California Regional Water Quality Control Board
North Coast Region
Geoffrey M. Hales, Chairman

Linda S. Adams
Secretary for Environmental Protection

www.waterboards.ca.gov/northcoast
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone: (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135

Arnold Schwarzenegger
Governor

ORDER NO. R1-2010-0033
NPDES NO. CA0005894
WDID No. 1B77005OHUM

WASTE DISCHARGE REQUIREMENTS FOR FRESHWATER TISSUE COMPANY, SAMOA PULP MILL

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

Table 1. Discharger Information

Discharger	**Freshwater Tissue Company**
Name of Facility	**Samoa Pulp Mill**
Facility Address	**1 TCF Drive**
	Samoa CA 95564
	Humboldt County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a major discharge.	

The discharge by the owner from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	wastewater	40º, 48', 28" N	124º, 12', 24" W	**Pacific Ocean**

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**June 10, 2010**
This Order shall become effective on:	**June 10, 2010**
This Order shall expire on:	**June 10, 2015**
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	**<u>180 days prior to the Order expiration date</u>**

IT IS HEREBY ORDERED, that, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

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I, Catherine Kuhlman, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on June 10, 2010.

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Catherine Kuhlman, Executive Officer

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I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	**Freshwater Tissue Company**
Name of Facility	**Samoa Pulp Mill**
Facility Address	**1 TCF Drive**
	Samoa CA 95564
	Humboldt County
Facility Contact, Title, and Phone	**Robert Simpson, President, (707) 441-2801**
Mailing Address	**PO Box 248, Samoa, CA 95564**
Type of Facility	**Pulp Mill**
Facility Design Flow	**20 million gallons per day**

II. FINDINGS

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

A. Background. Freshwater Tissue Company (hereinafter Discharger) submitted a Report of Waste Discharge, dated January 27, 2010**,** and applied for a NPDES permit to discharge approximately 13.6 millions gallons per day (MGD), on average, of untreated wastewater from the Samoa Pulp Mill**,** hereinafter Facility. Additional information was submitted on February 16, 2010 and March 23, 2010, and the application fee was submitted on March 29, 2010. The application was deemed complete on March 29, 2010.

The discharge from the Facility was previously regulated pursuant to Board Order No. R1-2004-0047 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0005894 issued to Evergreen Pulp, Inc., a subsidiary of Lee & Man Paper Manufacturing Limited. The Facility ceased operation on October 17, 2008. On January 7, 2009, the Regional Water Board issued a Notice of Intent to terminate Board Order No. R1-2004-0047 in accordance with 40 CFR § 122.61(b) to prevent the automatic transfer of the existing NPDES permit from Evergreen Pulp, Inc. to a new owner of the Facility. On March 12, 2009, after due notice to Evergreen Pulp, Inc. and all other affected persons, the Regional Water Board conducted a public hearing at which time the Regional Water Board terminated Board Order No. R1-2004-0047.

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

B. Facility Description. The Discharger owns and operates the Samoa Pulp Mill. Wastewater created during the pulp production process and energy and chemical recovery processes is discharged from Discharge 001 (see table on cover page) to the Pacific Ocean, a water of the United States, through an outfall that is approximately 8,200 feet long and provides an initial dilution rate of 115:1. Attachment B provides a map of the area around the facility. Attachment C provides a flow schematic of the facility.

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

The CWA authorizes the USEPA to permit a state to serve as the NPDES permitting authority in lieu of the USEPA. The State of California has an in-lieu authority of the NPDES program. The State Water Resources Control Board (State Water Board) entered into a Memorandum of Agreement with the USEPA on September 22, 1989, to administer the NPDES program governing discharges to waters of the United States. The Porter-Cologne Water Quality Control Act authorizes the State Water Board, through the Regional Water Board, to regulate and control the discharge of pollutants to waters of the state.

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E are also incorporated into this Order.

E. California Environmental Quality Act (CEQA). Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of the CEQA, Public Resources Code sections 21100-21177.

F. Technology-based Effluent Limitations*.* Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations[1] require that permits include conditions meeting applicable

[1] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

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 set out in Effluent Limitations Guidelines and Standards for the Pulp, Paper, and Paperboard Point Source Category in Part 430.

The Discharger's pulping process includes an oxygen delignification process to brighten finished unbleached pulp and as a pretreatment process prior to its totally chlorine free (TCF) bleaching process. The Discharger has stated that it plans to produce both unbleached pulps and bleached pulp using TCF bleaching as market demands require. The Regional Water Board has determined that, for purposes of the effluent limitations guidelines, the Samoa Pulp Mill fits into the Unbleached Kraft subcategory (40 CFR 430 Subpart C), when a kraft pulp is produced without TCF bleaching. When producing a kraft pulp using TCF bleaching, the Samoa Pulp Mill fits into the Bleached Kraft subcategory (40 CFR 430 Subpart B). Should the Discharger produce bleached pulp using traditional chlorine-based bleaching processes, effluent limitations guidelines for bleached kraft pulp would apply. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

G. Water Quality-Based Effluent Limitations. Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order contains requirements more stringent than secondary treatment requirements that are necessary to meet applicable water quality standards. The rationale for these requirements is discussed in Attachment F Fact Sheet part IV.C.

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

H. Water Quality Control Plans. The Regional Water Board adopted a *Water Quality Control Plan for the North Coast Basin* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Pacific Ocean Beneficial uses applicable to the Pacific Ocean are as follows:

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Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	**Pacific Ocean**	Existing: NAV – Navigation REC1 – Water Contact Recreation REC2 – Non-contact Water Recreation COMM – Commercial and Sport Fishing WILD – Wildlife Habitat RARE – Rare, Threatened, or Endangered Species MAR – Marine Habitat MIGR – Migration of Aquatic Organisms SPWN – Spawning, Reproduction, and/or Early Development SHELL – Shellfish Harvesting AQUA – Aquaculture Potential: IND – Industrial Service Supply PRO – Industrial Process Supply ASBS – Preservation of Areas of Special Biological Significance

Requirements of this Order implement the Basin Plan.

The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for coastal waters. Requirements of this Order implement the Thermal Plan.

H. California Ocean Plan. The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, and 2005. The State Water Board adopted the latest amendment on April 21, 2005 and it became effective on February 14, 2006. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. To the extent that there is a conflict between a provision of this plan and a provision of another statewide plan or policy, or the Basin Plan, the more stringent provision shall apply except where pursuant to Chapter III.I of the Ocean Plan, the State Water Board has approved an exception.

The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized below:

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Table 6. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
Outfall 001	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish spawning and shellfish harvesting

In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan.

J. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 C.F.R. § 131.21; 65 Fed. Reg. 24641; (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000 must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

K. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on pH, total suspended solids, biochemical oxygen demand, and adsorbable organic halides (AOX). Restrictions are discussed in section IV.B of Attachment F (Fact Sheet). This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the Ocean Plan, which was approved by USEPA on February 14, 2006. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

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L. Antidegradation Policy. Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

M. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of 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 a previous permit, with some exceptions where limitations may be relaxed.

N. Endangered Species Act. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

O. Monitoring and Reporting. Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 of the CWC authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

P. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

Q. Notification of Interested Parties. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to

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submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.

R. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

III. DISCHARGE PROHIBITIONS

A. The discharge of any waste not disclosed by the Discharger or not within the reasonable contemplation of the Regional Water Board is prohibited.

B. The discharge of any waste at any point not described in Finding II.B is prohibited.

C. The creation of a pollution, contamination, or nuisance as defined by Water Code section 13050 is prohibited.

D. The discharge of sanitary wastes to the Pacific Ocean is prohibited**.**

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations during Bleached Pulp Production[2] – Discharge Point 001

During manufacture of bleached pulp, the Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP:

[2] Bleached Pulp Production shall mean the chemical delignification of pulp with chlorine compounds and by means of a Totally Chlorine-Free (TCF) bleaching process. The use of oxygen delignification is not included in this definition of bleached pulp production.

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Table 7. Effluent Limitations – Bleached Pulp

Parameter	Units	Effluent Limitations					
		Average Monthly[3]	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
TSS	lbs/day[4]	22,960		42,560			
BOD_5	lbs/day[3]	11,270		21,630			
pH[5]	standard units				5.0	9.0	
(AOX)[6]	ug/L			20			
HCH	ug/L			0.93	1.4		0.46
TCDD equivalents	pg/L	0.45					
Aldrin	ug/L	0.0026					
DDT	ug/L	0.020					

2. Final Effluent Limitations during Unbleached Pulp Production – Discharge Point 001

During manufacture of unbleached pulp, the Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001 with compliance measured at Monitoring Location EFF-001 as described in the attached MRP.

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[3] The monthly discharge (lbs/day) of BOD and TSS during production of bleached pulp is obtained from the following calculation on any calendar month:

$$\text{Monthly Discharge (lbs/day)} = \frac{8.34}{N} \sum_{i}^{N} Q_i C_i$$

in which N is the number of days of production of bleached pulp in any calendar month. Q_i and C_i are the flow rate (mgd) and the constituent concentration, respectively, which are associated with each of the N days in any calendar month.

[4] Based on a monthly average production rate of 700 ADT/day

[5] Compliance with pH limitations shall be determined in accordance with 40 CFR 401.17 and 430.22, as explained in the Fact Sheet.

[6] Compliance with the AOX limitation shall be determined by analyzing the water treatment plant effluent at INT-001 and the effluent discharge at EFF-001. The AOX measured at INT-001 shall be subtracted from the AOX measured at EFF-001 to determine compliance with this limitation.

Table 8. Effluent Limitations – Unbleached Pulp

Parameter	Units	Effluent Limitations					
		Average Monthly[7]	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
TSS	lbs/day[3]	8,400		16,800			
BOD_5	lbs/day[3]	3,920		7,840			
pH[3]	standard units				5.0	9.0	
(AOX)[4]	ug/L			20			
HCH	ug/L			0.93	1.4		0.46
TCDD equivalents	pg/L	0.45					
Aldrin	ug/L	0.0026					
DDT	ug/L	0.020					

3. **Final Effluent Limitations for the Raw Water Discharge from the Water Treatment Plant during Unbleached Pulp Production – Discharge Point 001**
The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001 with compliance measured at Monitoring Location EFF-002 as described in the attached MRP.

Table 9. Effluent Limitations – Water Treatment Plant

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
Total Suspended Solids							
Wet Season (Oct-Apr.)	lbs/d	70,000		400,000			
Dry Season (May-Sept.)	lbs/d	14,000		400,000			

B. Land Discharge Specifications *(Not Applicable)*

C. Reclamation Specifications *(Not Applicable)*

[7] The monthly discharge (lbs/day) of BOD and TSS during production of unbleached pulp is obtained from the following calculation on any calendar month:

$$\text{Monthly Discharge (lbs/day)} = \frac{8.34}{N} \sum_{i}^{N} Q_i C_i$$

in which N is the number of days of production of unbleached pulp in any calendar month. Q_i and C_i are the flow rate (mgd) and the constituent concentration, respectively, which are associated with each of the N days in any calendar month.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

The following receiving water limitations are based on water quality objectives established by the Ocean Plan and are a required part of this Order. Compliance with the water quality objectives contained in the Ocean Plan shall be determined from samples collected at stations representative of the area within the waste field where initial dilution is completed.

1. Bacterial Characteristics
   a. Body Contact Standards. Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone designated for water contact recreation use by the Regional Water Board, but including all kelp beds, the following bacteriological objectives shall be maintained throughout the water column.

      30-Day Geometric Mean – The following standards are based on the geometric mean of the five most recent samples from each receiving water monitoring location.

      i. Total coliform density shall not exceed 1,000 per 100 ml;
      ii. Fecal coliform density shall not exceed 200 per 100 mL; and
      iii. Enterococcus density shall not exceed 35 per 100 mL.

      Single Sample maximum;

      i. Total coliform density shall not exceed 10,000 per 100 ml;
      ii. Fecal coliform density shall not exceed 400 per 100 mL; and
      iii. Enterococcus density shall not exceed 104 per 100 mL.
      iv. Total coliform density shall not exceed 1,000 per 100 mL when the fecal coliform to total coliform ratio exceeds 0.1.

   b. Shellfish Harvesting**.** At all areas where shellfish may be harvested for human consumption, as determined by the Regional Water Board, the following bacteriological objectives shall be maintained throughout the water column:

      i. The median total coliform density shall not exceed 70 organisms per 100 mLs, and in not more than 10 percent of samples shall coliform density exceed 230 organisms per 100 mLs.

2. Physical Characteristics
   a. Floating particulates and grease and oil shall not be visible.

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b. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.
c. Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.
d. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.

3. Chemical Characteristics
   a. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally as a result of the discharge of oxygen demanding waste material.
   b. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.
   c. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.
   d. The concentration of substances set forth in Chapter IV, Table B of the Ocean Plan in marine sediments shall not be increased to levels that would degrade indigenous biota.
   e. The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.
   f. Nutrient levels shall not cause objectionable aquatic growths or degrade indigenous biota.
   g. Discharges shall not cause exceedances of water quality objectives for ocean waters of the State established in Table B of the Ocean Plan.
   h. Discharge of radioactive waste shall not degrade marine life.

4. Biological Characteristics
   a. Marine communities, including vertebrate, invertebrate and plant species, shall not be degraded.
   b. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.
   c. The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

5. General Standards
   a. The discharge shall not cause a violation of any applicable water quality standard for the receiving waters adopted by the Regional Water Board or the State Water Board as required by the Clean Water Act and regulations adopted thereunder.

   b. The discharge shall be essentially free of:
      i. Material that is floatable or will become floatable upon discharge.

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ii. Settleable material or substances that may form sediments that will degrade benthic communities or other aquatic life.
iii. Substances that will accumulate to toxic levels in marine waters, sediments or biota.
iv. Substances that significantly decrease natural light to benthic communities and other marine life.
v. Material that results in aesthetically undesirable discoloration of the ocean surface.

c. Waste effluent shall be discharged in a manner that provides sufficient initial dilution to minimize the concentrations of substances not removed in the treatment.

B. Groundwater Limitations *(Not Applicable)*

VI. PROVISIONS

A. Standard Provisions

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

2. **Regional Water Board Standard Provisions**. The Discharger shall comply with the following provisions:

   a. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

   b. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, interim or final effluent limitation, land discharge specification, reclamation specification, receiving water limitation, or provision of this Order that may result in a significant threat to human health or the environment, such as inundation of treatment components, breach of pond containment, sanitary sewer overflow, irrigation runoff, etc., that results in a discharge to a drainage channel or a surface water, the Discharger shall as soon as possible, but no later than two (2) hours after becoming aware of the discharge, orally notify the State Office of Emergency Services, the local health officer or directors of environmental health with jurisdiction over the affected water bodies, and the Regional Water Board.

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c. As soon as possible, but no later than twenty-four (24) hours after becoming aware of an unauthorized discharge to a drainage channel or a surface water, the Discharger shall submit to the Regional Water Board a written certification that the State Office of Emergency Services and the local health officer or 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.

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

a. **Standard Revisions.** If applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, the Regional Water Board may reopen this Order and make modifications in accordance with such revised standards.

b. **Reasonable Potential.** This Order may be reopened for modification to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above an Ocean Plan Table B water quality objective.

c. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a limitation for a specific toxicant identified in the TRE.

d. **Tiered Effluent Limitations.** If the pulp production rates change significantly during the life of this Order, the Regional Water Board may reopen this Order and make modifications in production-based effluent limitations for BOD and total suspended solids.

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2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

i. **Whole Effluent Toxicity.** The MRP of this Order requires routine monitoring for whole effluent toxicity at Monitoring Location EFF-001, as described in Table E-1 of the MRP, to determine compliance with the Ocean Plan's water quality objective for toxicity. As established by the MRP, if the results of whole effluent toxicity tests exceed the chronic toxicity water quality objective of 116 TUc, the Discharger shall conduct accelerated toxicity monitoring.

Results of accelerated toxicity monitoring will indicate a need to conduct a Toxicity Reduction Evaluation (TRE), if toxicity persists; or it will indicate that a return to routine toxicity monitoring is justified because persistent toxicity has not been identified by accelerated monitoring. TREs shall be conducted in accordance with the TRE workplan and the TRE Action Plan prepared by the Discharger pursuant to Section VI. C. 2. a. ii. of this Order, below, and section V.A.8.c of the MRP, respectively.

ii. **Toxicity Reduction Evaluations (TRE) workplan.** The Discharger shall prepare and submit to the Regional Water Board Executive Officer a TRE workplan by **December 1, 2010**. This plan shall be reviewed and updated as necessary in order to remain current and applicable to the discharge and discharge facilities. The workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include at least the following items:

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

iii. **Toxicity Reduction Evaluations (TRE).** The TRE shall be conducted in accordance with the following:
(a) The TRE shall be initiated within 30 days of the date of completion of the accelerated monitoring test, required by Section V of the MRP, if that test result exceeds the chronic toxicity water quality objectrive.
(b) The TRE shall be conducted in accordance with the Discharger's workplan.
(c) The TRE shall be in accordance with current technical guidance and reference material including, at a minimum, the USEPA manual EPA/833B-99/002.

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(d) The TRE may end at any stage if, through monitoring results, it is determined that there is no longer consistent toxicity.
(e) The Discharger may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. As guidance, the Discharger shall use the USEPA chronic manual, EPA/600/6-91/005F (Phase I), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III).
(f) As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the source(s) and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with acute or chronic toxicity parameters.
(g) Many recommended TRE elements may be implemented in tandem with required efforts of source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements of recommendations of such programs may be acceptable to comply with requirements of the TRE.
(h) The Regional Water Board recognizes that chronic toxicity may be episodic and identification of a reduction of sources of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

3. Best Management Practices and Pollution Prevention

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

(1) The concentration of the pollutant is reported as DNQ and the effluent limitation is less than the reported Minimum Level (ML); or

(2) The concentration of the pollutant is reported as Not Detected (ND) and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section X.B.4.

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

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(1) 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;

(2) Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;

(3) 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;

(4) Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

(5) An annual status report that shall be sent to the Regional Water Board including:

(a) All PMP monitoring results for the previous year;

(b) A list of potential sources of the reportable priority pollutant(s);

(c) A summary of all actions undertaken pursuant to the control strategy; and

(d) A description of actions to be taken in the following year.

b. Spill Prevention and Control

i. **Plan Preparation.** The Discharger shall implement a Best Management Practices (BMP) Plan to prevent or otherwise contain leaks and spill of spent pulping liquors, soap, and turpentine, and to control intentional diversions of these materials. The BMP Plan shall be based on best engineering practices and shall be implemented in a manner that takes into account the specific circumstances at the Samoa Pulp Mill. At a minimum, the BMP Plan should include

(a) initial and refresher training of operators, maintenance personnel, and other technical and supervisory personnel who have responsibility for operating, maintaining, or supervising the operation and maintenance of equipment;

(b) engineering analyses of problem areas and appropriate prevention and control strategies;

(c) preventive maintenance;

(d) engineered controls and containment;

(e) work practices;

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(f) surveillance and repair programs;

(g) dedicated monitoring and alarm systems; and

(h) recordkeeping to document implementation of these practices.

Additional BMPs that should be considered include:

(i) secondary containment diking around pulping liquor and storage tanks;

(j) covered storage tank capacity for collected spills and planned liquor diversions;

(k) automated spill detection systems, such as high level, flow, and conductivity monitors and alarms; and

(l) backup equipment capacity to handle process upset conditions.

ii. **Plan Amendment and Review** The Discharger shall review and evaluate its BMP plan at least once every five years or more often whenever there is a change in mill design, operation or maintenance that materially affects the potential for leaks or spills.

4. **Construction, Operation and Maintenance Specifications** *(Not Applicable)*

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

6. **Other Special Provisions** *(Not Applicable)*

7. **Compliance Schedules** *(Not Applicable)*

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of this Order that are derived from Ocean Plan Table B water quality objectives shall be determined as specified below:

A. Compliance with Single-Constituent Effluent Limitations.

Dischargers are out of compliance with the effluent limitation if the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum* Level.

B. Compliance with Effluent Limitations expressed as a Sum of Several Constituents

Dischargers are out of compliance with an effluent limitation which applies to the sum of a group of chemicals (e.g., PCB's) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as ND or DNQ.

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C. Multiple Sample Data Reduction

The concentration of the pollutant in the effluent may be estimated from the result of a single sample analysis or by a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses when all sample results are quantifiable (i.e., greater than or equal to the reported Minimum* Level). When one or more sample results are reported as ND or DNQ, the central tendency concentration of the pollutant shall be the median (middle) value of the multiple samples. If, in an even number of samples, one or both of the middle values is ND or DNQ, the median will be the lower of the two middle values.

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ATTACHMENT A – DEFINITIONS

Acute Toxicity

a. Acute Toxicity (TUa)

Expressed in Toxic Units Acute (TUa)

$$TUa = \frac{100}{\text{96-hr LC 50\%}}$$

b. Lethal Concentration 50% (LC 50)

LC 50 (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay techniques using standard marine test species as specified in Ocean Plan Appendix III. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC 50 may be determined after the test samples are adjusted to remove the influence of those substances.

When it is not possible to measure the 96-hour LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$TUa = \frac{\log (100 - S)}{1.7}$$

where:

S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

Areas of Special Biological Significance (ASBS): Those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of STATE WATER QUALITY PROTECTION AREAS.

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

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

Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

Chronic Toxicity: This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response.

a. Chronic Toxicity (TUc)

Expressed as Toxic Units Chronic (TUc)

$$TUc = \frac{100}{NOEL}$$

b. No Observed Effect Level (NOEL)

The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Ocean Plan Appendix III, Table III-1.

Coefficient of Variation (CV): the measure of the data variability that 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

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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.

DDT shall mean the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.

Degrade: Degradation shall be determined by comparison of the waste field and reference site(s) for characteristic species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

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

Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.

Downstream Ocean Waters: Waters downstream with respect to ocean currents.

Dredged Material: Any material excavated or dredged from the navigable waters of the United States, including material otherwise referred to as "spoil".

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

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay,

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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.

Endosulfan: The sum of endosulfan-alpha and -beta and endosulfan sulfate.

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

Estuaries and Coastal Lagoons are waters at the mouths of streams that serve as areas of mixing for fresh and ocean waters during a major portion of the year. 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 the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta, as defined by Section 12220 of the California Water Code, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

HCH shall mean the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

Inhibition Concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal, non-quantal biological measurement, such as growth. For example, an IC25 is the estimated concentration of toxicant that would cause a 25 percent reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as U.S. EPA's Bootstrap Procedure.

Initial Dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and non-buoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Board, whichever results in the lower estimate for initial dilution.

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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).

Kelp Beds, for or purposes of the bacteriological standards of the Ocean Plan, are significant aggregations of marine algae of the genera *Macrocystis* and *Nereocystis*. Kelp beds include the total foliage canopy of *Macrocystis* and *Nereocystis* throughout the water column.

Lowest Observed Effect Concentration (LOEC) is the lowest concentration of toxicant to which organisms are exposed in a test, which causes statistically significant adverse effects on the test organisms (i.e., where the values for the observed endpoints are statistically significantly different from the control).

Mariculture: The culture of plants and animals in marine waters independent of any pollution source.

Material: (a) In common usage: (1) the substance or substances of which a thing is made or composed (2) substantial; (b) For purposes of the Ocean Plan relating to waste disposal, dredging and the disposal of dredged material and fill, MATERIAL means matter of any kind or description which is subject to regulation as waste, or any material dredged from the navigable waters of the United States. See also, DREDGED MATERIAL.

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

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

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

Minimum Level (ML) is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample

that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Natural Light: Reduction of natural light may be determined by the Regional Water Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Regional Water Board.

No Observed Effect Concentration (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

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

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

PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

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

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not

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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.

Reported Minimum Level: The ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix II of the Ocean Plan in accordance with section III.C.5.a. of the Ocean Plan or established in accordance with section III.C.5.b. of the Ocean Plan. 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.

Shellfish: Organisms identified by the California Department of Public Health as shellfish for public health purposes (i.e., mussels, clams and oysters).

Significant Difference: Defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

Six-Month Median Effluent Limitation: The highest allowable moving median of all daily discharges for any 180-day period.

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

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

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

where:

x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

State Water Quality Protection Areas (SWQPAs): Non-terrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE (ASBS) that were previously designated by the State Water Board in Resolution No. 74-28, 74-32, and 75-61 are now also classified as a subset of State Water Quality Protection Areas and require special protections afforded by the Ocean Plan.

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TCDD Equivalents shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8 tetra CDF	0.1
1,2,3,7,8 penta CDF	0.05
2,3,4,7,8 penta CDF	0.5
2,3,7,8 hexa CDFs	0.1
2,3,7,8 hepta CDFs	0.01
octa CDF	0.001

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

Waste: As used in the Ocean Plan, waste includes a Discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

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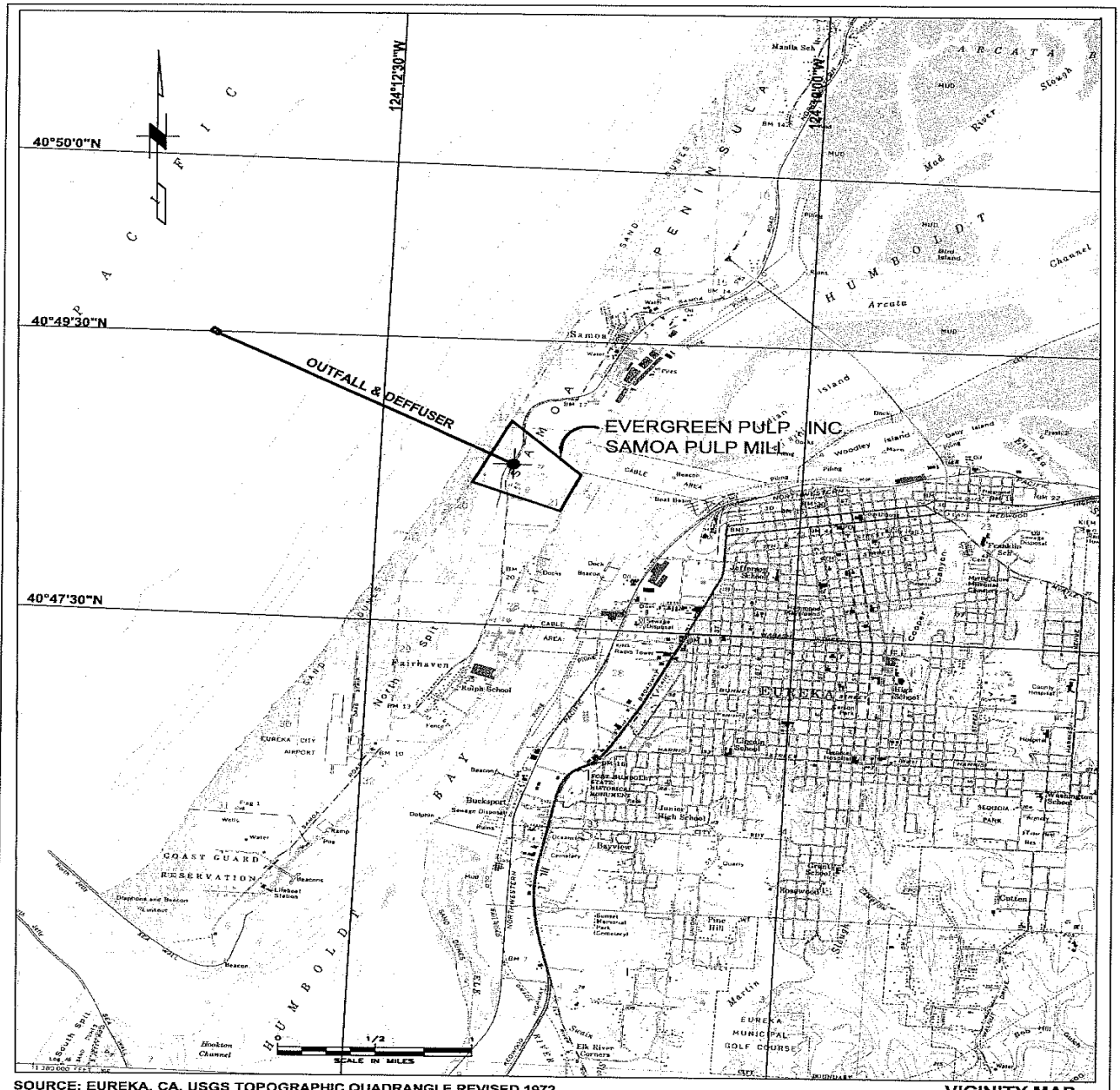
ATTACHMENT B – MAP



SOURCE: EUREKA, CA. USGS TOPOGRAPHIC QUADRANGLE REVISED 1972

VICINITY MAP

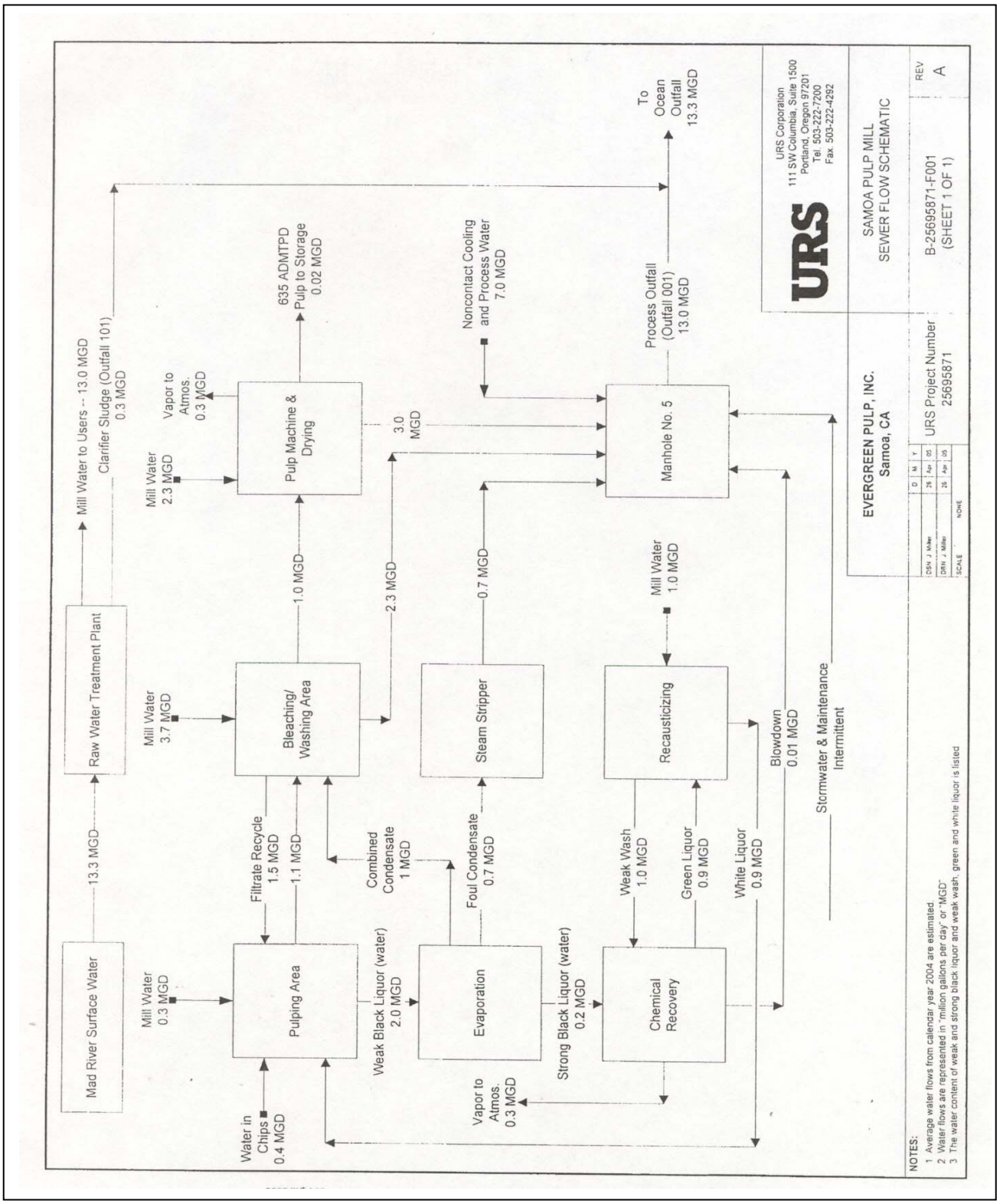
URS

MAY 2005

Evergreen Pulp, Inc.
Samoa Pulp Mill
Eureka, California

FIGURE 2

ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D –STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 C.F.R. § 122.41(a).)

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

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E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)

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

F. Inspection and Entry

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

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 C.F.R. § 122.41(i)(1));

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 C.F.R. § 122.41(i)(2));

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 C.F.R. § 122.41(i)(3)); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 C.F.R. § 122.41(i)(4).)

G. Bypass

1. Definitions

   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)

   b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be

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expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)

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

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and

   c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)

4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

5. Notice

   a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i).)

   b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii).)

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H. Upset

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

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)

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

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));

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

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

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

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or

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termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

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

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include:

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

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)

2. All permit applications shall be signed by 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

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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 USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

   c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware

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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 Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 2 hours from the time the Discharger becomes aware of the circumstances. Compliance with the 2 hour reporting requirement meets the minimum reporting requirement set forth in section 122.41(l)(6)(i) of title 40 of the code of federal regulations. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)

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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 2 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

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

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

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are 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 Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R. § 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

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

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H. Other Noncompliance

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

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (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 (µg/L) (40 C.F.R. § 122.42(a)(1)(i));

   b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4, 6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 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 40 CFR Section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)

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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 (µg/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 40 CFR 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 section 122.48 requires that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. Wastewater Monitoring Provision. Composite samples may be taken by a proportional sampling device approved by the Executive Officer or by grab samples composited in proportion to flow. In compositing grab samples, the sampling interval shall not exceed one hour.

B. If the Discharger monitors any pollutant more frequently than required by this Order, using test procedures approved by section 136 or as specified in this Order, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the monthly and annual discharger monitoring reports.

C. Laboratories analyzing monitoring samples shall be certified by the Department of Public Health, in accordance with the provisions of Water Code section 13176, and must include quality assurance / quality control data with their analytical reports.

II. MONITORING LOCATIONS

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

Table E-1A. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	INT-001	Internal monitoring station representing treated water supply prior to use in the Pulp Mill.
001	EFF-001	Combined discharge of all pulp mill process wastewaters (Manhole 5)
001	EFF-002	Raw water treatment plant sludge discharge prior to mixing with other pulping process wastewaters (formerly Outfall 101)
--	RSW-001	Receiving water at a location within the zone of initial dilution at discharge outfall at 40º, 49', 10" N, 124 º13'30'W
--	RSW-002	Receiving water at a location immediately outside the zone of initial dilution
--	REF-001	The reference station in the ocean at least 1,000 feet upcurrent of the effluent plume, representing natural background and natural water quality conditions

Table E-1B. Benthic Monitoring Station Locations

STATION	CALIFORNIA COORDINATES (Lambert Projection)		LATITUDE NORTH	LONGITUDE WEST
	NORTH	EAST		
ST31	547188.74	1381203.50	40°48′49″	124°14′09″
NT31	553087.46	1384078.38	40°49′48″	124°13′34″
ST28	546649.69	1382309.53	40°48′44″	124°13′55″
SM28	548124.37	1383028.25	40°48′59″	124°13′46″
CT28	549599.05	1383746.97	40°49′14″	124°13′37″
NM28	551073.73	1384465.69	40°49′29″	124°13′28″
NT28	552548.41	1385184.41	40°49′43″	124°13′19″
ST25	546110.64	1383415.56	40°48′39″	124°13′40″
SM25	547585.32	1384134.28	40°48′54″	124°13′31″
SD25	548322.66	1384493.64	40°49′01″	124°13′27″
ND25	549797.34	1385212.36	40°49′16″	124°13′18″
NM25	550534.68	1385571.72	40°49′24″	124°13′13″
NT25	552009.36	1386290.44	40°49′38″	124°13′05″
ST22	545571.59	1384521.60	40°48′34″	124°13′25″
SM22	547046.27	1385240.31	40°48′49″	124°13′17″
CT22	548520.95	1385959.03	40°49′04″	124°13′08″
NM22	549995.63	1386677.75	40°49′19″	124°12′59″
NT22	551470.31	1387396.47	40°49′33″	124°12′50″
ST19	545032.54	1385627.63	40°48′29″	124°13′11″
NT19	550931.26	1388502.50	40°49′28″	124°12′36″
NC25	572647.70	1396349.00	40°53′05″	124°11′00″

Table E-1C. Trawling Station Locations

TRAWL STATION NAME	DESCRIPTION
Trawl Track TR1	Southernmost trawl track running upcurrent along the 25-meter depth contour between 3,000 meters south and 4,500 meters south of the outfall diffuser for 10 minutes
Trawl Track TR2	Running upcurrent along the 25-meter depth contour between the outfall diffuser and 1,500 meters south of the diffuser for 10 minutes
Trawl Track TR3	Running upcurrent along the 25-meter depth contour between the outfall diffuser and 1,500 meters north of the diffuser for 10 minutes
Trawl Track TR4	Running upcurrent along the 25-meter depth contour between 3,000 meters north and 4,500 meters north of the outfall diffuser for 10 minutes
Trawl Track TR5	Northernmost trawl track running upcurrent along the 25-meter depth contour between benthic monitoring station NC25 (8,000 meters north of the outfall diffuser) and 1,500 meters north of station NC25 for 10 minutes

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III. INTERNAL MONITORING REQUIREMENTS

A. Monitoring Location INT-001

1. The Discharger shall monitor treated water supply prior to use in the Pulp Mill at INT-001 as follows:

Table E-2. Internal Monitoring INT-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Adsorbable Organic Halides (AOX)	ug/L	24-hour composite	monthly during unbleached pulp production	EPA Method 1650 (20 ug/L)

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor combined wastewater flow to the outfall (including raw water treatment plant clarifier sludge) at **EFF-001** as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-3. Effluent Monitoring EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units)[1]
Flow	MGD	daily total	continuous	recording meter
BOD_5	mg/L	24-hour composite	daily	Standard Method 5210B
Total Suspended Solids	mg/L	24-hour composite	daily	Standard Method 2540D
pH	pH	recording meter	continuous	40CFR136
AOX	ug/L	24-hour composite	monthly	EPA Method 1650 (20 ug/L)
HCH	ug/L	24-hour composite	monthly	40CFR136 (0.02)
TCDD Equivalents	ug/L	24-hour composite	quarterly	40CFR136
Aldrin	ug/L	24-hour composite	quarterly	40CFR136 (0.005)
DDT	ug/L	24-hour composite	quarterly	40CFR136 (0.05)
Arsenic	ug/L	24-hour composite	semiannually [2]	40CFR136 (1)

[1] For toxic pollutants with effluent limitations, detection limits shall be below the effluent limitations. If the lowest minimum level (ML) published in Appendix II of the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) is not below the effluent limitation, the detection limit shall be the lowest ML. For toxic pollutants without effluent limitations, the detection limits shall be equal to or less than the lowest ML published in Appendix II of the Ocean Plan.

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Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units)[1]
Cadmium	ug/L	24-hour composite	semiannually	40CFR136 (0.2)
Hexavalent Chromium	ug/L	24-hour composite	semiannually	40CFR136 (5)
Copper	ug/L	24-hour composite	semiannually	40CFR136 (0.5)
Lead	ug/L	24-hour composite	semiannually	40CFR136 (0.5)
Mercury	ug/L	Grab	semiannually	40CFR136 (0.2)
Nickel	ug/L	24-hour composite	semiannually	40CFR136 (1)
Selenium	ug/L	24-hour composite	semiannually	40CFR136 (1)
Silver	ug/L	24-hour composite	semiannually	40CFR136 (0.2)
Zinc	ug/L	24-hour composite	semiannually	40CFR136 (1)
Cyanide	ug/L	24-hour composite	semiannually	40CFR136 (5)
Total Chlorine Residual	ug/L	Grab	semiannually	40CFR136
Ammonia	ug/L	Grab	semiannually	40CFR136
Phenolic Compounds (non-chlorinated)	ug/L	24-hour composite	semiannually	40CFR136 (1)
Chlorinated Phenolics	ug/L	24-hour composite	semiannually	40CFR136 (1)
Endosulfan	ug/L	24-hour composite	semiannually	40CFR136 (0.02)
Endrin	ug/L	24-hour composite	semiannually	40CFR136 (0.01)
Acrolein	ug/L	Grab	semiannually	40CFR136 (2)
Antimony	ug/L	24-hour composite	semiannually	40CFR136 (0.5)
bis(2-chloroethoxy) methane	ug/L	24-hour composite	semiannually	40CFR136 (5)
bis(2-chloroisopropyl) ether	ug/L	24-hour composite	semiannually	40CFR136 (2)
Chlorobenzene	ug/L	Grab	semiannually	40CFR136 (0.5)
Chromium	ug/L	24-hour composite	semiannually	40CFR136 (0.5)
di-n-butyl phthalate	ug/L	24-hour composite	semiannually	40CFR136 (10)
Dichlorobenzenes	ug/L	Grab	semiannually	40CFR136 (2)
Diethyl phthalate	ug/L	24-hour composite	semiannually	40CFR136 (2)
Dimethyl phthalate	ug/L	24-hour composite	semiannually	40CFR136 (2)
4,6-dinitro-2-methylphenol	ug/L	24-hour composite	semiannually	40CFR136 (5)
2,4-dinitrophenol	ug/L	24-hour composite	semiannually	40CFR136 (5)
Ethylbenzene	ug/L	Grab	semiannually	40CFR136 (0.5)
Fluoranthene	ug/L	24-hour composite	semiannually	40CFR136 (0.05)
Hexachlorocyclopentadiene	ug/L	24-hour composite	semiannually	40CFR136 (5)
Nitrobenzene	ug/L	24-hour composite	semiannually	40CFR136 (1)
Thallium	ug/L	24-hour composite	semiannually	40CFR136 (1)
Toluene	ug/L	Grab	semiannually	40CFR136 (0.5)
Tributyltin	ug/L	24-hour composite	semiannually	40CFR136
1,1,1-trichloroethane	ug/L	Grab	semiannually	40CFR136 (0.5)
Acrylonitrile	ug/L	Grab	semiannually	40CFR136 (2)
Benzene	ug/L	Grab	semiannually	40CFR136 (0.5)
Benzidine	ug/L	24-hour composite	semiannually	40CFR136 (5)

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Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units)[1]
Beryllium	ug/L	24-hour composite	semiannually	40CFR136 (0.5)
bis(2-chloroethyl) ether	ug/L	24-hour composite	semiannually	40CFR136 (1)
bis(2-ethylhexyl) phthalate	ug/L	24-hour composite	semiannually	40CFR136 (5)
Carbon tetrachloride	ug/L	Grab	semiannually	40CFR136 (0.5)
Chlordane	ug/L	24-hour composite	semiannually	40CFR136 (0.1)
Chlorodibromomethane	ug/L	Grab	semiannually	40CFR136 (0.5)
chloroform	ug/L	Grab	semiannually	40CFR136 (0.5)
1,4-dichlorobenzene	ug/L	Grab	semiannually	40CFR136 (0.5)
3,3'-dichlorobenzidine	ug/L	24-hour composite	semiannually	40CFR136 (5)
1,2-dichloroethane	ug/L	Grab	semiannually	40CFR136 (0.5)
1,1-dichlorethylene	ug/L	Grab	semiannually	40CFR136 (0.5)
Dichlorobromomethane	ug/L	Grab	semiannually	40CFR136 (0.5)
Dichloromethane	ug/L	Grab	semiannually	40CFR136 (0.5)
1,3-dichloropropene	ug/L	24-hour composite	semiannually	40CFR136 (0.5)
Dieldrin	ug/L	24-hour composite	semiannually	40CFR136 (0.01)
2,4-dinitrotoluene	ug/L	24-hour composite	semiannually	40CFR136 (5)
1,2-diphenylhydrazine	ug/L	24-hour composite	semiannually	40CFR136 (1)
Halomethanes	ug/L	Grab	semiannually	40CFR136 (1)
Heptachlor	ug/L	24-hour composite	semiannually	40CFR136 (0.01)
Heptachlor epoxide	ug/L	24-hour composite	semiannually	40CFR136 (0.01)
Hexachlorobenzene	ug/L	24-hour composite	semiannually	40CFR136 (1)
Hexachlorobutadiene	ug/L	24-hour composite	semiannually	40CFR136 (1)
Hexachloroethane	ug/L	24-hour composite	semiannually	40CFR136 (1)
Isophorone	ug/L	24-hour composite	semiannually	40CFR136 (1)
N-nitrosodimethylamine	ug/L	24-hour composite	semiannually	40CFR136 (5)
N-nitroso di-N-propylamine	ug/L	24-hour composite	semiannually	40CFR136 (5)
N-nitrosodiphenylamine	ug/L	24-hour composite	semiannually	40CFR136 (1)
PAHs	ug/L	24-hour composite	semiannually	40CFR136 (10)
PCBs	ug/L	24-hour composite	semiannually	40CFR136 (0.5)
1,1,2,2-tetrachloroethane	ug/L	Grab	semiannually	40CFR136 (0.5)
Tetrachloroethylene	ug/L	Grab	semiannually	40CFR136 (0.5)
Toxaphene	ug/L	24-hour composite	semiannually	40CFR136 (0.5)
Trichlorethylene	ug/L	Grab	semiannually	40CFR136 (0.5)
1,1,2-trichloroethane	ug/L	Grab	semiannually	40CFR136 (0.5)
2,4,6-trichlorophenol	ug/L	24-hour composite	semiannually	40CFR136 (10)
Vinyl chloride	ug/L	Grab	semiannually	40CFR136 (0.5)

[2] Semiannual monitoring for Table B pollutants shall be collected in months not previously sampled

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B. Monitoring Location EFF-002

1. The Discharger shall monitor the raw water treatment plant discharged to the outfall at **EFF-002** as follows:

Table E-3. Effluent Monitoring EFF-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Flow	MGD	daily total	continuous	recording meter
TSS	mg/L	24-hour composite	weekly during unbleached pulp production	Standard Method 2540D

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

Although effluent limitations for whole effluent toxicity (WET) are not established by the Order, WET testing of discharges and receiving water is required by this MRP to determine compliance with water quality objectives established by the Ocean Plan for chronic WET. In certain circumstances, accelerated WET testing and/or a Toxicity Reduction Evaluation (TRE) are required by the MRP when WET "triggers" are exceeded. Table E-5 below, summarizes the WET testing requirements of the MRP.

Table E-4. Summary of WET Testing Requirements

Monitoring Location	WET Testing Requirement
EFF-001	Chronic WET shall be tested at least 2 times per year.

A. Chronic Toxicity Testing

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

1. **Test Frequency**. The Discharger shall conduct chronic WET testing in accordance with the schedules established by this MRP, as summarized in Table E-4 above.
2. **Sample Type.** For static renewal or static non-renewal testing, effluent samples and receiving water samples shall be grab samples that are representative of the volume and quality of the discharge from the facility. For toxicity tests requiring renewals, grab samples collected on successive days are required.

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3. **Test Species.** Critical life stage bioassay testing shall be conducted with a vertebrate, an invertebrate, and a plant species using an approved test, and test species, as presented below in Table E-5.

Table E-5. Approved Tests—Chronic Toxicity

Species	Test	Tier [1]	Reference [2]
Giant kelp, *Macrocystis pyrifera*	percent germination; germ tube length	1	a, b
Red abalone, *Haliotis rufescens*	abnormal shell development	1	a, b
Oyster, *Crassostrea gigas*; mussels, *Mytilus spp*.	abnormal shell development; percent survival	1	a, b
Urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	percent normal development	1	a, b
Urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	percent fertilization	1	a, b
Shrimp, *Homesimysis costata*	percent survival; growth	1	a, b
Topsmelt, *Atherinops affinis*	larval growth rate; percent survival	1	a, b

[1] First tier methods (designated "1" in this column) are preferred for compliance monitoring. If first tier organisms are not available, the Discharger can use a second tier test method (designated "2" in the above column) following approval by the Regional Water Board.

[2] Protocol References:
a. Chapman, G.A., D.L. Denton, and J.M. Lazorchak. 1995. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms. U.S. EPA Report No. EPA/600/R-95/136.
b. SWRCB 1996. Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project. 96-1WQ.

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 West Coast Marine and Estuarine Organisms (USEPA Report No. EPA/600/R-95/136, or subsequent editions), Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms (USEPA Report No. EPA-821-R-02-014 or subsequent editions), or other methods approved by the Executive Officer.
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: 1.0, 0.75, 0.5, 0.25 and 0.2 percent, and a control. Control and dilution water shall be receiving water collected at an appropriate location beyond the influence of the discharge. Laboratory water may be substituted for receiving water, as described in the USEPA test methods manual, upon approval by the Executive Officer. If the dilution water used is different from the culture water, a second control using culture water shall be used.

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6. **Reference Toxicant.** If organisms are not cultured in-house, concurrent testing with a reference toxicant shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests also shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).
7. **Test Failure.** If either the reference toxicant test or the chronic toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger shall re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.
8. **Accelerated Monitoring Requirements**. If the result of any chronic toxicity test exceeds a monitoring "trigger" of 116 TUc (the water quality objective for chronic toxicity established by the Ocean Plan), and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring. Accelerated monitoring shall consist of four additional samples – with one test conducted approximately every week over a four week period. Testing shall commence within 14 days of receipt of initial sample results which indicated an exceedance of the chronic toxicity "trigger." If the discharge will cease before the additional samples can be collected, the Discharger shall contact the Executive Officer within 21 days with a plan to address elevated levels of chronic toxicity in effluent and/or receiving water. The following protocol, which should be incorporated into the TRE Workplan, shall be used for accelerated monitoring and TRE implementation:
    a. If the results of four consecutive accelerated monitoring tests do not exceed the chronic toxicity "trigger" of 116 TUc, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, if there is adequate evidence of a pattern of effluent toxicity, the Regional Water Board's Executive Officer may require that the Discharger initiate a TRE.
    b. If the source(s) of the toxicity is easily identified (i.e. temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring "trigger." Upon confirmation that the chronic toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.
    c. If the result of any accelerated toxicity test exceeds the monitoring "trigger", the Discharger shall cease accelerated monitoring and initiate a TRE to investigate the cause(s) and identify corrective actions to reduce or eliminate the chronic toxicity. Within thirty (30) days of notification by the laboratory of the test results exceeding the monitoring "trigger" during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Regional Water Board. The TRE Action Plan shall include, at minimum:

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(1) Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;
(2) Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
(3) A schedule for these actions.

9. **Notification.** The Discharger shall notify the Regional Water Board in writing 14 days after the receipt of test results, which indicate the exceedance of the monitoring "trigger" for chronic toxicity.

B. Chronic Toxicity Reporting

1. **Routine Reporting**. All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals.

   The WET test report shall contain a narrative report that includes details about WET test procedures and results, including the following:

   a. Test Procedures

   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 NO

   vi. EC, TU_c and IC_{25};

   vii. identification of any anomalies or nuances in the test procedures or results;

   viii. Summary and Conclusions section.

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

   i. sample date(s)

   ii. test initiation date

   iii. test species

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iv. end point values for each dilution (e.g., number of young, growth rate, percent survival)

v. NOEC value(s) in percent effluent

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

vii. TUc values (100/NOEC)

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

ix. NOEC and LOEC values for reference toxicant test(s)

x. IC50 or EC50 value(s) for reference toxicant test(s)

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

xii. Statistical methods used to calculate endpoints.

xiii. The statistical output page, which includes the calculation of percent minimum significant difference (PMSD.)

xiv. Results of applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD and dates tested; the reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory; and any information on deviations from standard test procedures or problems encountered in completing the test and how the problems were resolved.

2. **Quality Assurance Reporting**: Because the permit requires sublethal hypothesis testing endpoints from methods 1006.0 and 1007.0 in the test methods manual titled Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms (EPA-821-R-02-014, 2002), in-test variability must be reviewed for acceptability and variability criteria (upper and lower PMSD bounds) must be applied, as directed under section 10.2.8 – Test Variability of the test methods manual. Under section 10.2.8, the calculated PMSD for both reference toxicant test and effluent toxicity test results must be compared with the upper and lower PMSD bounds variability criteria specified in Table 6 – Variability Criteria (Upper and Lower PMSD Bounds) for Sublethal Hypothesis Testing Endpoints Submitted Under NPDES Permits, following the review criteria in paragraphs 10.2.8.2.4.1 through 10.2.8.2.4.5 of the test methods manual. Based on this review, only accepted effluent toxicity test results shall be reported.

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3. **Compliance Summary**: The results of the chronic toxicity testing shall be provided in the most recent self-monitoring report and shall include a summary table organized by test species, type of test (survival, growth or reproduction) and monitoring frequency of toxicity data from at least three of the most recent samples. The final report shall clearly demonstrate that the Discharger is in compliance with effluent limitations and other permit requirements.

VI. LAND DISCHARGE MONITORING REQUIREMENTS *(NOT APPLICABLE)*

VII. RECLAMATION MONITORING REQUIREMENTS *(NOT APPLICABLE)*

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Offshore Monitoring

1. The Discharger shall conduct water quality monitoring of the Pacific Ocean at RSW-001, RSW-002 and REF-001 as follows:

Table E-6. Receiving Water Quality Monitoring – Offshore

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total suspended solids			Annually[2]	Standard Method 2540D
turbidity	NTU	grab	Annually[2]	Standard Method 2130B
dissolved oxygen	mg/L	grab	Annually[2]	40CFR136
pH	pH	grab	Annually[2]	40CFR136
Oil and Grease	mg/L	grab	Annually[2]	40CFR136
Visible particles	P/A	observation	Annually[2]	---
Light transmittance	% transmittance	meter	Annually[2]	---

B. Benthic Monitoring

1. **Sediment.** Beginning in 2009, one pooled bottom sediment sample, consisting of sediments collected from three replicate grabs, shall be collected from all Benthic Monitoring Stations identified in Table E-1B and analyzed as follows:

[2] Based on results of the first year of monitoring, the Regional Water Board Executive Officer will determine the frequency of monitoring as well as the specific parameters to be monitored thereafter; however, monitoring shall be required, at a minimum, at least two times during the term of the permit.

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Table E-7. Receiving Water Quality Monitoring – Benthic Sediment

Parameter	Units	Minimum Sampling Frequency	Required Analytical Test Method
Grain size dsitribution	Percent greater than phi	Biennially	
BOD_5	mg/kg	Biennially	40CFR136
Grease and Oil	mg/kg	Biennially	Standard Method 2130B
Total organic carbon	percent	Biennially	40CFR136
Dissolved sufides	mg/kg	Biennially	40CFR136
Oil and Grease	mg/kg	Biennially	40CFR136
HCH	ug /kg	Biennially	40CFR136 (0.02)
DDT	ug /kg	Biennially	40CFR136 (0.05)
Aldrin	ug /kg	Biennially	40CFR136 (0.005)
TCDD Equivalents	ug /kg	Biennially	40CFR136

2. **Infauna.** Samples of bottom sediments shall be collected separately from those collected for sediment analyses from all Benthic Monitoring Stations in Table E-1B. The minimum screen size for collecting benthic infauna shall be 1.0 mm.

   The biomass of infauna shall be estimated from wet weight measurements for each of the following taxa: mollusks, echinoderms, polychaetes, crustaceans, and other taxa. Community analysis shall consist of number of species, number of individuals per species and total numerical abundance, and biomass. Community analysis shall also include but not be limited to, the following: number of species per 0.1 m^2, total number of species per station, total numerical abundance, biomass, infaunal trophic index, Swarz' 75% dominance index, Shannon-Weiner's diversity index, and Margalef's Species Richness. The Discharger shall also conduct additional analysis, as appropriate, to elucidate temporal and spatial trends in the data.

C. Demersal Fish and Invertebrate Monitoring

The Discharger shall conduct trawls to assess the populations of demersal fish and epibenthic macroinvertebrates, and to determine whether differences exist between populations near the outfall diffuser and populations found outside the zone of initial dilution. Trawling shall be conducted every other calendar year, beginning in 2009, with duplicate trawls at all trawl stations (Table E-1C). Trawls shall be conducted using a Marinovich 7.62 meter (25 ft) head rope otter trawl having 3.8 cm (1.5 in) body mesh and 0.6 cm (0.25 in) cod-end liner mesh, or equivalent. Trawls shall be towed along the 11.6 m (38 ft) depth contour for a duration of 10 minutes at a uniform speed of between 2.0 and 2.5 knots. Necessary steps shall be taken to ensure that the second trawl at each station

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covers the same distance but does not sweep the same path as the first trawl or cover the stations sampled for benthic sediments and infauna.

Fish and macroinvertebrates collected by each trawl shall be identified to the lowest taxon possible. At all stations, community structure shall be conducted. Community structure analysis shall consist of: the wet weight of each species, number of individuals per species, total numerical abundance, species richness, species diversity, and other statistical analysis, as necessary, to compare monitoring results with previous studies in the vicinity of the outfall. Abnormalities and disease symptoms (e.g., fin erosion, external lesions, tumors, and parasites) shall also be recorded and itemized.

D. Bioaccumulation Monitoring

Beginning in calendar year 2009, muscle and hepatopancreas tissue of Dungeness crabs (*Cancer magister*) shall be analyzed for HCH, DDT, Aldrin, and TCDD equivalents. Collection of the crabs by trapping or trawl for tissue analysis shall occur near trawl stations T3 and T5. At each station, three composite samples shall be prepared for each tissue type. Each composite sample shall consist of tissues from at least six Dungeness crabs of similar size. If six Dungeness crabs are not caught at each station, the Discharger shall collect and analyze muscle and liver tissues from trawl-caught English sole (*Parophrys vetulus*). If neither Dungeness crabs nor English sole are caught in sufficient number, the Discharger may nominate other available species to fulfil the requirements as necessary. Any substitutions must be approved by the Regional Water Board and the California Department of Fish and Game prior to analysis. Results from muscle and tissue analyses shall be compared to results from analyses of muscle and tissue samples collected at a reference station outside the influence of the discharge

IX. OTHER MONITORING REQUIREMENTS

A. Production Reporting Requirements

1. The Discharger shall notify the Regional Water Board at least two business days prior to a change in production from bleached to unbleached pulp, or vice versa, and provide the anticipated rate of production and the duration the change in production is expected to continue.

2. The Discharger shall report, in the monthly self monitoring report, the daily production type (i.e., bleached or unbleached), the daily and monthly average production levels, and the limitations and standards applicable to that production type.

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3. Pounds of market pulp produced shall be reported daily on an air dry basis (10% moisture content.)

4. ISO brightness of the daily production shall also be reported.

5. Compliance with daily maximum effluent limitations shall be determined from mass emission rates calculated using composite effluent concentrations with the flow and weight of pulp produced on the day of sample collection.

6. Daily mass emission rate of total suspended solids during production of unbleached pulp shall be determined from the daily mass of solids computed at monitoring point EFF-001(i.e., without consideration of the mass of suspended solids discharged from the water treatment plant, as measured at EFF-002).

7. Daily mass emission rate of total suspended solids during production of bleached pulp shall be determined from the daily mass of solids computed at monitoring point EFF-001 plus the daily mass of solids computed at monitoring point EFF-002.

8. Compliance with monthly average effluent limitations applicable during pulp production shall be determined by computing a mass emission rate using total discharge flows and total pounds of pulp produced with the average of all daily concentrations within a calendar month.

9. When both bleached and unbleached pulp are produced in a single calendar month, monthly mass emission rates shall be determined from averaged concentrations measured on days of bleached pulp production multiplied by the averaged discharge flows of all days of bleached pulp production; and from averaged concentrations measured on days of unbleached pulp production multiplied by the averaged discharge flows on all days of unbleached pulp production. The mass emission rate is then compared to the applicable average monthly effluent limitation.

B. Outfall and Diffuser Monitoring Requirements

1. At least once before the permit expiration date, the Discharger shall conduct a survey of the outfall and diffuser port system to identify leaks and port blockages and to assess flow distribution. A report documenting their condition shall be submitted within 90 days of completing the inspection, but no later than 180 days prior to the expiration date of this Order.

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X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

2. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Regional Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the compliance time schedule.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

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

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

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Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	**June 10, 2010**	**All**	**Submit with monthly SMR**
Daily	**June 10, 2010**	**(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	**June 13, 2010**	**Sunday through Saturday**	**Submit with monthly SMR**
Monthly	**July 1, 2010**	**1st day of calendar month through last day of calendar month**	**First day of second calendar month following month of sampling**
Quarterly	**July 1, 2011**	**January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31**	**First day of second calendar month following month of sampling**
Semiannually	**July 1, 2011**	**January 1 through June 30 July 1 through December 31**	**First day of second calendar month following month of sampling**
Annually	**July 1, 2011**	**January 1 through December 31**	**March 1**
Biennially	**January 1, 2011**	**Every other year beginning in 2011**	**Submit with Annual Report**

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

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

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

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

      For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical

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estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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

d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.

5. The Discharger shall submit SMRs in accordance with the following requirements:

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

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

(1) Facility name;

(2) WDID;

(3) Applicable period of monitoring and reporting;

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

(5) Corrective actions taken or planned; and

(6) The proposed time schedule for corrective actions.

c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

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

C. Discharge Monitoring Reports (DMRs)

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

Standard Mail	FedEx/UPS/ Other Private Carriers
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of EPA Form 3320-1.

D. Other Reports

1. The Discharger shall report the results of any special studies, acute and chronic toxicity testing, TRE/TIE, PMP, and Pollution Prevention Plan required by Special Provisions – VI.C.2 and 3 of this Order. The Discharger 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. Annual Report. The Discharger shall submit an Annual Report to the Regional Water Board for each calendar year. The report shall be submitted by March 1st of the following year. The report shall, at a minimum, include the following:

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a. Both tabular and, where appropriate, graphical summaries of the monitoring data and disposal records from the previous year. If the Discharger monitors any pollutant more frequently than required by this Order, using test procedures approved under Part 136 or as specified in this Order, the results of this monitoring shall be included in the calculation and a report of the data submitted with the 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. A summary report of source control activities completed during the calendar year, in accordance with Special Provisions, VI.C.5.b of the Order.

d. A summary report, if applicable, of the amount of sludge or biosolids placed ina landfill and the landfill(s) which received the sludge or biosolids, in accordance with Special Provisions, VI.C.5.c(4) of the Order.

E. Spills and Overflows Notification

1. All spills equal to or in excess of 1,000 gallons or any size spill that results in a discharge to a drainage channel or a surface water:

   a. As soon as possible, but not later than **two (2) hours** after becoming aware of the discharge, the Discharger shall notify the State Office of Emergency Services (OES), the local health officer or directors of environmental health with jurisdiction over affected water bodies or land areas, and the Regional Water Board[3].

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

      i. Name and contact information of caller;
      ii. Date, time and location of spill occurrence;
      iii. Estimates of spill volume, rate of flow, and spill duration;
      iv. Surface water bodies impacted, if any;
      v. Cause of spill;
      vi. Cleanup actions taken or repairs made; and

[3] The contact number for spill reporting for the Office of Emergency Services is (800) 852-7550. The contact number of the Regional Water Board during normal business hours is (707) 576-2220. After normal business hours, spill reporting to OES will satisfy the 2 hour notification requirement for the Regional Water Board.

vii. Responding agencies.

b. As soon as possible, but not later than **twenty-four (24) hours** after becoming aware of a discharge, the Discharger shall submit to the Regional Water Board a certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over affected water bodies or land areas have been notified of the discharge. For the purpose of this requirement, “certification" means an OES certification number and, for the local health department, name of local health staff, department name, phone number and date and time contacted.

c. Within **five (5) business days**, the Discharger shall submit a written report to the Regional Water Board office. The report must include all available details related to the cause of the spill and corrective action taken or planned to be taken, as well as copies of reports submitted to other agencies.

   Information to be provided in writing includes:

   i. Information provided in verbal notification;
   ii. Other agencies notified by phone;
   iii. Detailed description of cleanup actions and repairs taken; and
   iv. Description of actions that will be taken to minimize or prevent future spills.

d. In the cover letter of the monthly monitoring report, the Discharger shall include a brief written summary of the event and any additional details related to the cause or resolution of the event, including, but not limited to results of any water quality monitoring conducted.

2. Discharges less than 1,000 gallons that do not reach a drainage channel or a surface water:

   a. As soon as possible, but not later than **twenty-four (24) hours** after becoming aware of the discharge, the Discharger shall notify the Regional Water Board and provide the applicable information specified in requirement 1.A of this section.

   b. In the cover letter of the monthly monitoring report, the Discharger shall include a written description of the event.

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ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table 1. Facility Information

WDID	1B77005OHUM
Discharger	Freshwater Tissue Company
Name of Facility	Samoa Pulp Mill
Facility Address	1 TCF Drive
	Samoa CA 95564
	Humboldt County
Facility Contact, Title and Phone	Robert Simpson, President, (707) 441-7511
Authorized Person to Sign and Submit Reports	David K.K. Tsang, Chief Executive Officer, (707)443-2801
Mailing Address	PO Box 248, Samoa, CA 95564
Billing Address	PO Box 248, Samoa, CA 95564
Type of Facility	Industrial with 2611 SIC code
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	No
Reclamation Requirements	No
Facility Permitted Flow	Not Applicable
Facility Design Flow	20 million gallons per day
Watershed	Eureka Plain Hydrologic Unit 110
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean waters

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A. Freshwater Tissue Company (hereinafter Discharger) is the owner and operator of the Samoa Pulp Mill (hereinafter Facility).

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

B. The Discharger filed a report of waste discharge and submitted an application for Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on January 27, 2010.

C. The Facility will discharge wastewater to the Pacific Ocean, a water of the United States. The discharge was previously regulated by Order R1-2004-0047 for Evergreen Pulp, Inc., which was terminated on March 12, 2009. The terms and conditions of the new Waste Discharge Requirements and NPDES permit, adopted pursuant to this Order, become effective on June 10, 2010.

II. FACILITY DESCRIPTION

The Samoa pulp mill will manufacture approximately 700 air dried tons of kraft market pulp per day from wood chips obtained from sources in Northern California. The mill has the capability to produce both unbleached pulp and totally-chlorine-free (TCF) bleached pulp. The kraft pulp process at the Facility involves the separation of lignin from the cellulose fibers in the wood chips through a chemical delignification process in a high temperature digester and an oxygen deliginification stage, post digestion, to remove additional lignin from the pulp. The partially delignified pulp is rinsed, dried and sold as brown stock (unbleached pulp) or rinsed and pumped to a bleach plant to remove the remaining lignin from the cellulose fibers for sale as a brighter final pulp product (bleached pulp). The spent chemicals and dissolved lignin rinsed from the pulp are recycled to a chemical recover system. The TCF bleaching process at the Samoa Pulp Mill uses a mixture of oxygen, hydrogen peroxide, sodium hydroxide, and specialty chemicals instead of chlorine or other chlorine compounds. Internal process water is pumped from the Mad River and clarified in the Facility's water treatment plant prior to its use in pulp processing.

A. Description of Wastewater and Sludge Treatment or Controls

Wastewaters generated from the facility include countercurrent pulp wash-water, black-liquor evaporator condensates, blow-down from the recovery boiler, spent bleaching solutions, and sludge from the raw water treatment plant clarifiers. Wastewaters also include wastewater from maintenance activities during pulp production, scheduled maintenance shutdowns, and unscheduled shutdown periods. Other authorized discharges include fresh water discharged through the outfall to maintain flow in the outfall and storm water from the pulp mill site, which is authorized and conditioned

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under general waste discharge requirements for industrial storm water. Effluent flows vary directly with pulp production rate, and inversely with raw water quality and the relative success of process stream recycle and spill prevention and containment. The effluent pump station and discharge outfall system are designed to convey up to 20 million gallons per day, on average. The average effluent flow from February 2005 to August 2008 was 14.0 million gallons per day.

B. Discharge Points and Receiving Waters

Untreated wastewaters and other authorized discharges are discharged to the Pacific Ocean at 40º 48' 28" North, 124º 12' 24" West through a multi-port diffuser (outfall 001) approximately 2,400 meters offshore at a depth of approximately 25 meters.

C. Summary of Previous Requirements and Self-Monitoring Data

Effluent limitations for Total Suspended Solids and five-day biochemical oxygen demand (BOD_5) contained in the previous Order for Evergreen Pulp, Inc. for discharges from Discharge Point 001 (Monitoring Location EFF-001 and Monitoring Location EFF-002) and representative monitoring data from the term of the previous Order are as follows:

Table 2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data (From July 2004 – To December 2007)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Outfall No. 001 (From July 2004 – To December 2007)							
Total Suspended Solids	lbs/d	22,960	---	42,560	32,754	---	103,437
BOD_5	lbs/d	11,270	---	21,630	33,920	---	55,135
Outfall No. 101 (From January 2005 – To September 2008)							
Total Suspended Solids							
Oct. – Apr.	lbs/d	70,000		400,000	60,000	---	132,000
May – Sept.	lbs/d	40,000		400,000	8,000	---	20,000

Effluent limitations for Outfall No. 001 were based on Effluent Limitation Guidelines and Standards for the Pulp, Paper, and Paperboard Point Source Category set forth in 40 CFR 430.22 (Bleached Kraft Pulp) and an anticipated pulp production rate of 700 average dry tons per day. Effluent limitations for Outfall No. 101 were based on best professional judgment using long-term historical discharge monitoring data.

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D. Compliance Summary

Pulp Mill Wastewater Discharges (Outfall No. 001)
For the 35 months from February 2005 through December 2007 the pulp mill, while under operation by Evergreen Pulp Inc. and producing only unbleached pulp, exceeded the monthly average BOD_5 limitation at Discharge Point 001 for eleven months. The daily maximum BOD_5 was exceeded for four days and the daily maximum total suspended solids limitation was exceeded for seven days. In addition to exceedances of BOD_5 and total suspended solids limitations, the discharge exceeded the monthly average Aldrin concentration limitation for one month. In January 2008, the Discharger resumed the manufacture of Totally Chlorine Free (TCF) bleached pulp in addition to unbleached pulp. For the nine months of operation in 2008 (January – September), until closure of the mill in October 2008, the discharge from the Pulp Mill exceeded the monthly average BOD_5 limitation for all 9 months of operation and the daily maximum BOD_5 limitation for 143 days.

Administrative Civil Liability Order No. R1-2009-0009 was adopted by the Regional Water Board on January 29, 2009 for permit violations for the period from March 1, 2005 to December 31, 2007. The Order assessed both discretionary and mandatory minimum penalties for the violations in the amount of $463,000, pursuant to Water Code section 13385, subdivisions (c), (h), and (i). Evergreen Pulp Inc., failed to fulfill the obligations of this Order. The matter has been referred to the Office of the Attorney General for enforcement.

Administrative Civil Liability Order No. R1-2009-0032 was adopted by the Regional Water Board on April 23, 2009 for permit violations for the period from January 1, 2008 to December 31, 2008. The Order assessed both discretionary and mandatory minimum penalties for the violations in the amount of $453,000, pursuant to Water Code section 13385, subdivisions (c), (h), and (i). Evergreen Pulp Inc., failed to fulfill the obligations of this Order. The matter has been referred to the Office of the Attorney General for enforcement.

Water Treatment Plant Discharge (Outfall 101)
During the term of the previous permit, the Facility was in continuous compliance with effluent limitations for total suspended solids at Outfall No. 101.

E. Planned Changes

The Discharger has proposed to design and construct a conventional activated sludge wastewater treatment plant to reduce effluent BOD_5 loading to approximately 1,950 lbs/day as a monthly average under anticipated pulp production rates. Design of the system would include two new effluent pump stations, effluent cooling towers, a 7 million gallon activated sludge reactor, two 130-foot diameter secondary clarifiers, and sludge dewatering equipment. Preliminary details of the proposed system, as well as

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an environmental assessment of this project as other alternatives, are contained in the document titled, "Analysis of Alternatives for Reducing Effluent Biochemical Oxygen Demand," prepared by CH2MHILL for Evergreen Pulp, Inc. and submitted to the Regional Water Board on May 29, 2007.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

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

B. California Environmental Quality Act (CEQA)

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

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, and 2005. The State Water Board adopted the latest amendment on April 21, 2005 and it became effective on February 14, 2006. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized below:

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Table 3. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Pacific Ocean	Existing: NAV – Navigation REC1 – Water Contact Recreation REC2 – Non-contact Water Recreation COMM – Commercial and Sport Fishing WILD – Wildlife Habitat RARE – Rare, Threatened, or Endangered Species MAR – Marine Habitat MIGR – Migration of Aquatic Organisms SPWN – Spawning, Reproduction, and/or Early Development SHELL – Shellfish Harvesting AQUA – Aquaculture Potential: IND – Industrial Service Supply PRO – Industrial Process Supply ASBS – Preservation of Areas of Special Biological Significance

Requirements of this Order implement the Basin Plan.

2. **Thermal Plan.** The State Water Board adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for coastal waters. Requirements of this Order implement the Thermal Plan.

3. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, and 2005. The State Water Board adopted the latest amendment on April 21, 2005 and it became effective on February 14, 2006. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized below:

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Table 4. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
Outfall 001	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish spawning and shellfish harvesting

In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan.

4. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 CFR § 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

5. **Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

6. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations[1], section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in a previous permit, with some exceptions in which limitations may be relaxed.

[1] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

D. Impaired Water Bodies on CWA 303(d) List *(Not Applicable)*

E. Other Plans, Polices and Regulations *(Not Applicable)*

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

A. Discharge Prohibitions

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

   This prohibition is based on the Basin Plan, previous Order, and State Water Resources Control Board Order WQO 2002-0012 regarding the petition of WDRs Order No. 01-072 for the East Bay Municipal Utility District and Bay Area Clean Water Agencies. In State Water Board Order WQO 2002-0012, the State Water Board found that this prohibition is acceptable in permits, but should be interpreted to apply only to constituents that are either not disclosed by the discharger or are not reasonably anticipated to be present in the discharge, but have not been disclosed by the discharger. 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 permitting authority and . . . can be reasonably contemplated." (In re the Petition of East Bay Municipal Utilities District et al., (State Water Board 2002) Order No. WQ 2002-0012, p. 24.) The case cited in that order by the State Water Board reasoned that the Discharger is liable for discharges "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, State Water Board authority provides that, to be permissible, the constituent discharged (1) must have been disclosed by the discharger and (2) can be reasonably contemplated by the Regional Water Board.

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The Regional Water Board has the authority to determine whether the discharge of a constituent is "reasonably contemplated." The *Piney Run* case makes clear that the Discharger is liable for discharges "not within the reasonable contemplation of the permitting authority . . . , whether spills or otherwise . . . ." (268 F.3d 255, 268 [italics added].) In other words, whether or not the Discharger reasonably contemplates the discharge of a constituent is not relevant. What matters is whether the Discharger disclosed the constituent to the Regional Water Board or whether the presence of the pollutant in the discharge can otherwise be reasonably contemplated by the Regional Water Board at the time of permit adoption.

2. **Discharge Prohibition III B. The discharge of any waste at any point not described in Finding II.B is is prohibited.**

   This prohibition is based on the Basin Plan to protect beneficial uses of the receiving waters from unpermitted discharges, and the intent of California Water Code section 13376 which requires anyone discharging or proposing to discharge pollutants to waters of the United States to file a report of the discharge in compliance with the procedures set forth in Water Code section 13260, and sections 13261 through 13265, which requires waste discharge requirements be issued for discharges to waters of the state, and set out potential to civil liability for discharging waste to waters of the State without filing a report of waste discharge and being issued a permit. This prohibition applies to spills and other unauthorized discharges of wastewater within the waste collection, treatment and disposal facilities.

3. **Discharge Prohibition III.C. The creation of a pollution, contamination, or nuisance as defined by Water Code section 13050 is prohibited.**

   This prohibition is based on CWC Section 13050.

4. **Discharge Prohibition III D. The discharge of sanitary wastes to the Pacific Ocean is prohibited.**

   The pulp mill has an on-site septic system for subsurface disposal of sanitary waste. The discharge of sanitary waste to the ocean outfall is not anticipated nor permitted.

B. Technology-Based Effluent Limitations

1. Scope and Authority

a. Applicability of the Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards: Pulp, Paper, and Paperboard Category (40 CFR 430)

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Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations[2] 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 Pulp, Paper, and Paperboard Point Source Category in Part 430.

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

- Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

- 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.

- 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 the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

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

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Effluent limitations guidelines and standards applicable to the Samoa Pulp Mill were established on April 15, 1998 for 12 subcategories for the pulp, paper, and paperboard industry. (63 Fed. Reg. 18635).

[2] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

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2. Applicable Technology-Based Effluent Limitations

a. The applicable technology-based effluent (BPT) limitation guidelines for total suspended solids, BOD_5, and pH for bleached kraft pulp process waste are set out in 40 CFR 430.22, as follows:

Pollutant or Pollutant Property	pounds per 1,000 pounds of product	
	1-day Maximum	30-day Average
BOD_5	15.45	8.05
TSS	30.4	16.4
pH	Within the range of 5.0 to 9.0 at all times	

Final effluent limitations for total suspended solids, BOD_5 are expressed as a maximum mass emission rate based on pulp production rate of 700 ADT/day, as follows:

Pollutant or Pollutant Property	pounds per day	
	Daily Maximum	Monthly Average
BOD_5	21,630	11,270
TSS	42,560	22,960

Compliance with effluent limitations for pH shall be detemined in accordance with 40 CFR 401.17, as follows:

i. 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
ii. No individual excursion from the ranch of pH values shall exceed 60 minutes.

b. The applicable technology-based effluent (BAT) limitations for adsorbable organic halides (AOX) for bleached kraft pulp process waste are set out in 40 CFR 430.24(a)(2), as follows:

Pollutant or Pollutant Property	BAT effluent limitations (TCF)	
	1-day Maximum	Monthly Average
AOX	< ML[3]	---

This effluent limitation applies to each fiber line that uses exclusively TCF bleaching processes.

[3] "< ML" means less than the minimum level specified in 40 CFR 430.01(i) for the particular pollutant. Currently, the ML for AOX is 20 ug/L using EPA Method 1650.

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c. As set out in 40 CFR 430.24(d), the following additional effluent limitations (BAT) apply to all dischargers unless the Discharger certifies that it is not using these compounds as biocides:

Pollutant or Pollutant Property	pounds per 1,000 pounds of product
	1-day Maximum
Pentachlorophenol	0.0019
Trichlorophenol	0.012

The Discharger has certified that it does not use pentachlorophenol or trichlorophenol as biocides. Accordingly, effluent limitations are not required.

d. As set out in 40 CFR 430.22(c), the following additional limitations (BPT) apply to bleached kraft facilities where log washing or chip washing is part of the facility operations:

Pollutant or Pollutant Property	pounds per 1,000 pounds of product	
	1-day Maximum	30-day Average
BOD_5	0.2	0.1
TSS	0.6	0.3
pH	Within the range of 5.0 to 9.0 at all times	

The Discharger reports that wood chips processed to pulp are not washed prior to processing and that wash water is recycled back into to pulping process. Accordingly, effluent limitations are not required.

e. The applicable technology-based effluent (BPT) guidelines for total suspended solids, BOD_5, and pH for unbleached pulp process waste are set out in 40 CFR 430.32, as follows:

Pollutant or Pollutant Property	pounds per 1,000 pounds of product	
	1-day Maximum	30-day Average
BOD_5	5.6	2.8
TSS	12.0	6.0
pH	Within the range of 6.0 to 9.0 at all times	

Final effluent limitations for total suspended solids, BOD_5 are expressed as a maximum mass emission rate based on pulp production rate of 700 ADT/day, as follows:

Pollutant or Pollutant Property	pounds per day	
	Daily Maximum	Monthly Average
BOD_5	7,840	3,920
TSS	16,800	8,400

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Compliance with effluent limitations for pH shall be detemined, as follows:

i. 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
ii. No individual excursion from the ranch of pH values shall exceed 60 minutes.

f. Technology-based effluent limitations for the discharge for the water treatment plant were first established in the 1987 NPDES permit for the Samoa Pulp Mill using best professional judgment, These limitations are based on long-term historical monitoring data and reflect the highly variable sediment load carried by the source water, the Mad River.

Pollutant	pounds per day	
	Daily Maximum	Monthly Average
Total Suspended Soilds		
Wet Season (Oct. – Apr.)	400,000	70,000
Dry Season (May – Sept.)	400,000	40,000

Table 5. Summary of Technology-based Effluent Limitations Discharge Point 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Bleached Pulp					
Total Suspended Solids	lbs/day	**22,960**	**42,560**		
Biochemical Oxygen Demand	lbs/day	**11,270**	**21,630**		
pH	pH Units			**5.0**	**9.0**
Unbleached Pulp					
Total Suspended Solids	lbs/day	**8,400**	**16,800**		
Biochemical Oxygen Demand	lbs/day	**3,920**	**7,840**		
pH	pH Units			**6.0**	**9.0**

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

NPDES regulations at 40 CFR 122.44 (d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards, including numeric and narrative objectives within a standard.

The process for determining "reasonable potential" and calculating WQBELs, when necessary, is intended to protect the designated uses of receiving waters as specified in the Basin and Ocean Plans, and achieve applicable water quality objectives and criteria that are contained in the Basin Plan and in other applicable State and federal rules, plans, and policies, including applicable water quality criteria from the Ocean Plan.

Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established in accordance with the requirements of 40 CFR 122.44 (d) (1) (vi), using (1) USEPA criteria guidance under CWA section 304 (a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information.

2. Beneficial Uses and Water Quality Criteria and Objectives

Beneficial uses for ocean waters of the North Coast Region are established by the Ocean Plan and Table 2-1 of the Basin Plan, which are substantially similar to one another. The beneficial uses of the Pacific Ocean are described in the following table.

Receiving Water	Beneficial Uses
Pacific Ocean	**Potential:** Industrial Service Supply (IND); Industrial Process Supply (PRO); Preservation of Areas of Special Biological Significance (ASBS) **Existing:** Navigation (NAV); Water Contact Recreation (REC1); Non-contact Water Recreation (REC-2); Commercial and Sport Fishing (COMM); Wildlife Habitat (WILD); Rare, Threatened, or Endangered Species (RARE); Marine Habitat (MAR); Migration of Aquatic Organisms (MIGR); Spawning, Reproduction, and/or Early Development (SPWN); Shellfish Harvesting (SHELL); Aquaculture (AQUA); Mariculture

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Water quality criteria applicable to ocean waters of the Region are established by the Ocean Plan, which includes general provisions and water quality objectives for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity. These water quality objectives from the Ocean Plan are incorporated as receiving water limitations into the Order.
Table B of the Ocean Plan contains numeric water quality objectives for 83 toxic pollutants for the protection of marine aquatic life and human health. Pursuant to NPDES regulations at 40 CFR 122.44 (d) (1), and in accordance with procedures established by the Ocean Plan (2005), the Regional Water Board has performed a reasonable potential analysis (RPA) to determine the need for effluent limitations for the Table B toxic pollutants. The RPA showed "reasonable potential" for HCH, TCDD equivalents, aldrin, and total DDT; and therefore effluent limitations for these pollutants are required.

3. Determining the Need for WQBELs

a. Regional Potential Analysis

Procedures for performing a Reasonable Potential Analysis (RPA) for ocean dischargers are described in Section III. C. and Appendix VI of the Ocean Plan. In general, the procedure is a statistical method that projects an effluent data set while taking into account the averaging period of water quality objectives, the long term variability of pollutants in the effluent, limitations associated with sparse data sets, and uncertainty associated with censored data sets. The procedure assumes a lognormal distribution of the effluent data set, and compares the 95th percentile concentration at 95 percent confidence of each Table B pollutant, accounting for dilution, to the applicable water quality criterion. The RPA results in one of three following endpoints.

Endpoint 1 – There is "reasonable potential," and a WQBEL and monitoring are required.

Endpoint 2 - There is no "reasonable potential." WQBELs are not required, and monitoring is required at the discretion of the Regional Water Board.

Endpoint 3 - The RPA is inconclusive. Existing WQBELs are retained, and monitoring is required.

The State Water Resources Control Board has developed a reasonable potential calculator, which is available at http://www.waterboards.ca.gov/plnspols/docs/oplans/rpcalc.zip. The calculator (RPcalc 2.0) was used in conducting the RPA and considers several pathways in the determination of reasonable potential.

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1. First Path

   If available information about the receiving water or the discharge supports a finding of reasonable potential without analysis of effluent data, the Regional Water Board may decide that WQBELs are necessary after a review of such information. Such information may include: the facility or discharge type, solids loading, lack of dilution, history of compliance problems, potential toxic effects, fish tissue data, 303 (d) status of the receiving water, or the presence of threatened or endangered species or their critical habitat, or other information.

2. Second Path

   If any pollutant concentration, adjusted to account for dilution, is greater than the most stringent applicable water quality objective, there is reasonable potential for that pollutant.

3. Third Path

   If the effluent data contains 3 or more detected and quantified values (i.e., values that are at or above the ML), and all values in the data set are at or above the ML, a parametric RPA is conducted to project the range of possible effluent values. The 95th percentile concentration is determined at 95 percent confidence for each pollutant, and compared to the most stringent applicable water quality objective to determine reasonable potential. A parametric analysis assumes that the range of possible effluent values is distributed lognormally. If the 95th percentile value is greater than the most stringent applicable water quality objective, there is reasonable potential for that pollutant.

4. Fourth Path

   If the effluent data contains 3 or more detected and quantified values (i.e., values that are at or above the ML), but at least one value in the data set is less than the ML, a parametric RPA is conducted according to the following steps.

   (1) If the number of censored values (those expressed as a “less than” value) account for less than 80 percent of the total number of effluent values, calculate the M_L (the mean of the natural log of transformed data) and S_L (the standard deviation of the natural log of transformed data) and conduct a parametric RPA, as described above for the Third Path.

   (2) If the number of censored values account for 80 percent or more of the total number of effluent values, conduct a non-parametric RPA, as described below for the Fifth Path. (A non-parametric analysis becomes necessary when the effluent data is limited, and no assumptions can be made regarding its possible distribution.)

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5. Fifth Path

   A non-parametric RPA is conducted when the effluent data set contains less than 3 detected and quantified values, or when the effluent data set contains 3 or more detected and quantified values but the number of censored values accounts for 80 percent or more of the total number of effluent values. A non-parametric analysis is conducted by ordering the data, comparing each result to the applicable water quality objective, and accounting for ties. The sample number is reduced by one for each tie, when the dilution-adjusted method detection limit (MDL) is greater than the water quality objective. If the adjusted sample number, after accounting for ties, is greater than 15, the pollutant has no reasonable potential to exceed the water quality objective. If the sample number is 15 or less, the RPA is inconclusive, monitoring is required, and any existing effluent limits in the expiring permit are retained.

b. Reasonable Potential Determination

The following table presents results of the RPA, performed in accordance with procedures described by the Ocean Plan and summarized above, for the Samoa Pulp Mill. The RPA was conducted using effluent monitoring data generated during monitoring events between August 2003 and October 2006.

The RPA endpoint for each Table B pollutant is identified. As shown in the following table, the RPA commonly leads to Endpoint 3, meaning that the RPA is inconclusive, when a majority of the effluent data is reported as ND (not detected). In these circumstances, the Regional Water Board views the "inconclusive" result as an indication of no concern for a particular pollutant; however, additional monitoring will be required for those pollutants during the term of the reissued permit.

The RPA showed "reasonable potential" for HCH, TCDD equivalents, aldrin, and total DDT; and therefore effluent limitations for these pollutants are required for Discharge Point 001.

Table 6. Results of Reasonable Potential Analysis

Table B Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	RPA Result, Comment
Objectives for Protection of Marine Aquatic Life					
Arsenic	8	12	12	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Cadmium	1	13	13	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chlorinated Phenolics	1	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Chromium (VI)	2	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.

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Table B Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	RPA Result, Comment
Copper	3	16	12	0.5	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Cyanide	1	15	13	0.34	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Endosulfan (total)	0.009	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Endrin	0.002	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
HCH	**0.004**	**14**	**8**	**0.48**	**Endpoint 1 – An effluent limitation must be developed for this pollutant. Monitoring is required.**
Lead	2	16	15	0.05	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Mercury	0.04	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Nickel	5	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Non-chlorinated Phenolics	30	15	1	0.5	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Selenium	15	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Silver	0.7	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Zinc	20	16	5	8.3	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Objectives for Protection of Human Health – Noncarcinogens					
1,1,1-Trichloroethane	540000	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
2,4-Dinitrophenol	4.0	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
2-Methyl-4,6-Dinitrophenol	220	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Acrolein	220	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Antimony	1200	11	11	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Bis(2-Chloroethoxy)Methane	4.4	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Bis(2-Chloroisopropyl)Ether	1200	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Chlorobenzene	570	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.

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Table B Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	RPA Result, Comment
Chromium (III)	190000	15	3	0.06	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Dichlorobenzenes	5100	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Diethyl Phthalate	33000	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Dimethyl Phthalate	820000	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Di-n-Butyl Phthalate	3500	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Ethylbenzene	4100	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Fluoranthene	15	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Hexachlorocyclo-pentadiene	58	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Nitrobenzene	4.9	16	16	ND	Endpoint 2 – An effluent limitation is not required for this pollutant. Monitoring may be required as appropriate.
Thallium	2	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Toluene	85000	15	5	0.11	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
Tributylin	0.0088	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Objectives for Protection of Human Health – Carcinogens					
1,1,2,2-Tetrachloroethane	2.3	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,1,2-Trichloroethane	9.4	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,1-Dichloroethylene	0.9	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,2-Dichloroethane	28	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,2-Diphenylhydrazine	0.16	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
1,3-Dichloropropylene	8.9	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
1,4 Dichlorobenzene	18	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
TCDD Equivalents	**3.9E-9**	**17**	**11**	**2.72E-8**	**Endpoint 1 – An effluent limitation must be developed for this pollutant. Monitoring is required.**
2,4,6-Trichlorophenol	0.29	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.

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Table B Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	RPA Result, Comment
2,4-Dinitrotoluene	2.6	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
3,3'-Dichlorobenzidine	0.0081	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
Acrylonitrile	0.10	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Aldrin	**0.000022**	**14**	**13**	**0.000474**	**Endpoint 1 – An effluent limitation must be developed for this pollutant. Monitoring is required.**
Benzene	5.9	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Benzidine	6.9E-5	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
Beryllium	0.033	12	12	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Bis(2-Chloroethyl)Ether	0.045	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
Bis(2-Ethylhexyl)Phthalate	3.5	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
Carbon Tetrachloride	0.90	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chlordane	2.3E-5	14	14	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chlorodibromomethane	8.6	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Chloroform	130	15	3	0.16	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
DDT (total)	**0.00017**	**14**	**10**	**0.00112**	**Endpoint 1 – An effluent limitation must be developed for this pollutant. Monitoring is required.**
Dichlorobromomethane	6.2	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Dieldrin	0.00004	14	14	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Halomethanes	130	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Heptachlor	0.00005	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Heptachlor Epoxide	0.00002	13	13	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Hexachlorobenzene	0.00021	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
Hexachlorobutadiene	14	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
Hexachloroethane	2.5	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.

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Table B Pollutant	Most Stringent WQO (µg/L)	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	RPA Result, Comment
Isophorone	730	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
Methylene Chloride	450	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
N-Nitrosodimethylamine	7.3	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
N-Nitrosodi-n-Propylamine	0.38	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
N-Nitrosodiphenylamine	2.5	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
PAHs (total)	0.0088	16	16	ND	Endpoint 2 – An effluent limit is not required for this pollutant. Monitoring may be required as appropriate.
PCBs	1.9E-5	14	14	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Tetrachloroethylene	2.0	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Toxaphene	0.00021	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Trichloroethylene	27	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.
Vinyl Chloride	36	15	15	ND	Endpoint 3 – RPA is inconclusive. Less than 3 detects or greater than 80% ND.

Notes to Table 1:

ND indicates that the pollutant was not detected.

Minimum probable initial dilution for this Discharger is 115 : 1.

The Maximum Effluent Concentration is the expected concentration after complete mixing, in accordance with reasonable potential procedure in Appendix VI of the Ocean Plan.

Effluent data used for this RPA are from 2003 to 2006.

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4. WQBEL Calculations

Based on results of the RPA, performed in accordance with methods of the Ocean Plan for discharges to the Pacific Ocean, the Regional Water Board is establishing WQBELs for HCH, TCDD equivalents, aldrin, and total DDT.

As described by Section III. C of the Ocean Plan, effluent limits for Table B pollutants are calculated according to the following equation.

$$Ce = Co + Dm (Co – Cs)$$

Where

Ce = the effluent limitation (µg/L)

Co = the concentration (the water quality objective) to be met at the completion of initial dilution (µg/L).

Cs = background seawater concentration (µg/L), with all metals expressed as total recoverable concentrations.

Dm = minimum probable initial dilution expressed as parts seawater per part wastewater (here, Dm = 115)

For the Samoa Pulp Mill, the calculated minimum probable initial dilution is unchanged from the previous Order (R1-2004-0047). Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge. As site-specific water quality data is not available, in accordance with Table B implementing procedures, Cs equals zero for all pollutants, except the following:

Table 7. Background Seawater Concentrations – Ocean Plan

Pollutant	Background Seawater Concentration
Arsenic	3 µg/L
Copper	2 µg/L
Mercury	0.0005 µg/L
Silver	0.16 µg/L
Zinc	8 µg/L

Applicable water quality objectives from Table B of the Ocean Plan are as follows:

Table 8. Water Quality Objectives–Ocean Plan

Pollutant	Units	6-Month Median	Daily Maximum	Instantaneous Maximum	30 Day Avg
HCH	µg/L	0.004	0.008	0.012	---
TCDD Equivalents	µg/L	---	---	---	0.0000000039
Aldrin	µg/L	---	---	---	0.000022
DDT	µg/L	---	---	---	0.00017

Using the equation, Ce = Co + Dm (Co – Cs), effluent limitations are calculated as follows. Here, Co is equal to zero for each effluent limitation calculation.

<u>HCH</u>

Ce = 0.004 + 115 (0.004 – 0) = 0.46 µg/L (6-Month Median)
Ce = 0.008 + 115 (0.008 – 0) = 0.93 µg/L (Daily Maximum)
Ce = 0.012 + 115 (0.012 – 0) = 1.4 µg/L (Instantaneous Maximum)

<u>TCDD Equivalents</u>

Ce = 3.9E-9 + 115 (3.9E-9 – 0) = 4.5E-7 µg/L (30-Day Average)

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Aldrin

Ce = 2.2E-5 + 115 (2.2E-5 - 0) = 2.6E-3 µg/L (30-Day Average)

DDT

Ce = 0.00017 + 115 (0.00017 – 0) = 0.020 µg/L (30-Day Average)

Table 9. Final WQBELs for Ocean Plan Table B Pollutants

Pollutant	Units	6-Month Median	Daily Maximum	Instantaneous Maximum	30 Day Avg
HCH	µg/L	0.46	0.93	1.4	---
TCDD Equivalents	µg/L	---	---	---	0.00000045
Aldrin	µg/L	---	---	---	0.0026
DDT	µg/L	---	---	---	0.020

5. Whole Effluent Toxicity (WET)

Federal regulations (40 CFR 122.44(d)) require that effluent limitations be established for pollutants, including whole effluent toxicity, when a discharge has the reasonable potential to cause or contribute to an exceedance of a State water quality standard, including State narrative objectives for water quality. The 2005 Ocean Plan specifies toxicity testing requirements based on the minimum initial dilution factor, expressed as parts seawater per wastewater, for the discharge. Where the minimum initial dilution of the effluent franges from 100:1 to 350:1 at the edge of the mixing zone, dischargers are required to conduct only chronic toxicity monitoring. As the Permittee's calculated minimum initial dilution is 115:1, Regional Water Board staff has determined only short-term chronic toxicity tests on the treated effluent are required.

A RPA for whole effluent toxicity was conducted in accordance with Appendix VI of the Ocean Plan using 78 monthly effluent monitoring data from January 2002 through June 2008. The test species was *Haliotis rufescens*, red abalone, and monitored the effect of the discharge on larval abalone shell development. The calculator (RPcalc 2.0) was used in conducting the RPA. The results for the RPA indicate that the one-sided, upper 95 percent confidence bound (UCB) for the 95th percentile of the effluent distribution was 0.3657. Because the calculated UCB is less that the water quality objective (before dilution) of 1.0 TUc, an effluent limitation is not required for whole effluent toxicity.

Although this Order does not contain WET limitations, it establishes chronic monitoring requirements for the effluent discharge at EFF-001. If the result of any chronic test exceeds the water quality objective of 116 TUc (after minimum initial dilution), the Discharger must initiate accelerated monitoring as described in Section V of the MRP. After accelerated monitoring, if conditions of chronic toxicity are

found to persist, the Discharger will be required to conduct a Toxicity Reduction Evaluation, as described in Special Provision VI.C.2.iii.

D. Final Effluent Limitations

1. Satisfaction of Anti-Backsliding Requirements

All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

2. Satisfaction of Antidegradation Policy

This Order is consistent with the Antidegradation Policy. The activities allowed in accordance with these waste discharge requirements apply to an existing facility and will not result in an increased volume or concentration of waste beyond that which was permitted to discharge in accordance with the previous Order. Further, this Order permits only those discharges of waste that are compliant with USEPA effluent limitation guidelines for the pulp and paper industry. Discharges from the pulp mill will be required to maintain protection of the beneficial uses of the receiving water and comply with applicable provisions of the Basin Plan.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on total suspended solids, 5-day biochemical oxygen demand, pH, turbidity, settleable solids, and grease and oil. Restrictions on these pollutants are discussed in Fact Sheet section IV.B. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. These limitations are not more stringent than required by the CWA.

E. Interim Effluent Limitations *(Not Applicable)*

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

1. CWA section 303(a-c) requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The State Water Resources Control Board adopted water quality criteria as water quality objectives in the Ocean Plan. The Ocean Plan includes numeric and narrative water quality objectives for various beneficial uses. This Order contains receiving surface water

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limitations based on the Ocean Plan numerical and narrative water quality objectives for dissolved oxygen, floating particulates, oil and grease, pH, discoloration, natural lighting, deposition of solids, dissolved sulfides, organic materials, and nutrient materials.

B. Groundwater*(Not Applicable)*

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

A. Internal Monitoring

Internal monitoring in this Order consists of monthly analyses of the treated water supply prior to its use in the Pulp Mill. Monitoring of the treated water supply for adsorbable organic halides (AOX) is required to measure the contribution of this pollutant to the total waste discharge at Discharge Point 001 during bleached pulp production. For the purpose of determining compliance with effluent limitations for AOX at Monitoring Location EFF-001 during bleached pulp production, the concentraton of AOX at INT-001 is subtracted from the concentration of AOX at EFF-001.

B. Effluent Monitoring

1. Pursuant to the requirements of 40 CFR 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. In addition, routine monitoring of the effluent and the receiving water for priority pollutants is required to periodically assess the reasonable potential of the discharge to cause or contribute to an exceedance of water quality objectives in the Ocean Plan. Appendix III of the Ocean Plan requires monitoring of Ocean Plan Table B constituents at least semi-annually. More frequent monitoring may be required using best professional judgment, with consideration given to the nature of the individual pollutant, the past record of detections in the effluent, and likelihood of the presence of the pollutant in the discharge. Effluent monitoring requirements are contained in Attachment E, Section IV of the MRP.

   This Order establishes two effluent monitoring locations, EFF-001 and EFF-002. These locations are analogous to Outfall No. 001 and Outfall No. 101, respectively, in the previous permit. Monitoring Location EFF-001 monitors the combined

discharge of all pulp mill process wastewaters and storm water at a location known as "Manhole 5." Monitoring Location EFF-001 is the point of compliance with technology-based and water quality-based effluent limitations for bleached and unbleached pulp process waste, with the exception of TSS during bleached pulp production (explained below). Monitoring Location EFF-002 monitors the flow, and the TSS concentration of the water treatment plant discharge prior to mixing with the process water flow in the outfall pipe (Discharge Point 001). Monitoring information from Monitoring Location EFF-002 is used to determine compliance with effluent limitations for TSS at Discharge Point 001 and for determining the TSS loading from the water treatment plant discharge that is added to the TSS loading from EFF-001 for compliance purposes.

2. Total Suspended Solids Measurements for Compliance Determination

State Water Board Exception. On November 17, 1987, the State Water Board issued Resolution 87-103 granting the Samoa Pulp Mill an exception to the Ocean Plan Table A effluent limitation that requires at least 75 percent removal of suspended solids from the influent before discharging waste to the ocean. This exception allowed the Discharger to subtract suspended solids from the water treatment plant from the Facility's combinded effluent discharge for the purpose of demonstrating compliance with effluent limitation for suspended solids.

Bleached Pulp Production. When the effluent limitations guidelines were revised in 1998[4], the definition of "process wastewater" at 40 CFR 430.01 (m) was modified to specifically include "wastewaters from water treatment and other utility operations." This modified definition was made applicable to subparts B (Bleached Papergrade Kraft and Soda) and E (Papergrade Sulfite) of the guidelines. Accordingly, the Order requires the Discharger to include the contribution of suspended solids and other Table A parameters from the water treatment plant as part of the compliance calculation during bleached pulp production.

Unbleached Pulp Production. Because EPA's 1998 rulemaking did not update or modify subpart C (Unbleached Kraft) of the effluent limitations guidelines, the pre-1998 definition of "process wastewater" remains applicable, when the Evergreen Mill is categorized as an unbleached kraft pulp mill. The pre-1998 definition of "process wastewater" does not address wastewaters from utility operations and has not previously been interpreted to include such wastewaters. The exception to the Ocean Plan Table A requirement for suspended solids, established by State Water Board Resolution No. 87-103, therefore, remains in effect, when the Mill is categorized as an unbleached kraft mill. Consequently, when discharging waste

[4] [Proposed Rules. Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards: Pulp, Paper, and Paperboard Category, 58 Fed. Reg. 66078, 66170 (December 17, 1993)

during production of unbleached pulp, the contribution of these pollutants to the final effluent at Discharge Point 001 is not included from the combined effluent discharge.

C. Whole Effluent Toxicity Testing Requirements

Monitoring requirements for chronic toxicity are established for discharge Monitoring Location EFF-001. The toxicity monitoring requirements are included in the MRP in accordance with the 2005 Ocean Plan.

D. Receiving Water Monitoring

1. **Surface Water.** Receiving water monitoring is required to demonstrate compliance with the receiving water limitations. Compliance with receiving water limitations will be demonstrated by grab samples or measurements taken in the ocean near the point of discharge and at a point sufficiently distant from the discharge to represent background conditions.

   The Discharger is required to conduct benthic monitoring in the vicinity of the outfall to assess compliance with receiving limitations related to concentrations of pollutants in marine sediments that may degrade indigenous biota or disrupt benthic communities. The monitoring requirements include sediment and infauna analysis, fish and invertebrate monitoring and bioaccumulation monitoring. The requirements for benthic monitoring, demersal fish/invertebrate monitoring, and bioaccumulation monitoring in this Order are based on the marine monitoring program conducted by the Pulp Mill in 1997, under its previous owner, Louisiana-Pacific Corporation. The scope of the monitoring in this Order is consistent with the 1997 study in order to compare data collected during the permit cycle to data collected in 1997.

2. **Groundwater.** ***(****Not Applicable****)***

E. Other Monitoring Requirements

1. **Production Reporting Requirements.** Daily reporting of the quantity and quality of pulp produced is required to determine which effluent limitation (unbleached kraft pulp as described at 40 CFR 430.32 or bleached papergrade kraft and soda pulp as described at 40 CFR 430.22) is appropriate and to assess compliance with that daily effluent limitation. The Permit Guidance Document, Pulp, Paper, and Paperboard Manufacturing Point Source Category (EPA-821-B-00-003) page 8-6 states:

   "As part of business operations as well as permit requirements, mills record production of all final products ... Mills that manufacture market pulp typically measure this product in terms of ADT with 10 % moisture content, which is consistent with the production definition for conventional pollutants. …some mills

report market pulp production with variable moisture content. If so, [the permit writer] must either obtain the pulp moisture content information from the mill, and then normalize the pulp production to 10 % moisture content, or require the mill to do so."

Therefore, Evergreen is required in its reporting of quantity of pulp produced to report the moisture content of its production.

The Order establishes tiered effluent limitations based on production type (i.e., bleached or unbleached pulp). In accordance with 40 CFR 122.45(b)(ii), because the pemit includes alternative limitations based on anticipated fluctuations in production, the permit must include the following special reporting requirements such as:

- The permittee notifying the permitting authority at least two business days prior to the month they expect to be operating at a higher level of production and the duration this level of production is expected to continue; and

- The permittee reporting, in the discharge monitoring report, the level of production and the limitation and standards applicable to that level.

Section IX of the Order includes specific reporting requirements

2. **Outfall and Diffuser Monitoring Requirements** Periodic visual investigation of the outfall is required to confirm the structural integrity and proper operation of the discharge outfall structure. Proper operation and maintenance of the outfall structure is require to comply with requirements in 40 CFR 122.41(e).

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D to the Order.

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

B. Special Provisions

1. Reopener Provisions

a. **Standards Revisions (Special Provisions VI.C.1.a).** Conditions that necessitate a major modification of a permit are described in 40 CFR section 122.62, which include the following:

i. When standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision. Therefore, if revisions of applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such revised standards.

ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.

b. **Reasonable Potential (Special Provisions VI.C.1.b).** This provision allows the Regional Water Board to modify, or revoke and reissue, this Order if present or future investigations demonstrate that the Discharger governed by this Permit is causing or contributing to excursions above any applicable priority pollutant criterion or objective or adversely impacting water quality and/or the beneficial uses of receiving waters.

c. **Tiered Effluent Limitations** (**Special Provisions VI.C.1.d).** Effluent limitations for BOD and total suspended solids in this Order are based on a long term pulp production rate of 700 ADT/day. Some variability in pulp production is expected to occur during the life of the Order. However, if as a result of market trends, market forces, or company plans, the pulp production rates change significantly during the life of this Order, the Regional Water Board may reopen this Order and make modifications in production-based effluent limitations for BOD and total suspended solids. As a general rule of thumb, up to a 20 percent fluctuation in production is within the rance of normal variability.

2. Special Studies and Additional Monitoring Requirements

a. Toxicity Reduction Requirements (Special Provision VI. C. 2. a)
In addition to routine toxicity monitoring, Special Provision VI. C. 2. b requires the Discharger to submit to the Regional Water Board an Initial Investigative TRE Work Plan <u>within 180 days of the effective date of this Order</u> for approval by the Executive Officer, to ensure the Discharger has a plan to immediately move forward with the initial tiers of a TRE, in the event effluent toxicity is encountered.

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The TRE is initiated by evidence of a pattern of toxicity demonstrated through the additional effluent monitoring provided as a result of an accelerated monitoring program.

TRE Guidance. The Discharger is required to prepare a TRE Work Plan in accordance with appropriate USEPA guidance. Numerous guidance documents are available, as identified below.

1. Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, (EPA/833B-99/002), August 1999.
2. Generalized Methodology for Conducting Industrial TREs, (EPA/600/2-88/070), April 1989.
3. Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures, Second Edition, EPA 600/6-91/005F, February 1991.
4. Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I, EPA 600/6-91/005F, May 1992.
5. Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting acute and Chronic Toxicity, Second Edition, EPA 600/R-92/080, September 1993.
6. Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity, Second Edition, EPA 600/R-92/081, September 1993.
7. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, EPA-821-R-02-012, October 2002.
8. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA-821-R-02-013, October 2002.
9. Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991

3. Best Management Practices and Pollution Prevention

a. Pollution Minimization Program

Provision VI. C. 3. a is included in this Order pursuant to section III. C. 9 of the Ocean Plan. A Pollutant Minimization Program is required when there is evidence that a toxic pollutant is present in effluent at a concentration greater than an applicable effluent limitation.

b. Spill Prevention and Control Program

Provision VI.C.3.b is included in this Order pursuant to 40 CFR 430.03, which requires owners or operators of bleached papergrade kraft, soda, and sulfite mills to implement site-specific BMPs to prevent or otherwise control leaks and spills

of spent pulping liquors, soap, and turpentine, and to control intentional diversions of these materials. The Discharger should review and evaluate its BMP plan at least once every five years or more often whenever there is a change in mill design, operation or maintenance that materially affects the potential for leaks or spills.

4. **Construction, Operation, and Maintenance Specifications** *(Not Applicable)*

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

6. **Other Special Provisions** *(Not Applicable)*

7. **Compliance Schedules** *(Not Applicable)*

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, North Coast Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for Evergreen Pulp, Inc. Samoa Pulp Mill. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through publication in the Eureka Daily Standard on September 19, 2008 and through posting on the Regional Water Board's Internet site at http://www.waterboards.ca.gov/northcoast/board_decisions/tentative_orders/ beginning on September 19, 2008.

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on **May 1, 2010.**

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C. Public Hearing

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

Date:	**June 10, 2010**
Time:	**8:30 AM, or as soon as possible thereafter as noticed in the final agenda**
Location:	**Regional Water Board Office** **5550 Skylane Blvd., Suite A** **Santa Rosa, CA 95403**

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

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

D. Waste Discharge Requirements Petitions

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

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

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 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.

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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 Charles Reed at (707) 576-2752.

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