated median to the monthly median chronic toxicity trigger of 1.0 TUc, and the individual sample results will be compared to the single sample chronic toxicity trigger of 1.6 TUc. If the first monthly chronic toxicity result is greater than 1.6 TUc, a minimum of three chronic toxicity test results would be needed to determine the need for accelerated monitoring based on the monthly median chronic toxicity trigger of 1.0 TUc.

K. Mean Daily Dry Weather Flow

Compliance with the mean daily dry weather flow prohibition in section III.H of this Order will be determined by evaluating all flow data collected in a calendar year. The lowest 30 day period of flow must be 1.9 MGD or less (prior to adding storage and reclamation capacity to handle higher), or a higher ADWF up to 2.25 MGD upon concurrence by the Regional Water Board Executive Officer that the Permittee has storage and reclamation capacity to handle the full average dry weather design capacity.

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.

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.

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-Kärber. 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).

Lowest Observed Effect Concentration (LOEC): the lowest concentration of an effluent or toxicant that results in adverse effects on the test organism (i.e., where the values for the observed endpoints are statistically different from the control).

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.

No Observed Effect Concentration (NOEC): the highest tested concentration of an effluent or a test sample at which the effect is no different from the control effect, according to the statistical test used (see LOEC). The NOEC is usually the highest tested concentration of an effluent or toxicant that causes no observable effects on the aquatic test organisms (i.e., the highest concentration of toxicity at which the values for the observed responses do not statistically differ from the controls). It is determined using hypothesis testing.

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

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.

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:

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

where:

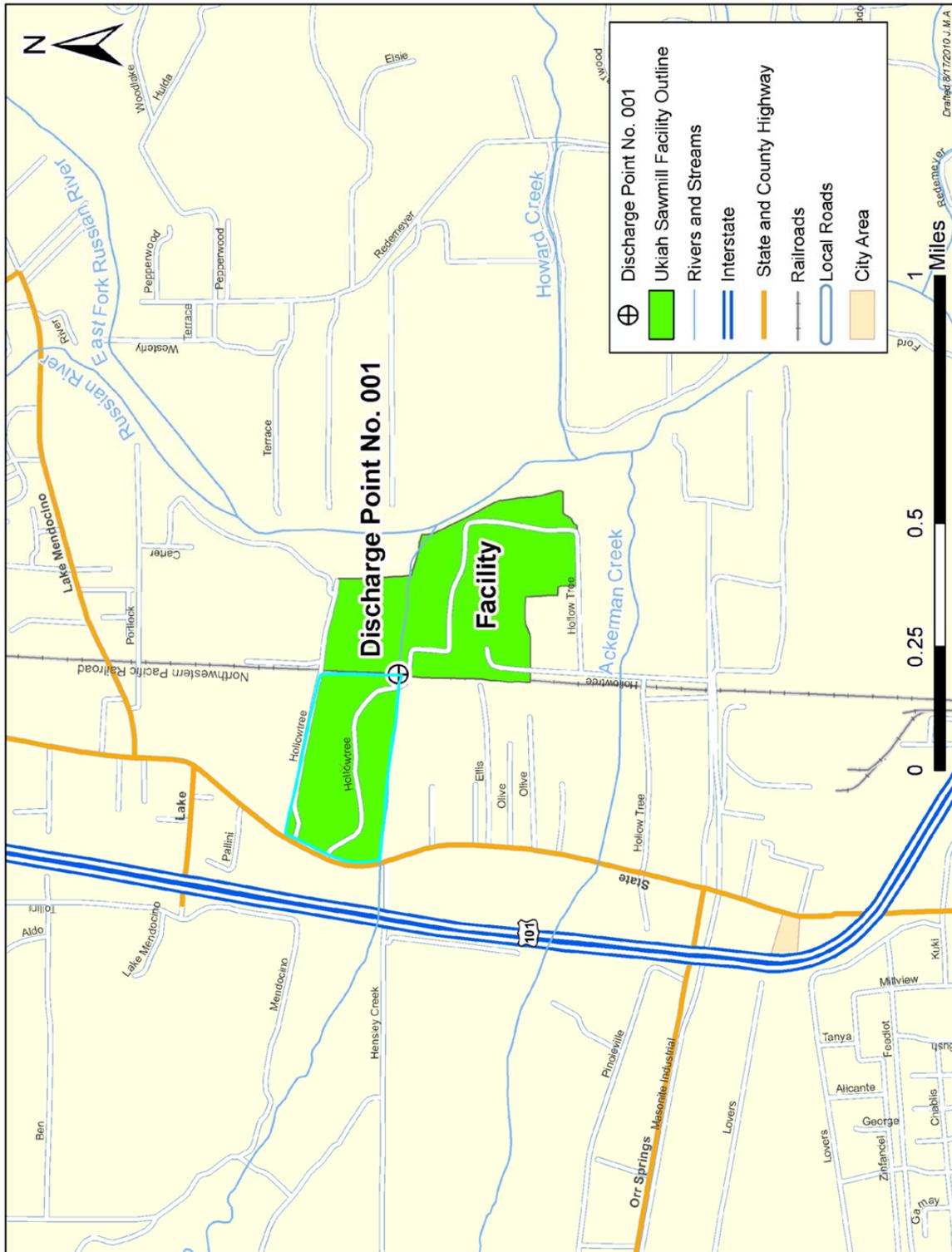
x is the observed value;

μ is the arithmetic mean of the observed values; and

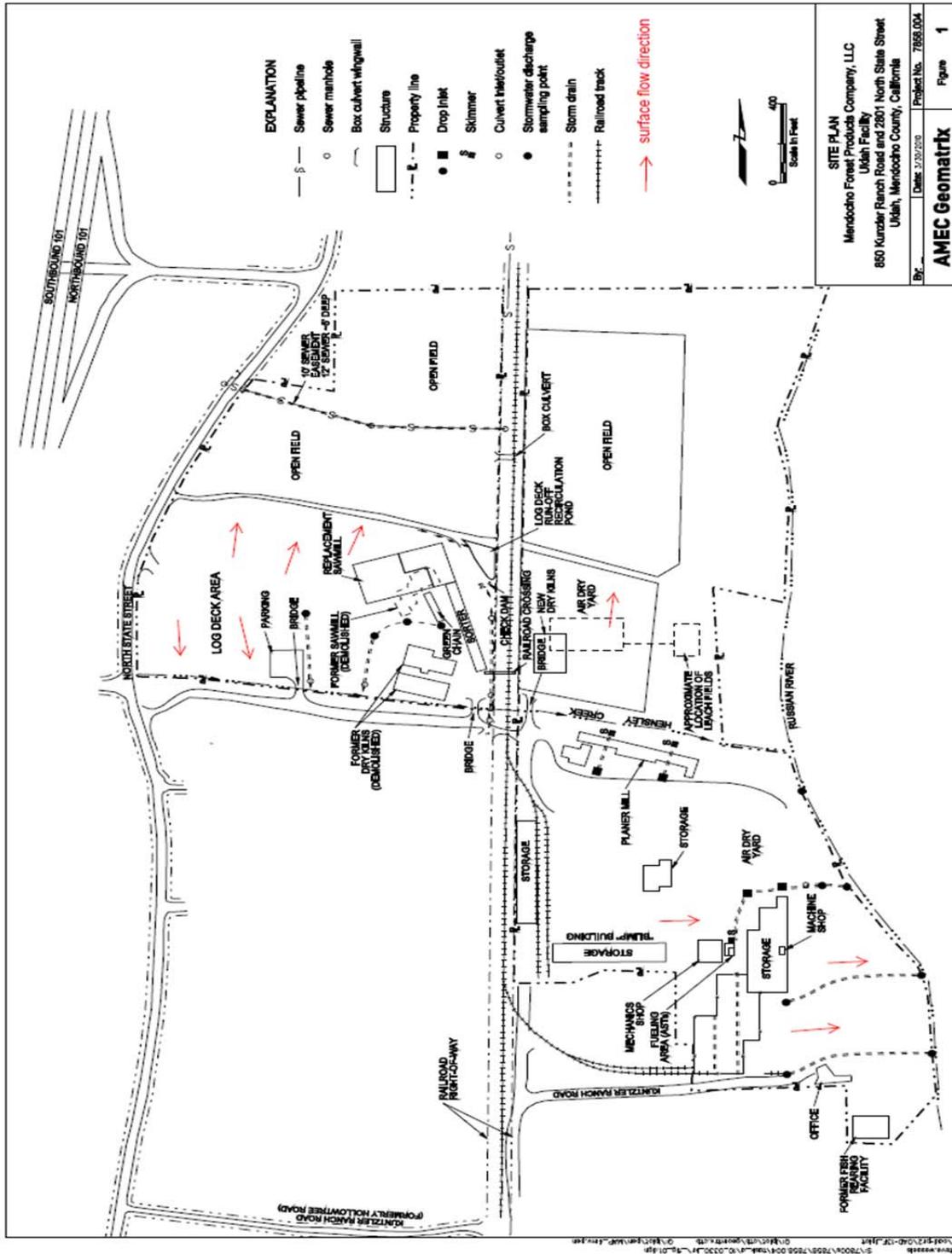
n is the number of samples.

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



ATTACHMENT C - FLOW SCHEMATIC



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 C.F.R. § 122.41(a).)
2. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a 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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(e).)

E. Property Rights

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

F. Inspection and Entry

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

1. Enter upon the 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 C.F.R. § 122.41(i)(1));

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

G. Bypass

1. Definitions

- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
 - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The 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 C.F.R. § 122.41(m)(2).)
 3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Permittee for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
 - c. The Permittee submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
 4. **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 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the 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 C.F.R. § 122.41(n)(1).)

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

If the 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 C.F.R. § 122.41(b).)

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

- A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)
- B.** Monitoring results must be conducted according to test procedures under 40 C.F.R. part 136 or, in the case of sludge use or disposal, approved under 40 C.F.R. part 136 unless otherwise specified in 40 C.F.R. part 503 unless other test procedures have been specified in this Order. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

- A.** Except for records of monitoring information required by this Order related to the 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 40 C.F.R. 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 C.F.R. § 122.41(j)(2).)
- B.** Records of monitoring information shall include:
 - 1.** The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
 - 2.** The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
 - 3.** The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
 - 4.** The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
 - 5.** The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
 - 6.** The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)
- C.** Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):
 - 1.** The name and address of any permit applicant or Permittee (40 C.F.R. § 122.7(b)(1)); and
 - 2.** Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Permittee shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Regional Water Board, State Water Board, or U.S. EPA 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 U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)
2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and
 - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

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

C. Monitoring Reports

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The 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 C.F.R. § 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)
 - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

The 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 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 C.F.R. § 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 C.F.R. § 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 this Order's requirements. (40 C.F.R. § 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 C.F.R. § 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 U.S. EPA, the Permittee shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Permittees shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 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 C.F.R. § 122.42(a)(1)):
 - a. 100 micrograms per liter ($\mu\text{g}/\text{L}$) (40 C.F.R. § 122.42(a)(1)(i));
 - b. 200 $\mu\text{g}/\text{L}$ for acrolein and acrylonitrile; 500 $\mu\text{g}/\text{L}$ for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));
 - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or
 - d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 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 C.F.R. § 122.42(a)(2)):
- a.** 500 micrograms per liter ($\mu\text{g/L}$) (40 C.F.R. § 122.42(a)(2)(i));
 - b.** 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));
 - c.** Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or
 - d.** The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (40 C.F.R. § 122.48) requires that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement federal and California regulations.

I. GENERAL MONITORING PROVISIONS

- A. Wastewater Monitoring Provision.** Composite samples may be taken by a proportional sampling device approved by the Executive Officer or by grab samples composited in proportion to flow. In compositing grab samples, the sampling interval shall not exceed 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 discharge monitoring reports.
- C.** Laboratories analyzing monitoring samples shall be certified by the Department of Public Health (DPH), in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports.
- D.** All monitoring instruments and devices used by the Permittee to fulfill the prescribed monitoring program shall be properly installed, calibrated, operated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. All flow measurement and UV transmittance devices shall be calibrated no less than the manufacturer’s recommended intervals or one year intervals, (whichever comes first) to ensure continued accuracy of the devices.
- E.** 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 ML value is below the effluent limitations, the lowest ML shall be selected as the RL.

Table E-1. Test Methods and Minimum Levels for Priority Pollutants

| CTR | Constituent Types of Analytical Methods Minimum Levels (µg/L) | Types of Analytical Methods Minimum Levels (µg/L) | | | | |
|-----|---|--|---|--------------|--|--|
| | | Gas Chromatography (GC) | Gas Chromatography/Mass Spectroscopy (GCMS) | Colorimetric | Inductively Coupled Plasma/Mass Spectroscopy (ICPMS) | Stabilized Platform Graphite Furnace Atomic Absorption |
| 13 | Zinc | --- | --- | --- | 1 | --- |

- F.** The Permittee shall develop, maintain and adhere to a standard operating procedure that follows the appropriate Standard Method for any sampling analysis performed by the Permittee for compliance with this order or MRP. Common examples of such analyses include flow, pH, chlorine residual and dissolved oxygen because the holding times for these analyses are sufficiently short that Permittees often perform the analyses on-site or in the field. Any standard operating procedure kept for such analyses shall include, at a minimum:
 1. Instrument calibration protocols and a log of such calibrations; and
 2. Staff training procedures and a log of such trainings; and

3. A procedure for taking multiple readings of the same sample for data quality assurance.

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 |
|----------------------|--------------------------|--|
| 001 | EFF-001 | Process wastewater from the log deck sprinkler recirculation pond prior to discharge to Hensley Creek. Latitude: 39.18506 Longitude: -123.20425 |
| -- | RSW-001 | Upstream receiving water monitoring location that is not affected by the discharge, accessible to sampling personnel, and approved by the Executive Officer. Latitude: 39.18505° Longitude: -123.20450° |
| -- | RSW-002 | Downstream receiving water monitoring location at the end of the pipe where the discharge reaches receiving waters. Latitude: 39.18505° Longitude: -123.20408° |
| 002 | LND-001 | Boiler blowdown wastewater discharge to groundwater. Latitude: 39.18642 Longitude: -123.20190 |
| 003 | LND-002 | Wet decking process wastewater discharge to groundwater from the recirculation pond. Latitude: 39.18731 Longitude: -123.20470 |

The North latitude and West longitude information in Table E-2 are approximate for administrative purposes.

III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Permittee shall monitor process wastewater from the log deck sprinkler recirculation pond at monitoring location EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Permittee must select from the listed methods and corresponding Minimum Level:

Table E-3. Effluent Monitoring

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method and (Minimum Level, units), respectively ¹ |
|--|------------------|-------------|----------------------------|---|
| Flow | cfs | Continuous | Daily | Meter |
| Dissolved Oxygen | mg/L | Grab | Monthly | Standard Methods |
| pH | standard units | Grab | Monthly | Standard Methods |
| Temperature | oF or °C | Grab | Monthly | Standard Methods |
| Turbidity | NTU | Grab | Monthly | Standard Methods |
| Color | Color Units | Grab | Monthly | Standard Methods |
| Total Suspended Solids | mg/L | Grab | Monthly | Standard Methods |
| Settleable Solids | ml/L | Grab | Monthly | Standard Methods |
| Chemical Oxygen Demand | mg/L | Grab | Monthly | Standard Methods |
| Debris | N/A | Visual | Monthly | N/A |
| Hardness, Total (as CaCO ₃) ³ | mg/L | Grab | Monthly | Standard Methods |
| Zinc, Total Recoverable ^{2,3} | µg/L | Grab | Monthly | Standard Methods |
| Lead, Total Recoverable ^{2,3} | µg/L | Grab | Monthly | Standard Methods |
| Nickel, Total Recoverable ^{2,3} | µg/L | Grab | Monthly | Standard Methods |
| Arsenic, Total Recoverable | µg/L | Grab | Monthly | Standard Methods |
| Acute Toxicity ⁴ | % Survival | Grab | Monthly | See Section V.A below |
| Chronic Toxicity ⁴ | TUc | Grab | Twice Annually | See Section V.B below |
| | Passed/Triggered | | | -- |
| All CTR Pollutants ⁵ | µg/L | Grab | 1x/5 years ⁶ | Standard Methods |
| Detected CTR Pollutants ⁷ | µg/L | Grab | Annually | Standard Methods |

1. In accordance with the current edition of the Standard Methods for Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in 40 CFR Part 136.
2. Analytical methods shall achieve the lowest minimum level (ML) as shown in Table E-1, above, and as specified in Appendix 4 of the SIP; and in accordance with Section 2.4.1 of the SIP the Permittee shall report the Reporting Level (RL) and the Method Detection Limit (MDL) with each sample result.
3. Monitoring of the effluent for hardness, and hardness dependent metals (copper, cadmium, chromium, zinc, nickel, lead, and silver) shall be conducted concurrently with upstream receiving water water monitoring for hardness.
4. Whole effluent acute and chronic toxicity shall be monitored in accordance with the requirements of section V of this Monitoring and Reporting Program.
5. CTR pollutants are those pollutants identified in the California Toxics Rule at 40 CFR 131.38.
6. The samples tested for the full set of CTR pollutants shall commence during the first discharge event after the 2014 dry season.
7. Detected CTR pollutants are those CTR Pollutants that have been previously detected in the effluent or in the recirculation pond including Antimony, Arsenic, Chromium, Mercury, Nickel, Aluminum.

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 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 with an invertebrate, the water flea (*Ceriodaphnia dubia*) and a vertebrate, the rainbow trout (*Oncorhynchus mykiss*).
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 14 days after receipt of test results exceeding the acute toxicity effluent limitation during regular or accelerated monitoring. The notification shall 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* (USEPA Report No. EPA-821-R-02-012, 5th edition or subsequent editions). The submitted report shall clearly identify test results and the Permittee's status with regard to compliance with effluent limitations and other permit requirements.
10. **Ammonia Toxicity.** The acute toxicity test shall be conducted without modifications to eliminate ammonia toxicity.

B. Chronic Toxicity Testing

The 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 chronic WET testing in accordance with the schedule established by this MRP while discharging at Discharge Point 001, as summarized in Table E-2, above.
- 2. Sample Type.** Effluent samples for chronic toxicity testing shall be grab samples collected at EFF-001. 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 Test Method 1000.0), an invertebrate, the water flea, *Ceriodaphnia dubia* (survival and reproduction Test Method 1002.01), and a plant, the green algae, *Selanastrum capricornutum* (also named *Raphidocelis subcapitata*) (growth Test Method 1003.0).
- 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. Effluent dilution and control water may be receiving water or standard synthetic laboratory water as described in the USEPA test methods manual. Where toxicity or biostimulatory issues are not a concern in the receiving water, receiving water is preferred for control and dilution water. 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 monitoring 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 four 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 any accelerated toxicity testing exceed 1.0 TUC as a monthly median, the Permittee shall cease accelerated monitoring, and within 30 days of the date of completion of the accelerated monitoring, initiate the TRE Workplan developed in accordance with section VI.C.2.a.ii of the Order to investigate the cause(s) and identify actions to reduce or eliminate the chronic toxicity. Within 30 days of completing the TRE Workplan implementation, the Permittee shall submit a report to the Regional Water Board that shall include, at a minimum:
 - i.** Specific actions the Permittee took to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;
 - ii.** Specific actions the Permittee took to mitigate the impact of the discharge and prevent the recurrence of toxicity;
 - iii.** Recommendations for further actions to mitigate continued toxicity, if needed; and
 - iv.** A schedule for implementation of recommended actions.
- b.** If the results of four consecutive accelerated monitoring tests do not exceed the chronic toxicity trigger of 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.
- c.** 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 may cease accelerated monitoring and resume regular chronic toxicity monitoring.

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. Routine reporting shall include the following in order to demonstrate compliance with permit requirements:
 - 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 the 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 (\pm 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. Compliance Summary. In addition to the WET report, the Permittee shall submit a compliance summary that includes an updated chronology of chronic toxicity test results expressed in NOEC and TUC for tests conducted during the permit term, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency (routine, accelerated, or TRE). Each compliance summary report shall clearly identify whether or not the effluent discharge is below the chronic toxicity monitoring triggers and, in the event that the effluent discharge exceeds a single sample or median chronic toxicity trigger, the status of efforts (e.g., accelerated monitoring, TRE, TIE, etc.) to identify the source of chronic toxicity as required by section V.B.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* (USEPA Report No. EPA-821-R-02-013, 2002, or subsequent editions), within 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 – NOT APPLICABLE

Monitoring requirement may be established for land discharges in future permits based on the results of the Groundwater Impact Special Study required by this Order.

VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Surface Water Monitoring Location RSW-001

1. The Permittee shall monitor upstream conditions in Hensley Creek at Monitoring Location RSW-001 concurrently with the effluent sampling as follows:

Table E-4a. Receiving Water Monitoring at RSW-001

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method ¹ |
|--|----------------|-------------|----------------------------|--|
| Dissolved Oxygen | mg/L | Grab | Monthly | Standard Methods |
| 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 |
| Zinc, Total Recoverable | µg/L | Grab | Monthly | Standard Methods |
| Lead, Total Recoverable | µg/L | Grab | Monthly | Standard Methods |
| Nickel, Total Recoverable | µg/L | Grab | Monthly | Standard Methods |
| Arsenic, Total Recoverable | µg/L | Grab | Monthly | Standard Methods |
| Mercury, Total Recoverable | µg/L | Grab | Monthly | Standard Methods |
| Hardness, Total (as CaCO ₃) ³ | mg/L | Grab | Monthly | Standard Methods |
| All CTR Pollutants ^{4,5} | µg/L | Grab | 1x/5 years ⁸ | Standard Methods |
| Detected CTR Pollutants ^{4,6} | µg/L | Grab | Annually | Standard Methods |

1. In accordance with the current edition of the Standard Methods for Examination of Water and Wastewater (American Public Health Administration) or current test procedures specified in 40 CFR Part 136.
 2. Analytical methods shall achieve the lowest minimum level (ML) specified in Appendix 4 of the SIP) as shown in Table E-1, above; and in accordance with Section 2.4.1 of the SIP, the Permittee shall report the Reporting Level (RL) and the Method Detection Limit (MDL) with each sample result.
 3. Monitoring of the effluent for hardness, and hardness dependent metals (copper, cadmium, chromium, zinc, nickel, lead, and silver) shall be conducted concurrently with upstream receiving water water monitoring for hardness.
 4. CTR pollutants are those pollutants identified in the California Toxics Rule at 40 CFR 131.38.
 5. The samples tested for the full set of CTR pollutants shall commence during the first discharge event after the 2014 dry season.
 6. Detected CTR pollutants are those CTR Pollutants that have been previously detected in the effluent or in the recirculation pond including Antimony, Arsenic, Chromium, Mercury, Nickel, Aluminum.

B. Monitoring Location RSW-002

1. The Permittee shall monitor downstream conditions in Hensley Creek at Monitoring Location RSW-002 concurrently with the effluent sampling as follows:

Table E-4b. Receiving Water Monitoring at RSW-002

| Parameter | Units | Sample Type | Minimum Sampling Frequency | Required Analytical Test Method |
|------------------------|----------------|-------------|----------------------------|---------------------------------|
| Chemical Oxygen Demand | mg/L | Grab | Monthly | Standard Methods |
| Dissolved Oxygen | mg/L | Grab | Monthly | Standard Methods |
| 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 |

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 electronically submit SMRs 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 information for SMR submittal in the event there will be a planned service interruption for electronic submittal.
2. 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.
3. 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 U.S. EPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Permittee monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
4. All monitoring results reported shall be supported by the inclusion of the complete analytical report from the laboratory that conducted the analyses.
5. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-5. Monitoring Periods and Reporting Schedule

| Sampling Frequency | Monitoring Period Begins On... | Monitoring Period | SMR Due Date |
|--------------------|--------------------------------|---|-------------------------|
| Continuous | May 1, 2014 | All | Submit with monthly SMR |
| Hourly | May 1, 2014 | Hourly | Submit with monthly SMR |
| Daily | May 1, 2014 | (Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling. | Submit with monthly SMR |
| Weekly | May 4, 2014 | Sunday through Saturday | Submit with monthly SMR |
| Monthly | May 1, 2014 | 1 st day of calendar month | Submit with monthly |

| Sampling Frequency | Monitoring Period Begins On... | Monitoring Period | SMR Due Date |
|--------------------|--|---|-------------------------|
| | | through last day of calendar month | SMR |
| Quarterly | July 1, 2014 | January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31 | Submit with monthly SMR |
| Semiannually | July 1, 2014 | January 1 through June 30 July 1 through December 31 | Submit with monthly SMR |
| Annually | May 1, 2014 | January 1 through December 31 | Submit with monthly SMR |
| 1x / 5 years | First discharge to Hensley Creek after May 1, 2014 | All | Submit with monthly SMR |

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

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

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

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

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
 - d. 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.
- 7. Compliance Determination.** Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A. For purposes of reporting and administrative enforcement by the Regional Water Board and State Water Board, 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).

- 8. Multiple Sample Data.** When determining compliance with an AMEL or MDEL 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:

 - a.** 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.
 - b.** 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.
- 9. 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. The Permittee’s reports shall clearly identify the Discharge or Distribution Points that were utilized during the monitoring period. During periods when there is no discharge to one more Discharge or Distribution Points, the reports shall certify “No 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, including a description of any requirement not complied with and a description of the event, and the reason for 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 Permittee 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

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. The Permittee shall report the progress in satisfaction of compliance schedule dates specified in Special Provisions – VI.C.7. The Permittee shall submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date in compliance with SMR reporting requirements described in subsection X.B above.
2. The Permittee shall report progress in satisfaction of compliance schedule dates, if any, specified in Special Provision – VI.C.7 of this Order. Progress reports shall be submitted on, or before each compliance due date and shall identify compliance or noncompliance with the specific date and task. If noncompliance is reported, the Permittee shall state the reasons for noncompliance and include an estimate of the date when the Permittee will be in compliance. The Permittee shall notify the Regional Water Board by letter when it returns to compliance with the compliance time schedule.
3. **Annual Report.** The Permittee shall submit an annual report to the Regional Water Board for each calendar year through the CIWQS Program web site. In the event that a paper copy of the annual report is required, the Permittee shall submit the report to the address in section X.B.6.c., above. The report shall be submitted by March 1 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 40 CFR, 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.
 - c. The names and telephone numbers of persons to contact regarding the wastewater treatment Facility for emergency and routine situations.
 - d. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.
 - e. A statement certifying whether the current operation and management manual and spill contingency plan, reflect the wastewater treatment Facility as currently constructed and operated, and the dates when these documents were last reviewed and last revised for adequacy.

E. Spill Notification

1. **Spills and Unauthorized Discharges.** Information regarding all spills and unauthorized discharges (except SSOs and recycled water) that may endanger health or the environment

shall be provided orally to the Regional Water Board¹ within 24 hours from the time the Permittee becomes aware of the circumstances and a written report shall also be submitted within five (5) days of the time the Permittee becomes aware of the circumstances, in accordance with Section V.E. of Attachment D.

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

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

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¹ The contact number of the Regional Water Board during normal business hours is (707) 576-2220. After normal business hours, spill reporting to CalEMA will satisfy the 24 hour spill reporting requirement for the Regional Water Board. The contact number for spill reporting for the CalEMA is (800) 852-7550.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section I, 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 facility.

Table F-1. Facility Information

| | |
|---|---|
| WDID | 1B800510MEN |
| Permittee | Mendocino Forest Products Company, LLC |
| Name of Facility | Ukiah Sawmill Complex |
| Facility Address | 850 Kunzler Ranch Road |
| | Ukiah, CA 95482 |
| | Mendocino County |
| Facility Contact, Title and Phone | Rodger Ferguson, Environmental Manager, (707) 468-1712 |
| Authorized Person to Sign and Submit Reports | Dean Kerstetter, Vice-President |
| Mailing Address | P.O. Box 120, 850 Kunzler Ranch Road, Ukiah, CA 95482 |
| Billing Address | P.O. Box 390, Capella, CA 95418 |
| Type of Facility | Sawmill (SIC code 2421) |
| Major or Minor Facility | Minor |
| Threat to Water Quality | 2 |
| Complexity | B |
| Pretreatment Program | Not applicable |
| Recycling Requirements | Not applicable |
| Facility Permitted Flow | 0.022 million gallons per day (MGD) |
| Facility Design Flow | 0.022 MGD |
| Watershed | Russian River Hydrologic Unit, Ukiah Hydrologic Subarea |
| Receiving Water | Hensley Creek, tributary to the Russian River |
| Receiving Water Type | Inland surface water and groundwater |

- A. The Mendocino Forest Products Company, LLC (hereinafter Permittee) is the owner and operator of the Ukiah Sawmill Complex (hereinafter Facility), which has industrial process water discharges to surface waters and groundwater. 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. The Facility discharges process water to Hensley Creek, a water of the United States, and is currently regulated by Order No. R1-2002-0086 which was adopted on September 26, 2002. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order.

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

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.

- C. The Permittee filed a Report of Waste Discharge and submitted an application for renewal of its WDRs and NPDES permit on November 13, 2006. Supplemental information was requested on August 10, 2010 and received on August 17, 2010. The permit application was deemed complete on August 17, 2010.

II. FACILITY DESCRIPTION

The Permittee owns and operates a sawmill complex in Ukiah, CA directly adjacent to Hensley Creek. The Facility contains a log yard, sawmill, planer mill, lumber storage, treating facility, flooring facility, and vehicle maintenance shop which support lumber manufacturing, treatment, and storage operations. Storm water runoff from portions of the site, including the log deck, enters the recycle pond and is co-mingled with process flow. Storm water runoff flows co-mingled with process water are described as process water for purposes of this Order. Of the process waters produced at the Facility, log deck sprinkler water is the only process wastewater discharged to Hensley Creek; domestic wastewater and boiler blowdown are discharged to septic tank/leachfield systems onsite.

A. Description of Wastewater and Biosolids Treatment and Controls

Log deck watering operations involve pumping groundwater from onsite wells to a series of sprinklers used to apply moisture to logs. Sprinkler runoff from the log deck is collected and held in a settling pond and periodically recirculated back to the sprinkler system for reuse. During substantial storm events, the pond may overflow and discharge process water to Hensley Creek.

The Facility contains a wood treating system that uses a "spray booth" to apply fungicide to the milled wood. The spray booth is built to capture oversprays and drips; however, propiconazole, a fungicide used at the Facility, has been detected in the process water discharge, suggesting possible overspray or other pollutant transport. The wood is treated and allowed to dry under the roof before being packaged and shipped.

Historically, there were eight drying kilns, each with its own boiler. Many have been taken out of service and only one boiler remains operational. Chemicals are added to the boiler water so that scale does not build up on the pipes. Approximately 300 gallons of boiler blowdown water is discharged to a septic system onsite per day. Domestic wastes from the mill complex discharge to subsurface septic tank/leach field systems. These wastewaters are not discharged to surface waters.

B. Discharge Points and Receiving Waters

1. During large storm events, overflow from the log deck recirculation pond discharges to Hensley Creek, a water of the United States, at 39° 11' 8" N latitude, -123 12' 12" W longitude.
2. Boiler blowdown water is discharged to a septic tank/leachfield system on site just north of the drying kiln and south east of the log deck recirculation pond. The boiler water blowdown occurs continuously at approximately 2-4 gallons per hour and for 15 seconds twice per day during the week and once per day on the weekends. The approximate total volume of boiler blowdown is 300 gallons per day.

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

Effluent limitations contained in Order No. R1-2002-0086 for discharges from Discharge Point No. 001 (Monitoring Location EFF-001) and representative monitoring data from the term of Order No. R1-2002-0086 are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

| Parameter | Units | Effluent Limitations | | Monitoring Data (April 2003 - January 2010) | |
|------------------------|----------------|----------------------|---------------|--|---|
| | | Average Monthly | Maximum Daily | Average Monthly | Maximum Daily |
| Acute Toxicity | % Survival | -- | 1 | -- | 5 ² /50 ³ |
| Woody Material | -- | -- | 4 | -- | -- |
| Turbidity and Sediment | -- | -- | 5 | -- | 1400 ⁶ /0.4 ⁷ /790 ⁸ |
| pH | standard units | -- | 6.5 – 8.5 | -- | 6.0 – 7.4 |

1. 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.
2. Represents minimum observed percent survival.
3. Represents minimum observed median percent survival for three or more consecutive bioassays.
4. 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 possible by the implementation of BMPs approved by the Executive Officer.
5. The discharge shall be reduced the amount of turbidity and sediment to the maximum extent practicable by the implementation of BMPs approved by the Executive Officer.
6. Maximum observed turbidity grab sample value.
7. Maximum observed settleable solids grab sample value.
8. Maximum observed TSS grab sample value.

D. Compliance Summary

Between April 2003 and January 2010, the Permittee reported 10 exceedances of their instantaneous minimum effluent limitation for pH. The Permittee also reported three exceedances of acute toxicity limitation for the minimum percent survival for any one bioassay. Review of the acute toxicity reports indicates that there were two nonreporting violations for 2002 and 2003 and three exceedances of the acute toxicity limitation for the median percent survival for any three or more consecutive bioassays. The chronic toxicity testing indicates consistent chronic toxicity for three different organisms on three different days of discharge. The Regional Water Board has not yet adopted any enforcement actions against the Permittee.

E. Planned Changes

The Permittee is currently developing plans to reroute storm water flows from the recirculation pond to the Permittee’s undeveloped property north of the log deck. This rerouted discharge, if permitted, may eliminate discharges from the Facility to surface waters. There is currently no established timeframe for completion of these planned changes.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the

federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this Facility to surface waters.

B. California Environmental Quality Act (CEQA)

Under 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.

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

- 1. Water Quality Control Plan.** The 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. Requirements in this Order implement the Basin Plan. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. The Basin Plan establishes beneficial uses for groundwater as Municipal and Domestic Supply (MUN), Industrial Service Supply (IND), Industrial Process Supply (PRO), Agricultural Supply (AGR), and Freshwater Replenishment to Surface Waters (FRSH), Aquaculture (AQUA), and Native American Culture (CUL). The Basin Plan also identifies the beneficial uses for the Ukiah Hydrologic Subarea within the Upper Russian River Hydrologic Area, which contains Hensley Creek. Thus, beneficial uses applicable to Hensley Creek and groundwater are as follows:

Table F-3. Basin Plan Beneficial Uses

| Discharge Point | Receiving Water Name | Beneficial Use(s) |
|-----------------|--|---|
| 001 | Hensley Creek, tributary to the Russian River within the Ukiah Hydrologic Subarea of the Russian River Hydrologic Unit | <p><u>Existing:</u></p> <ul style="list-style-type: none"> • Municipal and Domestic Supply (MUN) • Agricultural Supply (AGR) • Industrial Service Supply (IND) • Ground Water Recharge (GWR) • Freshwater Replenishment (FRSH) • Navigation (NAV) • Hydropower Generation (POW) • Water Contact Recreation (REC-1) • Non-Contact Water Recreation (REC-2) • Commercial and Sport Fishing (COMM) • Warm Freshwater Habitat (WARM) • 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) <p><u>Potential:</u></p> <ul style="list-style-type: none"> • Industrial Process Supply (PRO) • Shellfish Harvesting (SHELL) • Aquaculture (AQUA) |
| -- | Groundwater | <p><u>Existing</u></p> <ul style="list-style-type: none"> • Municipal and Domestic Supply (MUN) • Industrial Service Supply (IND) • Industrial Process Supply (PRO) • Agricultural Supply (AGR) • Freshwater Replenishment (FRSH) |

Requirements of this Order implement the Basin Plan.

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 Russian River and its tributaries, including Hensley Creek, 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, except where exceptions have been granted and set forth in NPDES permits for individual dischargers.

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA 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, U.S. EPA 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 U.S. EPA 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 U.S. EPA 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. **Antidegradation Policy.** Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16. Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 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 C.F.R. section 131.12 and State Water Board Resolution 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 C.F.R. 131.12 and State Water Board Resolution No. 68-16.
5. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 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. Effluent limitations contained in this Order are at least as stringent as the previous Order (Order No. R1-2002-0086).
6. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 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, including protecting rare, threatened, or endangered species. The Permittee is responsible for meeting all requirements of the applicable Endangered Species Act.
7. **Monitoring and Reporting Requirements.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.

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

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

wasteload allocations (the portion of a TMDL allocated to existing and future point sources) for point sources and load allocations (the portion of a TMDL attributed to existing and future nonpoint sources) for nonpoint sources.

In June 2007, the USEPA provided final approval of the 303(d) list of impaired water bodies prepared by the State. The list identifies the entire Russian River watershed as impaired by excess sediment and elevated water temperatures. The Regional Water Board expects to adopt TMDLs for sediment and temperature for the Russian River by 2019. Sediment and temperature impairments in the North Coast Region are primarily attributable to nonpoint source discharges associated with certain land use activities. Point source discharges may also contribute to impairments and should be reviewed in that context when a permit is renewed. This Order contains additional requirements to control sediment that constitute early TMDL implementation.

Quantifiable measures of sediment impairing the Russian 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 and accumulative pollutant. The impact of suspended solids and turbidity, by contrast, results from their concentration in the water column.

Analysis of the Permittee's effluent monitoring data during the period of January 2005 through August 2010 indicates that the discharge from this facility, during periods of high wet weather flows, has exceeded the downstream TSS concentrations three times and the downstream Settleable Solids concentration once. No data has been collected from the receiving waters for turbidity during periods of discharge. The previous Order contained no effluent limitations or upstream monitoring requirements for sediment parameters.

In the previous Order, the Permittee was prohibited from discharging woody debris, where "woody debris" was defined as woody material such as bark, twigs, branches, heartwood, sapwood, or wood chips unable to pass a one-inch diameter round opening. The Permittee was required to develop and implement a set of BMPs designed to reduce the discharge of such materials to the maximum extent practicable. BMP requirements are retained in this Order, but they have been moved to the BMP and Pollution Prevention section of the Special Provisions. In addition, this Order contains new effluent limitations for turbidity, settleable solids and total suspended solids. The BMP requirements and effluent limitations will ensure that the discharge does not contain sediment (e.g., settleable solids, suspended solids, and turbidity) at levels which will cause, have the reasonable potential to cause, or contribute to increases in sediment levels in the Russian River.

Discharges to Hensley Creek are not expected to impact the temperature of the receiving water or the Russian River because process water discharges are caused by the comingling of storm water with process waters, which only occur during storm events in the winter season.

E. Other Plans, Policies and Regulations

1. USEPA promulgated federal regulations for storm water on 16 November 1990 in 40 CFR Parts 122, 123, and 124. The State Water Board adopted Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities, which regulates storm water discharges from timber product processing facilities. Timber product processing facilities are applicable industries under the storm water program and are obligated to comply with the federal regulations. The Facility submitted its NOI to be covered under the State-wide General Storm Water Permit on March 31, 2010. Therefore, this Order does not regulate storm water discharges and storm water monitoring requirements included in Order No. R1-2002-0086 have not been retained in this Order.

2. 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 Resources Control Board (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: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where a reasonable potential to exceed those criteria exists.

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 ...whether spills or otherwise...” [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. R1-2002-0086.

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.

4. **Discharge Prohibition III.D.** The discharge of waste at any point not described in Finding II.B. 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.

5. **Discharge Prohibition III.E.** The discharge of wood treatment chemicals or stain control fungicides to surface water or groundwater is prohibited.

This prohibition has been carried over from Order No. R1-2002-0086. As discussed in section II.A of this Fact Sheet, the Facility contains a wood treating system that uses a “spray booth” to apply fungicide to the milled wood. The spray booth is built to capture oversprays and drips; however, propiconazole, a fungicide used at the Facility, has been detected in the effluent from the log deck recirculation pond, suggesting possible runoff of wood treatment chemicals. This prohibition has been included to prevent runoff of wood treatment chemicals to the log deck recirculation pond and ensure that only process water is discharged to the receiving water.

6. **Discharge Prohibition III.F.** The discharge of process water from the Facility to the Russian River and its tributaries is prohibited during the period of May 15 through September 30 of each year.

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

7. **Discharge Prohibition III.G.** During the period from October 1 through May 14, discharges of treated wastewater to Hensley Creek, tributary to the Russian River, shall not exceed one percent of the flow of Hensley Creek as measured at Monitoring Locations RSW-001.

This prohibition is required by the Basin Plan (Chapter 4, North Coastal Basin Discharge Prohibition No. 4) and is retained from the previous order. The Basin Plan prohibits discharges to the Russian River and its tributaries when the waste discharge flow is greater than one percent of the receiving water’s flow. Order No. R1-2002-0086 did not contain language specifying how compliance with the prohibition should be evaluated; therefore, this Order requires a Discharge Flow Rate Study to assess compliance with the Basin Plan and to develop alternatives for each compliance scenario. This Order also requires flow monitoring in the effluent and establishes an upstream monitoring location (i.e., Monitoring Location RSW-001) for future in stream flow monitoring.

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

This prohibition is applied based on 40 CFR Part 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 U.S. EPA permit regulations at 40 C.F.R. 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 of the Timber Products Processing Point Source Category (40 CFR Part 429, Subpart I).

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

- a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.
- b. 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.
- c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests
- d. 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 U.S. EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. section 125.3 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 Regional Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

2. Applicable Technology-Based Effluent Limitations

The Permittee operates a “barking” operation, 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 this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT). The following effluent limitations apply to Discharge Point EFF-001:

- a. **Barking.** There shall be no discharge of process wastewater into navigable waters.

- b. **Sawmills and Planing Mills.** There shall be no discharge of process wastewater pollutants into navigable waters
- c. **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. Where, “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. In the previous Order, the regulation of debris required by the ELGs was included as a prohibition. To be consistent with the applicable ELG, the prohibition of debris has been replaced as an effluent limitation in this Order.

**Summary of Technology-based Effluent Limitations
Discharge Point No. 001**

Table F-4. Summary of Technology-based Effluent Limitations

| Parameter | Units | Effluent Limitations | | | |
|-----------|----------------|----------------------|---------------|-----------------------|-----------------------|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum |
| Debris | -- | -- | -- | -- | ¹ |
| pH | standard units | -- | -- | 6.0 ² | 9.0 ² |

1. There shall be no debris (as defined in Attachment A) discharged.
2. The TBELs for pH are superseded by more stringent WQBELs of 6.5 and 8.5 standard units as shown in section IV.C of this Fact Sheet.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

CWA Section 301(b) and 40 C.F.R. 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.

Section 122.44(d)(1)(i) of 40 C.F.R. 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 lead and zinc.

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

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

- a. Beneficial Uses. Beneficial use designations for receiving waters for discharges from the 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, and includes the Russian 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 the California Department of Public Health for the protection of public water supplies at title 22 of the California Code of Regulations 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 U.S. EPA at 40 C.F.R. section 131.38; and the National Toxics Rule (NTR), established by the U.S. EPA at 40 C.F.R. section 131.36. Criteria for most of the 126 priority pollutants are contained within the CTR and the NTR.
- d. 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 lead and zinc.

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, Hensley Creek, 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 Hensley Creek.

3. Determining the Need for WQBELs

NPDES regulations at 40 C.F.R. section 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.** The effluent limitation for pH of 6.5 to 8.5 is retained from WDRs Order No. R1-2002-0086 and applies to discharges to Hensley Creek. This limitation has been amended via the addition of the Basin Plan condition that “Changes in normal ambient pH levels shall not exceed...0.5 units within the range [6.5 to 8.5]...in fresh waters with designated COLD or WARM beneficial uses.” 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. Federal technology-based requirements prescribed in 40 C.F.R. section 133 are not sufficient to meet these Basin Plan water quality standards.
- ii. Sediment Parameters.** The Russian River is listed on the 303(d) list as impaired for sediment. Application of the tributary rule in the Basin Plan would reflect a recognition that the contribution of sediment from the Facility to Hensley Creek would eventually reach the Russian River and could further contribute to the impairment. However, since no TMDL has been developed for sediment in the Russian River, any pre-TMDL implementation in this permit needs to be consistent with the other sediment impairment WQBELs in the North Coast Region as applied to wet decking operations at sawmills. The only other similar discharge that occurs to a sediment impaired waterbody is the wet decking discharge to the North Fork of the Mad River from the California Redwood Company Korbel Sawmill in Humboldt County. The NPDES permit for that facility was recently adopted as Order No. R1-2013-0008 on May 2, 2013, and the Fact Sheet of that Order states, “The receiving water limitations for turbidity and the sediment control BMP requirements in this Order are consistent with the Mad River TMDL.” This Order contains similar receiving water limitations for turbidity and similar sediment control BMP provisions to Order No. R1-2013-0008. Since this Order is consistent with the TMDL required sediment controls for a similar discharge, the Regional Water Board anticipates that the receiving water limitations for turbidity and the sediment control BMP requirements in this Order will control the discharge of sediment from the Facility in a manner that does not further contribute to the sediment impairment in the Russian River.
- iii. 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 upstream receiving water and effluent data and information to conduct an RPA. In this Order, the Regional Water Board has used effluent monitoring generated from a sampling event on April 12, 2003 for all of the CTR pollutants. Step 5 of section 1.3 of the SIP requires that ambient background data be used to conduct the RPA, which generally represents upstream receiving water conditions. Upstream receiving water CTR data was not available for this RPA, but two Hensley Creek hardness values are available from acute toxicity tests contracted by the

Permittee and one downstream Hensley Creek hardness value is available from the 2003 CTR data. Therefore, RPA was performed only with effluent data and receiving water hardness data. As described in section VI.E.1 of this Fact Sheet, this Order establishes upstream receiving water monitoring at Monitoring Location RSW-001 to determine reasonable potential to cause or contribute to water quality criteria in the future.

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 only hardness-dependent metals criterion with an associated limit in this Order is zinc.

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 (the Emerick Study)¹ 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:

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

Where:

WER = water effect ratio

¹ Emerick, R.W.; Booroom, Y.; & Pedri, J.E., 2006. California and National Toxics Rule Implementation and Development of Protective Hardness Based Metal Effluent Limitations, WEFTEC, Chicago, Ill.)

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: zinc.

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 zinc. The water quality criteria for this metal was calculated for this Order using Equation 1 and a reported effluent hardness of 7 mg/L as CaCO₃, based on a single sample obtained by the Permittee on January 3, 2006. The Regional Water Board files contain twelve (12) effluent hardness samples of which six (6) data points (all below 33 mg/L CaCO₃) cause the MEC to exceed the effluent criteria for zinc (Trigger 1 for reasonable potential as demonstrated below).

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:

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

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

In this case, the reasonable worst-case upstream receiving water hardness to use in Equation 2 to calculate the ECA is 44 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) for each priority, toxic pollutant from effluent 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.

a. 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 zinc. 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 reasonable potential analysis for each priority pollutant that was reported in detectable concentrations in the effluent or the receiving water (detected values are indicated in bold type). The MECs, most stringent water

quality objectives/water quality criteria (WQO/WQCs), 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) | RPA Results ² |
|-------|---------------------|------------------------------------|---------------------------------------|------------------------|--------------------------|
| 1 | Antimony | 6 | 1.3 | N/A | No |
| 2 | Arsenic | 50 | 2.6 | N/A | No |
| 3 | Beryllium | 4 | <0.1 | N/A | No |
| 7 | Lead | -0.08 | ~0.46 | N/A | Ud |
| 8 | Mercury | 0.05 | 0.0165 | N/A | No |
| 9 | Nickel | 52 | 5.0 | N/A | No |
| 10 | Selenium | 5.0 | <0.51 | N/A | No |
| 13 | Zinc | 12.6 | 47 | N/A | Yes (Trigger 1) |

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). If it is preceded by "~" the value shown is an estimated concentration that has been detected above the method detection limit, but below the reporting limit.

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), if no criteria have been promulgated.

The negative criterion for lead is the result of the large difference between the receiving water and effluent hardness values. The negative MDEL and AMEL indicate that there is no effluent limitation that could be derived that would be protective of aquatic life criterion for lead under all possible receiving water concentration scenarios up to the water quality criterion. This situation is described in the Emerick Study in an example about a theoretical effluent limitation for silver as follows:

“...the significant difference in receiving water and effluent hardness leads to a condition that precludes discharge. However, the preclusion was due to the assumption that the receiving water at times contains silver up to its water quality criterion. Insofar as a high hardness condition within a receiving water may correspond with a water quality objective that is higher than maximum concentrations in the receiving water, it may be possible to discharge if data are available supporting use of a lower peak contaminant concentration for the receiving water.”

There are no available upstream receiving water data available to determine the receiving water assimilative capacity for lead. Therefore, no effluent limitation for lead can be calculated at this time. Rather, this Order includes monitoring requirements for upstream receiving water and effluent lead and hardness concentrations. This Order also contains a provision to reopen the permit if data collected during the permit term demonstrate the need to develop effluent limits for priority pollutants.

4. WQBEL Calculations

A final WQBEL for zinc has been determined using the methods described in Section 1.4 of the SIP.

Step 1: 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:

$$ECA = C + D (C - B), \text{ where}$$

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 2: For each ECA based on an aquatic life criterion/objective (i.e., lead and zinc), 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. A CV value was determined for zinc to be 0.60. Derivation of the multipliers is presented in Section 1.4 of the SIP.

From Table 1 of the SIP, the ECA multipliers for calculating LTAs at the 99th percentile occurrence probability are 0.32 (acute multiplier) and 0.53 (chronic multiplier). The LTAs are determined as follows in Table F-6.

Table F-6. Determination of Long Term Averages

| Pollutant | ECA | | ECA Multiplier | | LTA (µg/L) | |
|-----------|-------|---------|----------------|---------|------------|---------|
| | Acute | Chronic | Acute | Chronic | Acute | Chronic |
| Zinc | 12.6 | 12.6 | 0.32 | 0.53 | 4.04 | 6.64 |

Step 3: 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 is set equal to 0.60, 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 multiplier is 3.11, and the AMEL multiplier is 1.55. Final WQBELs are determined as follows.

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

| Pollutant | LTA (µg/L) | MDEL Multiplier | AMEL Multiplier | MDEL (µg/L) | AMEL (µg/L) |
|-----------|------------|-----------------|-----------------|-------------|-------------|
| | | | | | |

| | | | | | |
|------|------|------|------|------|-----|
| Zinc | 4.04 | 3.11 | 1.55 | 12.6 | 6.3 |
|------|------|------|------|------|-----|

The final effluent limit presented above for zinc is based on an effluent hardness of 7 mg/L.

A summary of WQBELs established by the Order is given in the table below. The effluent limitation for pH is based on the Basin Plan water quality objective for pH.

**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 | | | | Minimum Median of Three Consecutive Bioassays |
|----------------|----------------|----------------------|---------------|-----------------------|-----------------------|---|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum | |
| Zinc | µg/L | 6.3 | 12.6 | -- | -- | -- |
| pH | standard units | -- | -- | 6.5 | 8.5 | -- |
| 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).

a. Acute Aquatic Toxicity

Consistent with WDRs Order No. R1-2007-0013, 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 U.S. EPA 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*.

Order No. R1-2002-0086 required the Permittee to comply with the Basin Plan narrative toxicity objective by conducting acute toxicity testing using *Oncorhynchus mykiss* as the sole test species. This Order requires the two-suite testing as described above in the first year in order to identify the most sensitive species. Thereafter, the Permittee may continue testing in subsequent years using only the most sensitive species. Over the term of Order No. R1-2002-0086, the Permittee observed three exceedances of the acute toxicity limitation for the minimum of 70 percent survival for any one bioassay and three exceedances of the acute toxicity limitation for the minimum of 90 percent survival for any three or more consecutive bioassays.

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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* (also named *Raphidocelis subcapitata*). Attachment E of this Order requires annual chronic WET monitoring during periods of discharge at Discharge Point 002 to demonstrate compliance with the narrative toxicity objective.

The Permittee conducted chronic toxicity testing during the term of the previous permit. The Permittee’s chronic toxicity monitoring results are summarized in Table F-4, below:

Table F-9. Whole Effluent Chronic Toxicity Monitoring Results

| Date | <i>Selenastrum capricornutum</i> | | | | <i>Ceriodaphnia dubia</i> | | | | <i>Pimaphales promelas</i> | | | |
|------------|----------------------------------|-----|------|------|---------------------------|-----|--------------|-----|----------------------------|-----|--------|-----|
| | Growth | | | | Survival | | Reproduction | | Survival | | Growth | |
| | IC25 | TUc | NOEC | TUc | NOEC | TUc | NOEC | TUc | NOEC | TUc | NOEC | TUc |
| 12/16/2003 | -- | -- | -- | >16 | -- | 1.0 | -- | 2.0 | -- | 1.0 | -- | 1.0 |
| 01/12/2004 | -- | -- | -- | >2.0 | -- | 1.0 | -- | 2.0 | -- | -- | -- | -- |
| 01/19/2004 | -- | -- | -- | 8.0 | -- | 1.0 | -- | 2.0 | -- | -- | -- | -- |

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 the petitioning 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 annual chronic WET testing at Discharge Point 001, as specified in the MRP (Attachment E, section V). Furthermore, Special Provision IV.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 1.6 TUc as a single sample result or 1.0 TUc as a monthly median 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), U.S. EPA 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 TUc as a single sample result and 1.0 TUc as a monthly median triggers the need for accelerated monitoring. Accelerated monitoring is necessary to confirm the continued presence or absence of effluent toxicity and the magnitude of that toxicity, and to determine whether a TRE or other action is needed in response to the initial occurrence of toxicity.

If accelerated sampling of the discharge demonstrates a pattern of toxicity exceeding the chronic toxicity trigger, the permit requires the Permittee 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 of the Order requires the Permittee to maintain the

TRE Work Plan 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 also includes a numeric toxicity monitoring trigger and requirements for accelerated monitoring, as well as requirements for TRE initiation if a pattern of toxicity is demonstrated.

Chronic WET limitations will be established if future monitoring results demonstrate that discharges from the Facility are causing or contributing to chronic toxicity in the receiving water.

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 (CO₂) 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 U.S. EPA methods and do not significantly alter the test water chemistry so as to mask other sources of toxicity.

D. Final Effluent Limitation Considerations

1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. 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. Effluent limitations in this Order are as stringent as the effluent limitations in the previous Order.

The BMP requirements for woody material that will pass through a 1.0-inch diameter round opening, which were previously identified as effluent limit B.3 in Order R1-2002-0086, are more appropriate as provisions, and have been thus moved from the effluent limit section to permit provision VI.C.3.b.i.

The BMP requirements to reduce turbidity and sediment from the log deck that were previously included in effluent limitation B.4 of Order R1-2002-0086 have been removed because the sediment related water quality impacts from the recirculation pond effluent discharge, as they relate to the Russian River sediment impairment, are being assessed via compliance with the turbidity receiving water limitation, as described in section IV.C.3.a.ii of this Fact Sheet. Furthermore, effluent limitation B.4 of Order R1-2002-0086 would be more appropriate as a provision, and not be subject to anti-backsliding requirements, because the limitation is based on BMPs.

CWA section 402(o)(2)(B)(ii) allows for the removal of effluent limitations where technical mistakes or mistaken interpretations of the law were made in issuing the permit. Prohibited

discharges are more appropriately included in the discharge prohibition section and BMP requirements are better categorized as provisions, not effluent limits. Moreover, the requirements still apply and are enforceable. This change will not result in any change or decrease in water quality and anti-backsliding requirements are satisfied.

2. Antidegradation Policies

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.

Removal of the BMP effluent limitations for woody material that will pass through a 1.0-inch diameter round opening, turbidity, and sediment is also consistent with antidegradation policies because new and more stringent effluent limitations have been developed for these sediment parameters. The Permittee’s BMPs will continue to ensure that the discharge of woody material that will pass through a 1.0-inch diameter round opening, turbidity, and sediment are reduced to the maximum extent practicable in the effluent to Hensley Creek

3. 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 of the Timber Products Processing Point Source Category at 40 CFR Part 429, Subpart I. The technology-based effluent limitations consist of restrictions on pH and debris. Restrictions on these pollutants are discussed in section IV.B in this Fact Sheet. This Order’s technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

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.

Summary of Final Effluent Limitations

Discharge Point No. 001

Table F-10. Summary of Final Effluent Limitations

| Parameter | Units | Effluent Limitations | | | | Basis ¹ |
|-----------|-------|----------------------|---------------|-----------------------|-----------------------|--------------------|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum | |

| Parameter | Units | Effluent Limitations | | | | Basis ¹ |
|---|----------------|----------------------|---------------|----------------------------------|-----------------------|--------------------|
| | | Average Monthly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum | |
| Acute Toxicity | % Survival | -- | -- | 70 ² /90 ³ | -- | BP |
| Zinc, Total Recoverable | µg/L | 6.3 | 12.6 | -- | -- | CTR |
| pH | standard units | -- | -- | 6.5 | 8.5 | BP |
| <p>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.</p> <p>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.</p> | | | | | | |

- E. Interim Effluent Limitations – Not Applicable**
- F. Land Discharge Specifications – Not Applicable**
- G. Recycling Specifications – Not Applicable**
- H. Other Requirements – Not Applicable**

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 (MUN); Industrial Service Supply (IND); Industrial Process Supply (PRO); Agricultural Supply (AGR); Freshwater Replenishment (FRSH)
2. Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.
3. Discharges from the Permittee’s 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 the California Code of Regulations, title 22, division 4, chapter 15, article 4.1, section 64435, and article 5.5, section 64444, and listed in Table 3-2 of the Basin Plan.

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D. The Permittee must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 C.F.R. allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

2. Regional Water Board Standard Provisions

In addition to the Federal Standard Provisions (Attachment D), the 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., 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. This Provision implements federal requirements at section 122.41(I)(6) and (7) for notification of noncompliance and spill reporting.
- c. Order Provision VI.A.2.c requires the Permittee to file a petition with, and receive approval from, the State Water Board Division of Water Rights prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse. This requirement is mandated by Water Code section 1211.

B. Monitoring and Reporting Program (MRP) Requirements

1. **Compliance.** The Permittee shall comply with the MRP, and future revisions thereto, in Attachment E of this Order.
2. **Alternative Monitoring Locations.**

This Order establishes new upstream and downstream receiving water monitoring locations in Hensley Creek to isolate the effects of the 001 discharge to Hensley Creek by excluding intervening storm water discharges.

The Permittee may submit a proposal to monitor receiving water at locations different than receiving water locations specified in section VIII of the MRP. The proposal must be received by the Executive Officer within 180 days of the effective date of this Order and specify monitoring locations that are acceptable to the Executive Officer for the purpose of demonstrating compliance with this Order. The Executive Officer will inform the Permittee

within 90 days after receipt of the proposal whether the alternative monitoring locations are acceptable.

The Basin Plan does not contain a policy to allow for mixing zones and, therefore, the downstream receiving water monitoring location has been changed to a location immediately downstream of the discharge. This finding allows the Permittee to propose an alternative location if it can show that the alternative location does not create an unpermitted mixing zone.

C. Special Provisions

1. Reopener Provisions

- a. **Standard Revisions** (Special Provision VI.C.1.a). Conditions that necessitate a major modification of a permit are described in section 122.62, which include the following:
 - i. When standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision. Therefore, if revisions of applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such revised standards.
 - ii. When new information that was not available at the time of permit issuance would have justified different permit conditions at the time of issuance.
- b. **Reasonable Potential** (Special Provision 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 receiving waters.
- c. **Whole Effluent Toxicity** (Special Provision 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 Provision 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 Provision 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.
- f. **Salt and Nutrient Management Plans (SNMPs)** (Special Provision VI.C.1.g). This provision allows the Regional Water Board to reopen this Order if it adopts a regional or subregional SNMP that is applicable to the Permittee.

6. Special Studies and Additional Monitoring Requirements

a. Toxicity Reduction Requirements (Special Provision VI.C.2.a).

The SIP requires the use of short-term chronic toxicity tests to determine compliance with the narrative toxicity objectives for aquatic life in the Basin Plan. Attachment E of this Order requires acute and chronic toxicity monitoring for demonstration of compliance with the narrative toxicity objective.

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. The TRE may end if the Permittee can document that the failed toxicity test was the result of a temporary condition or plant upset (e.g., incomplete dechlorination, toxic chemical slug, etc.). In the absence of demonstrating a temporary condition or plant upset, the TRE may also end by demonstrating that less than 20% of the WET tests demonstrate toxicity.

b. Discharge Flow Rate Study

Discharge Point EFF-001 discharges into Hensley Creek that is tributary to the Russian River. The Implementation Plan for the North Coast Basin contained in the Basin Plan on page 4-1, prohibits discharges to the Russian River and its tributaries during periods when the waste discharge flow is greater than one percent of the receiving stream's flow. At this time, little if any information has been documented showing the actual flows from the discharge or in Hensley Creek. However, it is uncertain if the one percent criteria for discharge is being met. In order to comply with applicable regulations, the Permittee shall provide documentation indicating that the discharge is compliance with the Basin Plan's discharge rate requirement, or appropriate for an exception to the Basin Plan requirement or implement modifications that will result in Basin Plan compliance. It is appropriate to provide a reasonable time schedule for the proper evaluation of existing discharges, possible alternatives, and implementation for any necessary modifications.

c. Groundwater Impact Study

The discharges to groundwater of process wastewater from the recirculation pond, of boiler blowdown water, and of wastewater from the domestic wastewater systems have the potential to impact groundwater quality, but at this point little information has been collected to assess compliance with groundwater quality objectives in the Basin Plan. In order to comply with applicable regulations, the Permittee shall provide documentation indicating that the discharges are in compliance with the Basin Plan's groundwater quality objectives. It is appropriate to provide a reasonable time schedule for the proper evaluation of existing discharges, possible alternatives, and implementation for any necessary modifications.

7. Best Management Practices and Pollution Prevention

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

b. Debris and Sediment BMPs (Special Provisions VI.C.3.b and VI.C.3.c). Order No. R1-2002-0086 also required effluent limitations, in the form of BMPs, for woody material that will pass through a 1.0-inch diameter round opening to further eliminate

discharges of sawdust to the receiving water and for turbidity and sediment to minimize discharges of these constituents to the receiving water. It is impractical to require numeric effluent limitations for these parameters; therefore, in accordance with 40 CFR 122.41(k)(3) and consistent with Order No. R1-2002-0086, this Order requires implementation of BMPs to eliminate discharges of sawdust and minimize discharges of turbidity and sediment

8. Construction, Operation, and Maintenance Specifications

- a. **Operation and Maintenance** (Special Provisions VI.C.4.a and VI.C.4.b). 40 C.F.R. section 122.41(e) 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.

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

10. Other Special Provisions

- a. **Storm Water** (Special Provision VI.C.6.a). This provision acknowledges the Permittee coverage under the State Water Board's Water Quality Order No. 97-03-DWQ, NPDES General Permit Number CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.
- b. **Solids Disposal and Handling Requirements** (Special Provisions VI.C.6.a). Consistent with Order No. R1-2002-0086, this Order includes solids disposal and handling requirements to ensure that solids removed from liquid wastes are disposed at a solid waste facility for which WDRs have been prescribed by the Regional Water Board.

11. Compliance Schedules – Not Applicable

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 C.F.R. 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), Attachment E, establishes monitoring and reporting requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

A. Influent Monitoring – Not Applicable

B. Effluent Monitoring

Effluent monitoring requirements from Order No. R1-2001-0086 are retained for chemical oxygen demand (COD), pH, color, total suspended solids (TSS), and settleable solids. New effluent monitoring requirements are included for flow, dissolved oxygen, temperature, lead, mercury, nickel, zinc, arsenic, hardness, and all other CTR constituents that have been detected in the effluent. Monitoring at Monitoring Location EFF-001 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 Hensley Creek 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 Hensley Creek. The monitoring frequencies for acute and chronic toxicity have been increased from annual and once per permit term, respectively, to

monthly and twice annually because sampling during the previous permit term demonstrated acute and chronic toxicity and noncompliance with both acute toxicity limits. These monitoring requirements enable the Regional Water Board to assess compliance with the effluent limitations contained in this Order and with the Basin Plan's narrative water quality objective for toxicity that is applicable to all receiving waters of the Region.

The following describes changes to the effluent monitoring requirements from Order No. R1-2002-0086 established by this Order:

1. The monitoring requirement for monthly analysis of didecyl dimethyl ammonium chloride (DDAC) has been discontinued in accordance with a June 9, 2006 letter from the Regional Water Board. The Permittee now uses an anti-stain product that does not contain DDAC.
2. Monitoring data collected over the term of Order No. R1-2002-0086 for zinc indicate reasonable potential to exceed water quality criteria. Therefore, monthly effluent monitoring has been established at Monitoring Location EFF-001 to determine compliance with the applicable WQBELs.
3. A new requirement for effluent flow monitoring has been added to this Order to facilitate compliance determination with Finding III.G of this Order, which incorporates the Basin Plan requirement that the discharge flow not exceed one percent of the receiving water flow.
4. A new effluent monitoring requirement for dissolved oxygen has been added to this Order to facilitate compliance determination with Receiving Water Limitation V.A.1 of this Order, which incorporates the Basin Plan dissolved oxygen water quality objective.
5. A new effluent monitoring requirement for temperature has been added to this Order to facilitate compliance determination with Receiving Water Limitation V.A.13 of this Order, which incorporates the Basin Plan temperature water quality objective.
6. New effluent monitoring requirements for metals (total recoverable lead, nickel, arsenic and mercury) have been added to this Order to collect data to perform a more robust reasonable potential analysis.
7. A new requirement for effluent hardness monitoring has been added to 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 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.
8. Monitoring of hardness in the effluent should coincide with compliance monitoring for the hardness-dependent metals with effluent limitations (i.e., zinc) established by this Order.
9. The effluent monitoring frequency for acute toxicity has been increased from annually to monthly in order to provide more information regarding the degree of effluent toxicity and to facilitate a more comprehensive compliance assessment with the acute toxicity effluent limitation because collected data from the last permit indicate the existence of acute toxicity in the effluent.
10. 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. R1-2002-0086 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 every 5 years and annual monitoring of those priority pollutants that have been detected in the effluent.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (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 and monitoring of chronic toxicity with accelerated monitoring triggers.

D. Receiving Water Monitoring

1. Surface Water

Order No. R1-2002-0086 imposed monitoring requirements on the receiving water downstream of the effluent discharge point at a location that is affected by the discharge and accessible to sampling personnel. Since the Basin Plan does not contain a policy to permit mixing zones, a new downstream receiving water monitoring location (i.e., Monitoring Location RSW-002) has been established immediately downstream of the 001 discharge to Hensley Creek. A second receiving water monitoring location (i.e., Monitoring Location RSW-001) has been established by this Order immediately upstream of the effluent discharge point at a location that is not influenced by the effluent discharge and is accessible to sampling personnel. The upstream monitoring location is intended to aid in the evaluation of the effects of process wastewater discharge on Hensley Creek and to demonstrate compliance with requirements contained in this Order.

Monitoring requirements from Order No. R1-2002-0086 for COD, pH, and color have been retained in this Order. Monitoring requirements for TSS, settleable solids, and volatile suspended solids, have been eliminated because this Order relies on compliance with the turbidity receiving water limitation for sediment parameters. Receiving water monitoring for these constituents will still occur outside of this permit to ensure compliance with the General Industrial Storm Water Permit. Monitoring requirements for dissolved oxygen, turbidity, temperature, hardness, and CTR Priority Pollutants have been added to this Order.

Monitoring for pH is necessary in order to assess compliance with the site-specific pH objectives in Table 3-1 of the Basin Plan. Monitoring of color, is necessary to assess compliance with narrative objectives of the Basin Plan. Monitoring of COD is necessary in order to assess the potential impacts to downstream dissolved oxygen levels. The monitoring requirement for monthly analysis of DDAC has been discontinued in accordance with a 9 June 2006 letter from the Regional Water Board.

The following receiving water monitoring requirements are newly established by this Order:

- a.** Monitoring for dissolved oxygen, turbidity and temperature are established by this Order for Monitoring Locations RSW-001 and RSW-002 to determine compliance with the narrative water quality objectives for dissolved oxygen, turbidity and temperature in the Basin Plan.
- b.** Because the toxicity of certain metals is hardness dependant (i.e., as hardness decreases, metal toxicity increases), monitoring of hardness in the receiving water, at both monitoring locations, is required. Monitoring of hardness at the upstream and downstream monitoring locations shall coincide with the effluent compliance monitoring for hardness dependent metals and priority pollutants.

- c. Propiconazole receiving water monitoring has been eliminated because it will be performed in accordance with the General Industrial Stormwater Permit as described in Finding II.A.
- 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. R1-2002-0086 required downstream receiving water monitoring for priority pollutants once during the permit term. In order to provide sufficient monitoring to characterize the upstream receiving water and conduct a meaningful RPA during the next permit renewal, this Order requires complete priority pollutant monitoring of the upstream receiving water once per permit term and annual monitoring of those priority pollutants that have been detected in the effluent.

2. Groundwater - Not Applicable

E. Other Monitoring Requirements - Not Applicable

1. Land Discharge Monitoring Requirements - Not Applicable

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VIII. PUBLIC PARTICIPATION

The Regional Water Board has considered the issuance of WDRs that will serve as an NPDES permit for Mendocino Forest Products Company, LLC, Ukiah Sawmill Complex. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs and has 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 WDRs for the discharge and provided an opportunity to submit 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 and through publication in the Press Democrat on December 24, 2013.

The public had access to the agenda and any changes in dates and locations through the Regional Water Board's website.

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Regional Water Board at 5550 Skylane Boulevard, Suite A, Santa Rosa, California, 95403.

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 5:00 p.m. on January 27, 2014.

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: March 13, 2014
Time: 8:30 A.M.
Location: Regional Water Quality Control Board
David C. Joseph Room
5550 Skylane Blvd., Ste A
Santa Rosa, CA 95403

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

D. Reconsideration of Waste Discharge Requirements

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

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

For instructions on how to file a petition for review, see http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received 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 (707) 576-2682.

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ATTACHMENT F-1

| Beginning | | | Step 2 | Step 3 | | | Step 4 | Step 5 | Step 6 | Steps 7 & 8 | Final Result | | | |
|-----------|-------------------------|---|---------------------------------------|---|---|--|---|--|---|---------------------------|--|--|-------------------|-------------------------------|
| | <i>Constituent name</i> | <i>C (mg/L)</i> | <i>Effluent Data Available (Y/N)?</i> | <i>Are all data points non-detects (Y/N)?</i> | <i>If all data points ND Enter the min detection limit (MDL) (ug/L)</i> | <i>Enter the pollutant effluent detected max conc (ug/L)</i> | <i>If all data points are ND and MinDL>C, interim monitoring is required</i> | <i>Maximum Pollutant Concentration from the effluent (MEC) (ug/L)</i> <i>(MEC= detected max value; if all ND & MDL<C then MEC = MDL)</i> | <i>MEC vs. C</i> <i>1. If MEC> or =C, effluent limitation is required; 2. If MEC<C, go to Step 5</i> | <i>B Available (Y/N)?</i> | <i>B vs. C</i> <i>If B>C and pollutant detected in effluent, effluent limitation is required</i> | <i>7) Review other information in the SIP page 4. If information is unavailable or insufficient: 8) the RWQCB shall establish interim monitoring requirements.</i> | <i>RPA Result</i> | <i>Reason</i> |
| | | <i>Lowest (most stringent) Criteria (Enter "No Criteria" for no criteria)</i> | | | | | | | | | | | | |
| 1 | Antimony | 6 | Y | N | | 1.3 | | 1.3 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 2 | Arsenic | 50 | Y | N | | 2.6 | | 2.6 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 3 | Beryllium | 4 | Y | Y | 0.1 | | All ND, MDL<C, MEC=MDL | 0.1 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 4 | Cadmium | 0.2 | Y | Y | 0.2 | | All ND, MDL<C, MEC=MDL | 0.2 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 5a | Chromium (III) | 23 | N | | | | No effluent data | | | N | No detected value of B, Step 7 | | Ud | no effluent data & no B |
| 5b | Chromium (VI) | 11 | Y | Y | 5 | | All ND, MDL<C, MEC=MDL | 5 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 6 | Copper | 1.0 | Y | Y | 1 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 7 | Lead | -0.1 | Y | N | | 0.46 | | 0.46 | MEC>=C, Effluent Limits Required | N | No detected value of B, Step 7 | | Ud | Ud;ME C>C, but no B available |
| 8 | Mercury | 0.050 | Y | N | | 0.0165 | | 0.0165 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |

| | | | | | | | | | | | | | | |
|----|--------------------------|----------------|---|---|---------|----|--|-------------|---|---|--------------------------------------|-------------|-----|---------------------------|
| 9 | Nickel | 5 | Y | N | | 5 | | 5 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 10 | Selenium | 5.0 | Y | Y | 0.51 | | All ND, MDL<C, MEC=MDL | 0.51 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 11 | Silver | 0.0 | Y | Y | 1.6 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 12 | Thallium | 1.7 | Y | Y | 0.36 | | All ND, MDL<C, MEC=MDL | 0.36 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 13 | Zinc | 13 | Y | N | | 47 | | 47 | MEC>=C, Effluent Limits Required | N | No detected value of B, Step 7 | | Yes | MEC>C |
| 14 | Cyanide | 5.2 | Y | Y | 2 | | All ND, MDL<C, MEC=MDL | 2 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 15 | Asbestos | 7.0 | Y | Y | 0.021 | | All ND, MDL<C, MEC=MDL | 0.021 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 16 | 2,3,7,8 TCDD | 1.3E-08 | Y | Y | 2.2E-06 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 17 | Acrolein | 320 | Y | Y | 0.17 | | All ND, MDL<C, MEC=MDL | 0.17 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 18 | Acrylonitrile | 0.06 | Y | Y | 0.21 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 19 | Benzene | 1.0 | Y | Y | 0.15 | | All ND, MDL<C, MEC=MDL | 0.15 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 20 | Bromoform | 4.3 | Y | Y | 0.079 | | All ND, MDL<C, MEC=MDL | 0.079 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 21 | Carbon Tetrachloride | 0.25 | Y | Y | 0.11 | | All ND, MDL<C, MEC=MDL | 0.11 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 22 | Chlorobenzene | 70 | Y | Y | 0.16 | | All ND, MDL<C, MEC=MDL | 0.16 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 23 | Chlorodibromomet hane | 0.40 | Y | Y | 0.11 | | All ND, MDL<C, MEC=MDL | 0.11 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 24 | Chloroethane | No Criteria | Y | Y | 0.28 | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteri a |

| | | | | | | | | | | | | | | |
|----|----------------------------|-------------|---|---|-------|--|-------------------------------------|-------------|---------------------|---|--------------------------------|-------------|----|---------------------|
| 25 | 2-Chloroethylvinyl ether | No Criteria | N | | | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria |
| 26 | Chloroform | No Criteria | Y | Y | 0.19 | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria |
| 27 | Dichlorobromomethane | 0.56 | Y | Y | 0.12 | | All ND, MDL<C, MEC=MDL | 0.12 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 28 | 1,1-Dichloroethane | 5.0 | Y | Y | 0.21 | | All ND, MDL<C, MEC=MDL | 0.21 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 29 | 1,2-Dichloroethane | 0.38 | Y | Y | 0.28 | | All ND, MDL<C, MEC=MDL | 0.28 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 30 | 1,1-Dichloroethylene | 0.057 | Y | Y | 0.22 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 31 | 1,2-Dichloropropane | 0.52 | Y | Y | 0.11 | | All ND, MDL<C, MEC=MDL | 0.11 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 32 | 1,3-Dichloropropylene | 0.50 | Y | Y | 0.22 | | All ND, MDL<C, MEC=MDL | 0.22 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 33 | Ethylbenzene | 300 | Y | Y | 0.12 | | All ND, MDL<C, MEC=MDL | 0.12 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 34 | Methyl Bromide | 48 | Y | Y | 0.28 | | All ND, MDL<C, MEC=MDL | 0.28 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 35 | Methyl Chloride | No Criteria | Y | Y | 0.36 | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria |
| 36 | Methylene Chloride | 4.7 | Y | Y | 0.14 | | All ND, MDL<C, MEC=MDL | 0.14 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 37 | 1,1,2,2-Tetrachloroethane | 0.17 | Y | Y | 0.081 | | All ND, MDL<C, MEC=MDL | 0.081 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 38 | Tetrachloroethylene | 0.80 | Y | Y | 0.16 | | All ND, MDL<C, MEC=MDL | 0.16 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 39 | Toluene | 150 | Y | Y | 0.13 | | All ND, MDL<C, MEC=MDL | 0.13 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 40 | 1,2-Trans-Dichloroethylene | 10 | Y | Y | 0.17 | | All ND, MDL<C, MEC=MDL | 0.17 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 41 | 1,1,1-Trichloroethane | 200 | Y | Y | 0.12 | | All ND, MDL<C, MEC=MDL | 0.12 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |

| | | | | | | | | | | | | | | |
|----|-----------------------------|-------------|---|---|------|--|-------------------------------------|-------------|---------------------|---|--------------------------------|-------------|----|---------------------|
| 42 | 1,1,2-Trichloroethane | 0.60 | Y | Y | 0.11 | | All ND, MDL<C, MEC=MDL | 0.11 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 43 | Trichloroethylene | 2.7 | Y | Y | 0.18 | | All ND, MDL<C, MEC=MDL | 0.18 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 44 | Vinyl Chloride | 0.50 | Y | Y | 0.43 | | All ND, MDL<C, MEC=MDL | 0.43 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 45 | 2-Chlorophenol | 120 | Y | Y | 5 | | All ND, MDL<C, MEC=MDL | 5 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 46 | 2,4-Dichlorophenol | 93 | Y | Y | 5 | | All ND, MDL<C, MEC=MDL | 5 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 47 | 2,4-Dimethylphenol | 540 | Y | Y | 2 | | All ND, MDL<C, MEC=MDL | 2 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 48 | 2-Methyl- 4,6-Dinitrophenol | 13 | Y | Y | 5 | | All ND, MDL<C, MEC=MDL | 5 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 49 | 2,4-Dinitrophenol | 70 | Y | Y | 5 | | All ND, MDL<C, MEC=MDL | 5 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 50 | 2-Nitrophenol | No Criteria | Y | Y | 10 | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria |
| 51 | 4-Nitrophenol | No Criteria | Y | Y | 10 | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria |
| 52 | 3-Methyl 4-Chlorophenol | No Criteria | Y | Y | 1 | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria |
| 53 | Pentachlorophenol | 0.28 | Y | Y | 5 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 54 | Phenol | 21,000 | Y | Y | 1 | | All ND, MDL<C, MEC=MDL | 1 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 55 | 2,4,6-Trichlorophenol | 2.1 | Y | Y | 10 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 56 | Acenaphthene | 1,200 | Y | Y | 1 | | All ND, MDL<C, MEC=MDL | 1 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 57 | Acenaphthylene | No Criteria | Y | Y | 10 | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria |
| 58 | Anthracene | 9,600 | Y | Y | 10 | | All ND, MDL<C, | 10 | MEC<C, go to Step | N | No detected value of B, | | No | Ud;ME C<C & |

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| | | | | | | | MEC=MDL | | 5 | | Step 7 | | | B is ND |
| 59 | Benzidine | 0.00012 | Y | Y | 5 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 60 | Benzo(a)Anthracene | 0.0044 | Y | Y | 10 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 61 | Benzo(a)Pyrene | 0.0044 | Y | Y | 10 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 62 | Benzo(b)Fluoranthene | 0.0044 | Y | Y | 10 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 63 | Benzo(ghi)Perylene | No Criteria | Y | Y | 5 | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria |
| 64 | Benzo(k)Fluoranthene | 0.0044 | Y | Y | 10 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 65 | Bis(2-Chloroethoxy)Methane | No Criteria | Y | Y | 5 | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria |
| 66 | Bis(2-Chloroethyl)Ether | 0.031 | Y | Y | 1 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 67 | Bis(2-Chloroisopropyl)Ether | 1,400 | Y | Y | 2 | | All ND, MDL<C, MEC=MDL | 2 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;MEC<C & B is ND |
| 68 | Bis(2-Ethylhexyl)Phthalate | 1.8 | Y | Y | 5 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 69 | 4-Bromophenyl Phenyl Ether | No Criteria | Y | Y | 5 | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria |
| 70 | Butylbenzyl Phthalate | 3,000 | Y | Y | 10 | | All ND, MDL<C, MEC=MDL | 10 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;MEC<C & B is ND |
| 71 | 2-Chloronaphthalene | 1,700 | Y | Y | 10 | | All ND, MDL<C, MEC=MDL | 10 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;MEC<C & B is ND |
| 72 | 4-Chlorophenyl Phenyl Ether | No Criteria | Y | Y | 5 | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria |
| 73 | Chrysene | 0.0044 | Y | Y | 10 | | All ND, | | | N | No detected | | No | MDL>C |

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|----|------------------------|-------------|---|---|-------|--|-------------------------------------|-------------|---------------------|---|--------------------------------|-------------|----|---------------------|
| | | | | | | | MinDL>C, Go to Step 5, & IM | | | | value of B, Step 7 | | | & No B |
| 74 | Dibenzo(a,h)Anthracene | 0.0044 | Y | Y | 10 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 75 | 1,2-Dichlorobenzene | 600 | Y | Y | 0.077 | | All ND, MDL<C, MEC=MDL | 0.077 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 76 | 1,3-Dichlorobenzene | 400 | Y | Y | 0.15 | | All ND, MDL<C, MEC=MDL | 0.15 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 77 | 1,4-Dichlorobenzene | 5.0 | Y | Y | 0.12 | | All ND, MDL<C, MEC=MDL | 0.12 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 78 | 3,3 Dichlorobenzidine | 0.040 | Y | Y | 5 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 79 | Diethyl Phthalate | 23,000 | Y | Y | 2 | | All ND, MDL<C, MEC=MDL | 2 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 80 | Dimethyl Phthalate | 313,000 | Y | Y | 2 | | All ND, MDL<C, MEC=MDL | 2 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 81 | Di-n-Butyl Phthalate | 2,700 | Y | Y | 10 | | All ND, MDL<C, MEC=MDL | 10 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 82 | 2,4-Dinitrotoluene | 0.110 | Y | Y | 5 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 83 | 2,6-Dinitrotoluene | No Criteria | Y | Y | 5 | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria |
| 84 | Di-n-Octyl Phthalate | No Criteria | Y | Y | 10 | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria |
| 85 | 1,2-Diphenylhydrazine | 0.040 | Y | Y | 1 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 86 | Fluoranthene | 300 | Y | Y | 1 | | All ND, MDL<C, MEC=MDL | 1 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 87 | Fluorene | 1,300 | Y | Y | 10 | | All ND, MDL<C, MEC=MDL | 10 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 88 | Hexachlorobenzene | 0.00075 | Y | Y | 1 | | All ND, MinDL>C, Go to Step 5, & | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |

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|-----|---------------------------|-------------|---|---|--------|--|-------------------------------------|-------------|---|--------------------------------|-------------|----|---------------------|--|
| | | | | | | | IM | | | | | | | |
| 89 | Hexachlorobutadiene | 0.44 | Y | Y | 1 | | All ND, MinDL>C, Go to Step 5, & IM | | N | No detected value of B, Step 7 | | No | MDL>C & No B | |
| 90 | Hexachlorocyclopentadiene | 50 | Y | Y | 5 | | All ND, MDL<C, MEC=MDL | 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND | |
| 91 | Hexachloroethane | 1.9 | Y | Y | 1 | | All ND, MDL<C, MEC=MDL | 1 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND | |
| 92 | Indeno(1,2,3-cd)Pyrene | 0.0044 | Y | Y | 10 | | All ND, MinDL>C, Go to Step 5, & IM | | N | No detected value of B, Step 7 | | No | MDL>C & No B | |
| 93 | Isophorone | 8.4 | Y | Y | 1 | | All ND, MDL<C, MEC=MDL | 1 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND | |
| 94 | Naphthalene | No Criteria | Y | Y | 1 | | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria | |
| 95 | Nitrobenzene | 17 | Y | Y | 1 | | All ND, MDL<C, MEC=MDL | 1 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND | |
| 96 | N-Nitrosodimethylamine | 0.00069 | Y | Y | 5 | | All ND, MinDL>C, Go to Step 5, & IM | | N | No detected value of B, Step 7 | | No | MDL>C & No B | |
| 97 | N-Nitrosodi-n-Propylamine | 0.0050 | Y | Y | 5 | | All ND, MinDL>C, Go to Step 5, & IM | | N | No detected value of B, Step 7 | | No | MDL>C & No B | |
| 98 | N-Nitrosodiphenylamine | 5.0 | Y | Y | 1 | | All ND, MDL<C, MEC=MDL | 1 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND | |
| 99 | Phenanthrene | No Criteria | Y | Y | 5 | | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria | |
| 100 | Pyrene | 960 | Y | Y | 10 | | All ND, MDL<C, MEC=MDL | 10 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND | |
| 101 | 1,2,4-Trichlorobenzene | 5.0 | Y | Y | 5 | | All ND, MinDL>C, Go to Step 5, & IM | | N | No detected value of B, Step 7 | | No | MDL>C & No B | |
| 102 | Aldrin | 0.00013 | Y | Y | 0.0038 | | All ND, MinDL>C, Go to Step 5, & IM | | N | No detected value of B, Step 7 | | No | MDL>C & No B | |
| 103 | alpha-BHC | 0.0039 | Y | Y | 0.0043 | | All ND, MinDL>C, Go | | N | No detected value of B, | | No | MDL>C & No B | |

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|-----|--------------------|-------------|---|---|--------|--|-------------------------------------|-------------|---------------------|---|--------------------------------|-------------|----|---------------------|
| | | | | | | | to Step 5, & IM | | | | Step 7 | | | |
| 104 | beta-BHC | 0.014 | Y | Y | 0.0027 | | All ND, MDL<C, MEC=MDL | 0.0027 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 105 | gamma-BHC | 0.019 | Y | Y | 0.0041 | | All ND, MDL<C, MEC=MDL | 0.0041 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 106 | delta-BHC | No Criteria | Y | Y | 0.0021 | | No Criteria | No Criteria | No Criteria | N | No Criteria | No Criteria | Uo | No Criteria |
| 107 | Chlordane | 0.00057 | Y | Y | 0.035 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 108 | 4,4'-DDT | 0.00059 | Y | Y | 0.0045 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 109 | 4,4'-DDE | 0.00059 | Y | Y | 0.0033 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 110 | 4,4'-DDD | 0.00083 | Y | Y | 0.0048 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 111 | Dieldrin | 0.00014 | Y | Y | 0.0033 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 112 | alpha-Endosulfan | 0.056 | Y | Y | 0.0042 | | All ND, MDL<C, MEC=MDL | 0.0042 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 113 | beta-Endosulfan | 0.056 | Y | Y | 0.0033 | | All ND, MDL<C, MEC=MDL | 0.0033 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 114 | Endosulfan Sulfate | 110 | Y | Y | 0.007 | | All ND, MDL<C, MEC=MDL | 0.007 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 115 | Endrin | 0.036 | Y | Y | 0.0047 | | All ND, MDL<C, MEC=MDL | 0.0047 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 116 | Endrin Aldehyde | 0.76 | Y | Y | 0.0095 | | All ND, MDL<C, MEC=MDL | 0.0095 | MEC<C, go to Step 5 | N | No detected value of B, Step 7 | | No | Ud;ME C<C & B is ND |
| 117 | Heptachlor | 0.00021 | Y | Y | 0.003 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No | MDL>C & No B |
| 118 | Heptachlor Epoxide | 0.00010 | Y | Y | 0.003 | | All ND, MinDL>C, Go | | | N | No detected value of B, | | No | MDL>C & No B |

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|---------|-----------|---------|---|---|------|--|-------------------------------------|--|--|---|--------------------------------|--|-----------------|
| | | | | | | | to Step 5, & IM | | | | Step 7 | | |
| 119-125 | PCBs sum | 0.00017 | Y | Y | 0.19 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No MDL>C & No B |
| 126 | Toxaphene | 0.00020 | Y | Y | 0.21 | | All ND, MinDL>C, Go to Step 5, & IM | | | N | No detected value of B, Step 7 | | No MDL>C & No B |

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