California Regional Water Quality Control Board
North Coast Region
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Governor

ORDER NO. R1-2011-0028
GENERAL NPDES NO. CAG911001
WASTE DISCHARGE REQUIREMENTS FOR

DISCHARGES OF HIGHLY TREATED GROUNDWATER TO SURFACE WATERS FOLLOWING EXTRACTION AND TREATMENT OF GROUNDWATER POLLUTED WITH PETROLEUM HYDROCARBONS AND VOLATILE ORGANIC COMPOUNDS

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

Table 1. Discharger Information

Dischargers	
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

Table 2. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**May 5, 2011**
This Order shall become effective on:	**May 5, 2011**
This Order shall expire on:	**May 4, 2016**

Dischargers covered under this Order at the time of expiration will continue to be covered until coverage becomes effective under a reissued Order. Upon reissuance of this Order by the Regional Water Board, Dischargers seeking coverage under the reissued Order shall file a revised Notice of Intent.

IT IS HEREBY ORDERED, that Order No. R1-2006-0048 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Catherine Kuhlman, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, on May 5, 2011.

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Catherine Kuhlman, Executive Officer

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I. Facility Information

A. Industry Description

Extraction and treatment of groundwater impacted by chemical pollutants as a result of an unauthorized release is a remedial option used to reduce or eliminate petroleum hydrocarbons or volatile organic compounds (VOCs) from groundwater. This technology is also implemented for plume control by creating hydraulic control and reducing unwanted migration of pollution in groundwater. This Order (hereinafter, General Permit) is intended to authorize similar discharges from groundwater treatment facilities at sites that have been impacted by petroleum related compounds and other volatile organic compounds associated with an unauthorized release of pollutants to groundwater.

B. Pollutants of Concern

The chemical constituents of concern regulated by this General Permit are pollutants associated with cleanup activities including petroleum related organic compounds, volatile organic compounds, and naturally occurring inorganic compounds.

C. Eligible Discharges

1. Eligible Discharges

   The following discharges shall be eligible for coverage under this General Permit.

   a. This General Permit shall apply to new or existing discharges of treated groundwater, resulting from cleanup activities for petroleum products and VOCs, to surface waters.

   b. Coverage under this General Permit will be authorized only for minor discharges (as classified by the U.S. EPA and the Regional Water Board), which otherwise meet the criteria for authorization established herein.

   c. Discharges of waste from treatment facilities designed to remove pollutants from groundwater polluted with petroleum products and/or VOCs shall be permitted to surface water year-round with no discharge flow limitations based on the flow of the receiving water provided that the following conditions are met[1]:

      i. The discharge from the treatment facility must be pollutant free.

      ii. The discharge shall not adversely affect the beneficial uses of the receiving water.

[1] Water Quality Control Plan, North Coast Region, 4. Implementation Plans, p.4-9.00

iii. The discharge is necessary because a polluted groundwater cleanup operation is required.

iv. The discharge is necessary because no feasible alternative to the discharge (reinjection, reclamation, evaporation, discharge to a community wastewater treatment and disposal system, etc) is available.

v. The discharge is regulated by NPDES Permit/Waste Discharge Requirements.

vi. The discharger has demonstrated consistent compliance with Provision (i) above.

vii. The discharge is in the public interest.

2. Ineligible Discharges

The following discharges shall not be eligible for coverage under the General Permit.

a. Discharges that do not consist solely of highly treated groundwater resulting from cleanup activities for petroleum products or VOCs.

b. Discharges from treatment systems where groundwater contains inorganic constituents that are present as a result of a chemical release to groundwater.

c. Discharges that are insufficiently characterized and thereby preclude a determination as to suitability for coverage.

d. Discharges that cause acute or chronic toxicity to aquatic life in the receiving waters.

e. Discharger\s that would cause further degradation to a 303 (d) listed water body or would be inconsistent with a TMDL.

f. Discharges that can reasonably be expected to contribute to a violation of an applicable State water quality standard.

g. Discharges that will adversely affect a listed endangered or threatened species or their critical habitat.

h. Discharges to interstate waters including rivers, lakes, artificial impoundments, and all other waters that flow across or from a part of the boundary with other states.

i. Discharges to the Pacific Ocean are not authorized under the General Permit.

3. Application Requirements

   Application for Coverage Under the General Permit

   a. Existing Dischargers

      i. Existing Dischargers authorized to discharge under Order No. R1-2006-0048 shall retain coverage under Order No. R1-2006-0048 for 120 days following the effective date of this General Permit.

      ii. Existing dischargers who wish to continue the discharge under the General Permit are required to submit a complete Notice of Intent (NOI) to the Regional Water Board Executive Officer within 60 days following the effective date of the General Permit. The NOI must demonstrate eligibility in accordance with section I.C.1 of the General Permit and must include all information required by the NOI, as detailed in Attachment A.

      iii. If an existing Discharger does not submit a complete NOI in accordance with this section, authorization to discharge will automatically be terminated 120 days following the effective date of this General Permit and the discharge shall be thereafter prohibited.

   b. New Dischargers

      Dischargers who are seeking authorization to discharge under the General Permit for the first time shall submit a complete NOI to the Regional Water Board Executive Officer at least 120 days prior to the planned commencement of the discharge. The NOI shall be completed as described in Attachment A and must include the appropriate first annual fee as required by Title 23, of the California Code of Regulations, Division 3, Chapter 9, Article 1.

4. Regional Water Board Authorization

   a. Existing Dischargers

      Following review of a completed NOI, the Executive Officer shall provide written notice to an existing Discharger that coverage under the General Permit will continue or that an individual permit is required for the discharge.

   b. New Dischargers

      i. Following review of a completed NOI, the Executive Officer shall provide written notice to a new discharger one of the following findings.

- The proposed discharge is eligible for coverage under this General Permit; or

- Coverage under the General Permit shall be considered at a regularly scheduled Regional Water Board hearing; or

- The proposed discharge is ineligible for coverage under this General Permit and whether or not the discharge is eligible for coverage under an individual permit.

ii. If the proposed discharge is eligible for coverage, public noticing requirements must be completed prior to receiving coverage under the General Permit. The Executive Officer will place a public notice on the Regional Water Board's website providing a 30-day public notice of the Regional Water Board's intent to extend coverage under the General Permit.

iii. Additionally, the Discharger will be directed to publish a one time notification in a newspaper of general circulation in the locality of the discharge, post the notification on the subject in the area where the discharge will occur where it can reasonable be viewed by the public, distribute the notice to adjacent property owners, residences, businesses and other interested parties. The public comment period will conclude 30-days from the date the notification is published and distributed.

iv. Upon completion of these requirements, the Discharger must provide proof of publication, posting, and distribution, as required above. The Regional Water Board will not act on a complete NOI until 30 days after the public notification has ended and proof of publication has been provided.

v. At the end of the public comment period, the Executive Officer shall provide written notice to the Discharger that:

- No significant comments were received and coverage under this General Permit is extended; or

- Significant comments were received and coverage under this General Permit shall be considered at a regularly scheduled Regional Water Board hearing; or

- Significant comments were received and an individual permit is required for the discharge.

vi. New dischargers shall not be authorized to discharge until the Executive Officer provides written notice of authorization under this General Permit.

c. All Dischargers

Pursuant to NPDES regulations 40 CFR 122.28 (b) (2), the Executive Officer may require a discharger to comply with the conditions of the General Permit, and that the Discharger is therefore obligated to meet all discharge limitations and monitoring and reporting requirements of the General Permit, even if the Discharger has not submitted an NOI for coverage by the General Permit.

5. Failure to Submit an NOI

Existing dischargers who fail to submit a complete NOI by the deadline established herein will be deemed out of compliance with the General Permit and subject to all penalties allowable pursuant to applicable provisions of the Clean Water Act and the California Water Code including section 13385.

II. Findings

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

A. Background.

1. On October 26, 1995, the Regional Water Board adopted Order No. 95-88 (General NPDES Permit No. CAG911001) Waste Discharge Requirements for Discharges of Extracted and Highly Treated Groundwater Resulting from Cleanup of Groundwater Polluted with Petroleum Hydrocarbons and Volatile Organic Compounds. On January 26, 2001 the General Permit was reissued as Order No. R1-2001-9. On June 29, 2006 the General Permit was reissued as Order No. R1-2006-0048. This General Permit now replaces Order No. R1-2006-0048.

2. On September 22, 1989, a Memorandum of Agreement executed by the U.S. EPA and the State Water Resources Control Board (State Water Board) authorized and established procedures for the State Water Board to issue general NPDES permits pursuant to NPDES regulations at 40 CFR 122.28 and 122.44.

3. NPDES regulations at 40 CFR 122.28 provide for the issuance of general NPDES permits to regulate a category of point sources, which:

   a. Involve the same or substantially similar types of operations;

   b. Discharge the same type of waste;

   c. Require the same type of effluent limitations or operating conditions;

   d. Require similar monitoring; and

e. Are more appropriately regulated under a general permit rather than individual permits.

4. CWC section 13263 (i) authorizes the Regional Water Board to prescribe general waste discharge requirements for a category of dischargers, which

   a. Are produced by the same or similar operations;

   b. Involve the same or similar types of waste;

   c. Require the same or similar treatment standards; and

   d. Are more appropriately regulated under general discharge requirements.

B. Industry/Facility Description. The extraction of contaminated groundwater from the subsurface with above ground treatment is described as “pump-and-treat” operations. Treatment employed by such systems commonly includes air stripping and/or activated carbon (GAC). Within the North Coast Region six pump-and-treat operations are currently authorized to discharge treated groundwater under Order No. R1-2006-0048. These facilities treat on a continuous or batch basis and typically discharge between 1,000 to 300,000 gallons per day (gpd).

C. Legal Authorities. This General Permit 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 general NPDES permit for point source discharges of highly treated groundwater to surface waters resulting from extraction and treatments of groundwater polluted with petroleum hydrocarbons and/or volatile organic compounds. This General Permit also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this General Permit based on information required by monitoring and reporting programs and experience gained through administration of Order No. 95-88, Order No. R1-2001-9, and Order No. R1-2006-0048. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements of the General Permit, 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). Pursuant to California Water Code section 13389, the action by the Regional Water Board to adopt Waste Discharge/NPDES requirements does not trigger the requirements of CEQA, Public

Resources Code sections 21100-21177, except requirements under "new sources"[2] as defined in the Federal Water Pollution Control Act. For any "new source" compliance with CEQA must be achieved before coverage under this General Permit can be authorized for the project.

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[3], 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. There are no applicable Effluent Limitations Guidelines (technology-based limitations established by the US EPA) for groundwater pump-and-treat systems. Technology-based requirements of the General Permit have been established using Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3.

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.

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 following water quality control plans are applicable to this General Permit.

Basin Plan. The Regional Water Board adopted a Water Quality Control Plan for the North Coast Region (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Beneficial uses are designated for all waters of the North Coast Region and are designated for coastal and inland waters, wetlands, and ground waters. Beneficial uses of any water body

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[2] A "new source" is a discharge type for which USEPA has issued a New Source Performance Standards. A "new source" does not mean a new discharge.

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

specifically identified in the Basin Plan generally apply to its tributary streams. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Applicable beneficial uses of surface waters for the North Coast Region are listed below.

- Municipal and Domestic Supply (MUN)
- Agricultural Supply (AGR)
- Industrial Service Supply (IND)
- Industrial Process Supply (PRO)
- Groundwater Recharge (GWR)
- Freshwater Replenishment (FRSH)
- Navigation (NAV)
- Hydropower Generation (POW)
- Water Contact Recreation (REC-1)
- Non-Contact Water Recreation (REC-2)
- Commercial and Sport Fishing (COMM)
- Aquaculture (AQUA)
- Warm Freshwater Habitat (WARM)
- Cold Freshwater Habitat (COLD)
- Inland Saline Water Habitat (SAL)
- Estuarine Habitat (EST)
- Marine Habitat (MAR)
- Wildlife Habitat (WILD)
- Preservation of Areas of Special Biological Significance (ASBS)
- Rare, Threatened, or Endangered Species (RARE)
- Migration of Aquatic Organisms (MIGR)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Shellfish Harvesting (SHELL)
- Water Quality Enhancement (WQE)
- Flood Peak Attenuation/Flood Water Storage (FLD)
- Wetland Habitat (WET)
- Native American Culture (CUL)
- Subsistence Fishing (FISH)

Requirements of this General Permit protect beneficial uses by implementing water quality objectives and criteria, which are designed to protect such uses.

Thermal 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 and interstate waters and enclosed bays and estuaries. Requirements of this Order implement the Thermal Plan for these waters.

I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. Approximately forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants, which are applicable to inland surface waters, enclosed bays, and estuaries of the State.

J. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this General Permit implement the SIP.

K. **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.

L. **Stringency of Requirements for Individual Pollutants.** This General Permit contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on organic pollutants. Restrictions on organic pollutants are discussed in section V.B of the Fact Sheet. This General Permit's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this General Permit contains effluent limitations more stringent than the minimum federal technology-based requirements that are necessary to meet water quality standards.

This General Permit contains pollutant restrictions that are more stringent than applicable federal requirements and standards. Specifically, this General Permit includes effluent limitations for organic pollutants that are more stringent than applicable

federal standards, but that are nonetheless necessary to meet numeric objectives or protect beneficial uses. The rationale for including these limitations is explained in section V.B of the Fact Sheet.

M. Antidegradation Policy. 40 CFR 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.

N. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in this General Permit are less stringent that those in Order No. 2006-0048. As discussed in detail in the Fact Sheet this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

O. 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.

P. Monitoring and Reporting. 40 CFR 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. Upon enrollment, a Monitoring and Reporting Program will be issued to the Discharger. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements.

Q. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water

Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the Fact Sheet.

R. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections III.B. and III.D. of this General Permit are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

S. Notification of Interested Parties. The Regional Water Board has notified the authorized Dischargers and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this General Permit.

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

III. Discharge Prohibitions

A. The creation of pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code, is prohibited.

B. The discharge of any waste, other than highly treated groundwater extracted from the site and treated, as represented by the Discharger in the NOI or as contemplated by the Executive Officer in authorization to discharge under this General Permit is prohibited, unless the discharge is regulated by another NPDES permit or is discharged to a permitted facility.

C. The discharge of groundwater containing constituents listed in Table 3 of the General Permit in excess of the background level in the receiving water is prohibited.

D. The discharge of extracted and treated groundwater in excess of the flow rates described by the Discharger in the NOI or as authorized by the Executive Officer is prohibited.

E. Bypass or overflow of untreated or partially treated groundwater to waters of the State from the treatment system or from the collection and transport systems or from pump stations tributary to the treatment system is prohibited.

IV. Effluent Limitations and Discharge Specifications

A. Pollutants with Effluent Limitations Established by this General Permit:

The General Permit establishes effluent limitations for acute toxicity and the groups of pollutants listed below.

1. CTR Pollutants- the toxic pollutants identified as Compound Numbers 1 through 126 by the CTR at 40 CFR 131.38,

2. Title 22 Pollutants- the pollutants with drinking water primary maximum contaminant levels (MCLs) established by the State Department of Health Services at Title 22 of the California Code of Regulations, Division 4, Chapter 15, Article 4 (Primary Standards-Inorganic Chemicals) and Article 5.5 (Primary Standards-Organic Chemicals), and

3. Petroleum hydrocarbons and associated petroleum parameters- constituents associated with a release of petroleum hydrocarbons, but not identified as CTR or Title 22 Pollutants.

4. The effluent limitations established in this General Permit are intended to be as broad as possible to incorporate similar discharges under one permit. However, pollutants of concern can vary between individual Dischargers and not all effluent limitations established in this General Permit are applicable for every discharge. Applicable effluent limitations will be established for individual dischargers at the time of enrollment and will include all pollutants identified as a constituent of concern as part of the unauthorized release to groundwater and any identified pollutants which have a reasonable potential to be detected in the treated effluent discharge.

B. Effluent Limitations

1. pH. For waters listed in Table 3-1 from the Basin Plan, the pH water quality objectives shall apply as effluent limitations. For waters not listed in Table 3-1 and where pH objectives are not prescribed, the pH of the discharge shall not be less than 6.5 nor greater than 8.5.

2. Inorganic pollutants established in CTR and Title 22 shall not be discharged in concentrations that exceed applicable water quality objectives established by CTR or MCLs established by Title 22, whichever is most stringent. The applicable effluent limitations for inorganic pollutants are established in Table 3: Numeric Effluent Limitations for Inorganic Pollutants. For those inorganic compounds which toxicity is dependent on hardness, the appropriate effluent limitations shall be based on the actual receiving water hardness at the time of monitoring and shall be determined using Table 4: Most Stringent CTR Hardness Dependent Water Quality Criteria for Inorganics.

Table 3 Numeric Effluent Limitations for Inorganic Pollutants

Pollutant	CAS No.	Units	Minimum Detection Requirements[4]	Basis for Detection Requirement	Final Effluent Limitation
Aluminum	7429905	mg/L	0.050	Title 22	1.0
Antimony	7440360	µg/L	0.5	CTR	6.0
Arsenic	7440382	µg/L	1.0	CTR	10
Asbestos	1332214	MFL	0.2	Title 22	7
Barium	7440393	µg/L	100	Title 22	1000
Beryllium	7440417	µg/L	0.5	CTR	4.0
Cadmium	7440439	µg/L	0.25	CTR	Table 4
Chromium (total)		µg/L	0.5	CTR	50
Chromium +3	7440473	µg/L			Table 4
Chromium +6	18540299	µg/L	5.0	CTR	11
Copper	7440508	µg/L	0.5	CTR	Table 4
Cyanide	57125	µg/L	5.0	CTR	5.2
Fluoride	7782414	mg/L	0.100	Title 22	2.0
Lead	7439921	µg/L	0.5	CTR	Table 4
Mercury	7439976	µg/L	0.2	CTR	0.05
Nickel	7440020	µg/L	1.0	CTR	Table 4
Nitrate (as N03)		mg/L	2.0	Title 22	45
Nitrate + Nitrite (sum as N)		mg/L		Title 22	10
Nitrite (as N)		mg/L	0.400	Title 22	1.0
Perchlorate		µg/L	4.0	Title 22	6.0
Selenium	7782492	µg/L	1.0	CTR	5.0
Silver	7440224	µg/L	0.25	CTR	Table 4
Thallium	7440280	µg/L	1.0	CTR	1.7
Zinc	7440666	µg/L	1.0	CTR	Table 4

[4] Dischargers shall comply with the most stringent minimum detection requirement for each pollutant. The applicable minimum detection requirement will be either (1) the Minimum Level (ML) of detection as established by the State Water Board in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California 2005 (SIP) or (2) the Detection Limits for Purposes of Reporting (DLRs) as established by the State Department of Health Services at Title 22 of the California Code of Regulations, Section 64432.

Table 4 Most Stringent CTR Hardness Dependent Water Quality Criteria for Inorganics

Receiving Water Hardness (mg/L $CaCO_3$)	Most Stringent CTR Water Quality Criterion (µg/L) [5]						
	Cadmium	Chromium $^{+3}$	Copper	Lead	Nickel	Silver	Zinc
1 - 10	0.07	4.8	0.18	0.01	1.1	0.01	2.4
11 – 20	0.44	34	1.4	0.19	8.1	0.09	18
21 – 30	0.72	58	2.5	0.44	14	0.28	32
31 – 40	0.98	79	3.4	0.72	19	0.54	44
41 – 50	1.2	100	4.4	1.0	25	0.88	56
51 – 60	1.5	120	5.2	1.4	30	1.3	68
61 – 70	1.7	140	6.1	1.7	34	1.7	79
71 – 80	1.9	160	7.0	2.1	39	2.3	90
81 – 90	2.1	170	7.8	2.4	44	2.8	100
91 – 100	2.3	190	8.6	2.8	48	3.5	110
101 – 110	2.5	210	9.4	3.2	53	4.1	120
111 – 120	2.7	230	10	3.6	57	4.9	130
121 – 130	2.9	240	11	4.1	61	5.6	140
131 – 140	3.0	260	12	4.5	66	6.5	150
141 – 150	3.2	270	13	4.9	70	7.3	160
151 – 160	3.4	290	13	5.4	74	8.2	170
161 – 170	3.6	310	14	5.8	78	9.2	180
171 – 180	3.8	320	15	6.3	82	10	190
181 – 190	3.9	340	15	6.8	86	11	200
191 – 200	4.1	350	16	7.3	90	12	210
201 - 210	4.3	370	17	7.7	94	13	220
211 – 220	4.4	380	18	8.2	98	15	230
221 – 230	4.6	400	18	8.7	100	16	230
231 – 240	4.8	410	19	9.2	110	17	240
241 – 250	4.9	430	20	9.7	110	18	250
251 – 260	5.1	440	20	10	110	20	260
261 – 270	5.2	450	21	11	120	21	270
271 – 280	5.4	470	22	11	120	23	280
281 – 290	5.5	480	23	12	130	24	290
291 – 300	5.7	500	23	12	130	25	300
301 – 310	5.8	510	24	13	130	27	300
311 – 320	6.0	520	25	13	140	29	310
321 – 330	6.2	540	25	14	140	30	320
331 – 340	6.3	550	26	15	140	32	330
341 – 350	6.5	570	27	15	150	33	340
351 – 360	6.6	580	27	16	150	35	350
361 – 370	6.7	590	28	16	150	37	360
371 – 380	6.9	610	29	17	160	39	360
381 – 390	7.0	620	29	17	160	41	370
391 – 400	7.2	630	30	18	170	42	380
> 400	7.3	650	31	19	170	44	390

[5] Water quality criteria are expressed as total recoverable metal and are rounded to two significant figures.

3. Organic pollutants, including CTR pollutants, Title 22 pollutants, and petroleum hydrocarbons and associated parameters shall not be discharged at detectable concentrations.

   a. For the purposes of this General Permit, detectable concentrations of the CTR organic pollutants are concentrations equal to or exceeding their respective Minimum Level (ML) of detection as established by the State Water Board in the SIP (2005).

   b. For the purposes of this General Permit, detectable concentrations of the Title 22 organic pollutants are concentrations equal to or exceeding their respective Detection Limits for Purposes of Reporting (DLRs), as established by the State Department of Health Services at Title 22 of the California Code of Regulations, section 64445.1.

   c. For the purposes of this General Permit, detectable concentrations of petroleum hydrocarbons and associated parameters are concentrations equal to or exceeding the MLs established for this General Permit based on the most stringent and achievable detection limit for each parameter.

   d. The applicable effluent limitations for organic pollutants are established in Table 5: Numeric Effluent Limitations for Organic Pollutants.

Table 5: Numeric Effluent Limitations for Organic Pollutants

Pollutant	CAS No.	Units	Basis for Detection Requirement	Final Effluent Limitation
2,3,7,8-TCDD (Dioxin)	1746016	µg/L	Title 22	5 x 10^-9
Volatile Organic Compounds				
Acrolein	107028	µg/L	CTR	2.0
Acylonitrile	107131	µg/L	CTR	2.0
Benzene	71432	µg/L	CTR	0.5
Bromoform	75252	µg/L	CTR	0.5
Carbon Tetrachloride	56235	µg/L	CTR	0.5
Chlorobenzene	108907	µg/L	CTR	0.5
Chlorodibromomethane	124481	µg/L	CTR	0.5
Chloroethane	75003	µg/L	CTR	0.5
2-Chloroethylvinyl Ether	110758	µg/L	CTR	1
Chloroform	67663	µg/L	CTR	0.5
Cis-1,2-Dichlorobenzene	156592	µg/L	Title 22	0.5
Dichlorobromomethane	75274	µg/L	CTR	0.5
1,1-Dichloroethane	75343	µg/L	CTR	0.5
1,2-Dichloroethane	107062	µg/L	CTR	0.5
1,1-Dichloroethene	75354	µg/L	CTR	0.5
1,2-Dichloropropane	78875	µg/L	CTR	0.5
1,3-Dichloropropene	542756	µg/L	CTR	0.5
Ethylbenzene	100414	µg/L	CTR	0.5

Table 5: Numeric Effluent Limitations for Organic Pollutants

Pollutant	CAS No.	Units	Basis for Detection Requirement	Final Effluent Limitation
Methyl Bromide	74839	µg/L	CTR	1
Methyl Chloride	74873	µg/L	CTR	0.5
Methylene Chloride	75092	µg/L	CTR	0.5
Methyl Tertiary Butyl Ether	1634044	µg/L	Title 22	0.5
Styrene	100425	µg/L	Title 22	0.5
1,1,2,2-Tetrachloroethane	79345	µg/L	CTR	0.5
Tetrachloroethene	127184	µg/L	CTR	0.5
Toluene	108883	µg/L	CTR	0.5
1,2-Trans-Dichloroethene	156605	µg/L	CTR	0.5
1,2,4-Trichlorobenzene	120821	µg/L	Title 22	0.5
1,1,1-Trichloroethane	71556	µg/L	CTR	0.5
1,1,2-Trichloroethane	79005	µg/L	CTR	0.5
Trichloroethene	79016	µg/L	CTR	0.5
Trichlorofluoromethane	75694	µg/L	Title 22	5
1,1,2-Trichloro-1,2,2-Trifluoroethane	76131	µg/L	Title 22	10
Vinyl Chloride	75014	µg/L	CTR	0.5
Xylenes		µg/L	Title 22	0.5
Semi-Volatile Organic Compounds				
Acenaphthene	83329	µg/L	CTR	0.5
Acenaphthylene	208968	µg/L	CTR	0.2
Anthracene	120127	µg/L	CTR	2
Benzidine	92875	µg/L	CTR	5
Benzo(a)Anthracene	56553	µg/L	CTR	5
Benzo(a)pyrene	50328	µg/L	Title 22	0.1
Benzo(b)Fluoranthene	205992	µg/L	CTR	10
Benzeo(ghi)Perylene	191242	µg/L	CTR	0.1
Benzo(k)Fluoranthene	207089	µg/L	CTR	2
Bis(2-Chloroethoxy)Methane	111911	µg/L	CTR	5
Bis(2-Chloroethyl)Ether	111444	µg/L	CTR	1
Bis(2-Chlorosisopropyl)Ether	3963829	µg/L	CTR	2
Bis(2-Ethylhexyl)Phthalate	117817	µg/L	Title 22	3
4-Bromophenyl Phenyl Ether	101553	µg/L	CTR	5
Butylbenzyl Phthalate	85687	µg/L	CTR	10
2-Chloronaphthalene	91587	µg/L	CTR	10
2-Chlorophenol	95578	µg/L	CTR	2
4-Chlorophenyl Phenyl Ether	7005723	µg/L	CTR	5
Chrysene	218019	µg/L	CTR	5
Dibenzo(a,h)Anthracene	53703	µg/L	CTR	0.1
1,2-Dichlorobenzene	95501	µg/L	CTR	0.5
1,3-Dichlorobenzene	541731	µg/L	CTR	0.5
1,4-Dichlorobenzene	106467	µg/L	CTR	0.5
3,3-Dichlorobenzidine	91941	µg/L	CTR	5
2,4-Dichlorophenol	120832	µg/L	CTR	1
2,4-Dimethylphenol	105679	µg/L	CTR	1
Di(2-ethylhexyl)adipate	103231	µg/L	CTR	5
Diethyl Phthalate	84662	µg/L	CTR	2
Dimethyl Phthalate	131113	µg/L	CTR	2
Di-n-Butyl Phthalate	84742	µg/L	CTR	10
2,4-Dinitrophenol	51285	µg/L	CTR	5.0
2,4-Dinitrotoluene	121142	µg/L	CTR	5

Table 5: Numeric Effluent Limitations for Organic Pollutants

Pollutant	CAS No.	Units	Basis for Detection Requirement	Final Effluent Limitation
2,6-Dinitrotoluene	606202	µg/L	CTR	5
Di-n-Octyl Phthalate	117840	µg/L	CTR	10
1,2-Diphenylhydrzine	122667	µg/L	CTR	1
Di-Isopropyl Ether	10823	µg/L	Detection Limit	0.5
Ethanol	64175	µg/L	Detection Limit	5
Ethyl Tertiary Butyl Ether	637923	µg/L	Detection Limit	0.5
Ethylene Dibromide	8003074	µg/L	CTR	0.02
Fluoranthene	206440	µg/L	CTR	0.05
Fluorene	86737	µg/L	CTR	0.1
Hexachlorobenzene	118741	µg/L	Title 22	0.5
Hexachlorobutadiene	87683	µg/L	CTR	1
Hexachlorocyclopentadiene	77474	µg/L	Title 22	1
Hexachloroethane	67721	µg/L	CTR	1
Indeo(1,2,3-cd)Pyrene	193395	µg/L	CTR	0.05
Isophorone	78591	µg/L	CTR	1
Methanol	67561	mg/L	Detection Limit	1
3-Methyl-4-Chlorophenol	59507	µg/L	CTR	1
2-Methyl-4,6-Dinitophenol	53421	µg/L	CTR	5.0
Naphthlene	91203	µg/L	CTR	0.2
Nitrobenzene	98953	µg/L	CTR	1
2-Nitriphenol	88755	µg/L	CTR	10
4-Nitriphenol	100027	µg/L	CTR	5.0
N-Nitrosodimethylamine	62759	µg/L	CTR	5
N-Nitrosodi-n-Propylamine	621647	µg/L	CTR	5
N-Nitrosodiphenylamine	86306	µg/L	CTR	1
Pentachlorophenol	87865	µg/L	Title 22	0.2
Phenanthrene	85018	µg/L	CTR	0.05
Phenol	108952	µg/L	CTR	1
Pyrene	129000	µg/L	CTR	0.05
Tertiary Amyl Methyl Ether	994058	µg/L	Detection Limit	0.5
Tertiary Butyl Alcohol	75650	µg/L	Detection Limit	5.0
2,4,6-Trichlorophenol	88062	µg/L	CTR	10.0
Pesticides				
Alachlor	15972608	µg/L	Title 22	1
Aldrin	309002	µg/L	CTR	0.005
Atrazine	1912249	µg/L	Title 22	0.5
Bentazon	25057890	µg/L	Title 22	2
alpha-Benzene Hexachloride	319846	µg/L	CTR	0.01
beta-Benzene Hexachloride	319857	µg/L	CTR	0.005
gamma-Benzene Hexachloride	58899	µg/L	CTR	0.02
delta-Benzene Hexachloride	319868	µg/L	CTR	0.005
Carbofuran	1563662	µg/L	Title 22	5
Chlorodane	57749	µg/L	CTR	0.1
Dalapon	75990	µg/L	Title 22	10
Dibromochloropropane	96128	µg/L	Title 22	0.01
4,4-DDT	50293	µg/L	CTR	0.01
4,4-DDE	72559	µg/L	CTR	0.05
4,4-DDD	72548	µg/L	CTR	0.05
2,4 D	94757	µg/L	Title 22	10
Dieldrin	60571	µg/L	CTR	0.01

Table 5: Numeric Effluent Limitations for Organic Pollutants

Pollutant	CAS No.	Units	Basis for Detection Requirement	Final Effluent Limitation
Dinoseb	88857	µg/L	Title 22	2
Diquat	85007	µg/L	Title 22	4
Alpha-Endosulfan	959988	µg/L	CTR	0.02
Beta-Endosulfan	33213659	µg/L	CTR	0.01
Endosulfan Sulfate	1031078	µg/L	CTR	0.05
Endothall	145733	µg/L	Title 22	45
Endrin	72208	µg/L	CTR	0.01
Endrin Aldehyde	7421934	µg/L	CTR	0.01
Glyphosate	1071836	µg/L	Title 22	25
Heptachlor	76448	µg/L	CTR	0.01
Heptachlor Epoxide	1024573	µg/L	CTR	0.01
Methoxychlor	72435	µg/L	Title 22	10
Molinate	2212671	µg/L	Title 22	2
Oxamyl	23135220	µg/L	Title 22	20
Picloram	1918021	µg/L	Title 22	1
Simazine	122349	µg/L	Title 22	1
Thiobencarb	28249776	µg/L	Title 22	1
2,4,5-TP (Silvex)	93721	µg/L	Title 22	1
Toxaphene	8001352	µg/L	CTR	0.5
Polychlorinated Biphenyls				
Aroclor 1016	12674112	µg/L	CTR	0.5
Aroclor 1221	11104282	µg/L	CTR	0.5
Aroclor 1232	11141165	µg/L	CTR	0.5
Aroclor 1242	53469219	µg/L	CTR	0.5
Aroclor 1248	12672296	µg/L	CTR	0.5
Aroclor 1254	11097691	µg/L	CTR	0.5
Aroclor 1260	11096825	µg/L	CTR	0.5
Petroleum Hydrocarbons				
Total Petroleum Hydrocarbons as Gasoline	8006619	µg/L	Detection Limit	50
Total Petroleum Hydrocarbons as Diesel	68476346	µg/L	Detection Limit	50
Total Petroleum Hydrocarbons as Motor Oil		µg/L	Detection Limit	170

4. Acute Toxicity. There shall be no acute toxicity in treated effluent. Dischargers shall be in compliance with this limitation when the survival of aquatic organisms in a 96-hour bioassay of undiluted waste complies with a 90 percent survival.

V. Receiving Water Limitations

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this General Permit. Discharges authorized by this General Permit shall not cause the following conditions in receiving waters.

1. Unless more stringent water quality objective for dissolved oxygen are established for a specific receiving water body by Table 3-1 of the Basin Plan, authorized discharges shall not cause the dissolved oxygen concentration of receiving waters to be depressed below 7.0 mg/L at any time nor below 9.0 mg/L during critical spawning and egg incubation periods. In the event that receiving waters have background dissolved oxygen concentrations of less than these levels, discharges shall not depress dissolved oxygen concentrations below existing levels.

2. Unless more stringent water quality objectives for pH are established for a specific receiving water by Table 3-1 of the Basin Plan, authorized discharges shall not cause the pH of receiving waters to be depressed below 6.5 nor raised above 8.5. Within this ranges, authorized dischargers shall not cause receiving water pH to change more that 0.5 pH units at any time.

3. Authorized discharges shall not substantially contribute to exceedances of water quality objectives for specific waters of the North Coast Region that are established in Table 3-1 of the Basin Plan for specific conductance, total dissolved solids, hardness, and boron. In the event that receiving waters have background conditions for these parameters at levels that already exceed water quality objectives, dischargers shall not cause or contribute to a further exceedance of existing conditions.

4. Authorized discharges shall not cause the turbidity of receiving waters to be increased more than 20 percent above naturally occurring background levels.

5. Authorized discharges shall not cause receiving waters to contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses of receiving water.

6. Authorized discharges shall not cause receiving waters to contain floating materials including, but not limited to, solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.

7. Authorized discharges shall not cause receiving waters to contain taste and odor producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.

8. Authorized discharges shall not cause coloration of receiving waters that causes nuisance or adversely affects beneficial uses.

9. Authorized discharges shall not cause bottom deposits in receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses of the receiving waters.

10. Authorized discharges shall not cause or substantially contribute to concentrations of biostimulants in receiving waters that promote objectionable aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses of the receiving waters.

11. Authorized dischargers shall not cause receiving waters to contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animals, or aquatic life.

12. Authorized discharges shall not cause alteration of natural temperature of receiving waters unless it can be demonstrated to the satisfaction of the Executive Officer that such alteration in temperature does not adversely affect beneficial uses. At no time or place shall discharges cause temperature to increase more than 5º F above natural receiving water temperature.

13. Authorized discharges shall not cause an individual pesticide or combination of pesticides to be present in concentrations that adversely affect beneficial uses of receiving waters. Authorized discharges shall not cause bioaccumulation of pesticide, fungicide, wood treatment chemicals, or other toxic pollutant concentrations found in bottom sediments or aquatic life to levels that are harmful to human health.

14. The authorized discharge shall not cause receiving waters to contain concentration of pesticides exceeding of the limiting concentrations set forth in Table 3-2 of the Basin Plan or in excess of more stringent Maximum Contaminant Levels (MCLs) established for these pollutants in Title 22, Division 5, Chapter 15, Article 4 and 5.5 of the California Code of Regulations.

15. Authorized discharges shall not cause the receiving waters to contain toxic substances in concentrations that are toxic to, degrade or that produce detrimental physiological responses in humans or animals or cause acute or chronic toxicity in plants or aquatic life.

16. Authorized discharges shall not cause the receiving waters to contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water that cause nuisance or that otherwise adversely affect beneficial uses.

17. Authorized discharges shall not cause a violation of any applicable water quality objectives for receiving waters adopted by the Regional Water Board or the State Board as required by the CWA and regulations adopted hereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to CWA Section 3030 or amendments thereto, the Regional Water Board will revise and modify this General Permit with the more stringent standards.

18. Authorized discharges shall not cause radionuclides to be present in concentrations which are deleterious to human, plant, animal, or aquatic life nor which result in the accumulation of radionuclides in the food web to an extent which presents a hazard to human, plant, animal, or indigenouse aquatic life.

19. Waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of radionuclides in excess of the limits specified in California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64442 (Table 64442).

VI. Provisions

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this General Permit and shall adhere to the following standard provisions applicable to General Permits from 40 CFR 122.28(b):

   a. The General Permit may be modified, revoked, and reissued, or terminated in accordance with applicable requirements of NPDES regulations at 40 CFR 124.

   b. The Executive Officer may require any discharger authorized by the General Permit to apply for and obtain an individual NPDES permit. Any interested person may petition the Executive Officer to take action under this paragraph. Cases where an individual NPDES permit may be required include the following:

      i. The discharger is not in compliance with the terms of the general permit;

      ii. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;

      iii. Effluent Limitations Guidelines are promulgated for the point sources covered by the General Permit;

      iv. A water quality management plan applicable to the point sources covered by the General Permit is approved;

      v. Circumstances have changed since the time of the request to be covered so that the discharger is no longer appropriately controlled under the General Permit or either a temporary or permanent reduction or elimination of the authorized discharge is necessary; or

      vi. The discharger is a significant contributor of pollutants to the receiving waters.

   c. Any owner or operator authorized under the General permit may request to be excluded from coverage by applying for an individual permit in accordance with 40 CFR 122.28(b)(3)(iii).

d. When an individual NPDES permit is issued to an owner or operator otherwise subject to the General Permit, the applicability of the General Permit to the discharger is automatically terminated on the effective date of the individual permit.

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

a. Authorization to discharge under this Order may be terminated for reasons which include, but are not limited to, the following:

i. Violation of any term or condition contained in this Order;

ii. Obtaining authorization to discharge under this Order by misrepresentation or failure to fully disclose relevant information;

iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge;

iv. A change in the groundwater treatment system to a configuration that is not eligible for coverage under this General Permit;

v. The discharge is endangering human health or the environment.

b. The USEPA Administrator may request the Regional Water Board Executive Officer to require any discharger authorized to discharge under this General Permit to subsequently apply for and obtain an individual NPDES Permit. The Executive Officer may require any discharger authorized to discharge waste under this General Permit to subsequently apply for and obtain an individual NPDES Permit. An interested person may petition the Executive Officer or the Regional Administrator to take action under this provision. The Regional Water Board may also review and revise this General Permit at any time upon application by any person, or on the Regional Water Board's own motion.

c. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under the federal CWA at Section 307(a) for a toxic pollutant which is present in the discharge, and that standard or prohibition is more stringent than any limitation for the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the Discharger so notified.

d. The Executive Officer may modify or revoke authorization to discharge under this General Permit if it is determined that the Discharger is causing or significantly contributing to adverse impacts to the water quality and/or beneficial uses of receiving waters. In the event that the Regional Water Board's interpretation of the narrative toxicity objective is modified or invalidated by the Regional Water

Board, a court decision, or a State statute or regulation, this General Permit may be revised to be consistent with the decision, statute, or regulation.

e. In addition, the Regional Water Board may consider revising this General Permit to make it consistent with any Regional Water Board decisions arising from various petitions for re-hearing, and litigation concerning the State Implementation Plan, 303 (d) list, and TMDL Program.

f. Availability. A copy of this General Permit and the Executive Officer's authorization letter shall be maintained at the Discharger's facility or project site where the discharge occurs for reference by operating personnel. Key operating personnel shall be familiar with its content.

g. Change in Discharge. At least 30 days prior to an expected material change in the character, location, or volume of a discharge, the Discharger shall reapply for coverage under the General Permit by submitting a completed NOI to the Regional Water Board and submitting a new filing fee. A material change includes, but is not limited to, the following changes that could potentially cause different water quality or nuisance problems: identification of a pollutant that was not disclosed in the original NOI, an increase in the rate or volume of the discharge, or a change in the discharge location.

h. Monitoring and Reporting. The Regional Water Board or State Water Board may require the Discharger to establish and maintain records, make reports, install, use, and maintain monitoring equipment or methods (including, where appropriate, biological monitoring methods), sample effluent and receiving water as prescribed, and provide other information as may be reasonably required.

   The Discharger shall file with the Regional Water Board technical reports on self monitoring work performed according to the detailed specifications contained in any monitoring and reporting program as directed by the Regional Water Board.

   Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Department of Public Health Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer. In the event a certified laboratory is not available to the Discharger, analyses performed by a non-certified laboratory will be accepted, provided:

   i. A quality assurance/ quality control program is instituted by the laboratory, and a manual containing the steps followed in this program is kept in the laboratory and made available for inspection by representatives of the Regional Water Board. The quality assurance/quality control program must conform to U.S. EPA or State Department of Public Health guidelines.

   ii. The laboratory will become certified within the shortest practicable time if the State certification program is resumed.

All Discharge Monitoring Reports shall be sent to:

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

i. 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.

j. The Discharger shall immediately cease any discharge authorized by this Order in the event there is a violation or threatened violation of this General Permit, or if the Executive Officer so orders. The Discharger must notify Regional Water Board staff orally, as soon as reasonably possible, with a written confirmation within a week, when a violation of this Order is known to exist. The Discharge may not be resumed until authorized in writing by the Executive Officer.

k. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board orally[6] within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives 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, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

l. 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.)

[6] Oral reporting means direct contact with a Regional Water Board staff person. The oral report may be given in person or by telephone. After business hours, oral contact must be made by calling the State Office of Emergency Services at (800)852-7550 or Regional Water Board spill officer at (707) 696-7179.

B. Monitoring and Reporting Program (MRP) Requirements

Authorized dischargers shall comply with the MRP requirements, and future revisions thereto, in Attachment E of this Order. In accordance with section IV.A of the MRP, when granting authorization to discharge under the General Permit, the Regional Water Board Executive Officer will issue an individual monitoring and reporting program for a specific discharger. Future revisions to the individual monitoring and reporting program may be modified to reduce monitoring frequency and/or eliminate a monitoring parameter if it can be demonstrated that any reduction in monitoring requirements will not compromise water quality. In addition, the Executive Officer may stipulate conditions and requirements in addition to those established by the MRP for all authorized discharges, including monitoring and reporting requirements, for each specific discharge to assess compliance with requirements of the General Permit and/or to characterize the discharge and/or receiving water quality.

C. Special Provisions

1. Reopener Provisions

a. Standard Revisions. This Order may be reopened for modification, or revocation and reissuance in accordance with the provisions contained in 40 CFR section 122.62 which identifies the following conditions that may necessitate a permit modification:

i. If new or amended 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 the new or amended 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. Total Chlorine Residual. If a statewide policy for total residual chlorine is adopted during the term of this Order, this Order may be reopened and modified to maintain consistency with the statewide policy.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Toxicity Reduction Requirements**

For compliance with the Basin Plan's narrative toxicity objective, this General Permit requires the Discharger to conduct chronic whole effluent toxicity

(WET) testing, as specified in MRP section V. Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the numeric toxicity monitoring trigger during accelerated monitoring established in this Provision, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE) in accordance with an approved TRE Work Plan, and take actions to mitigate the impact of the discharge and prevent recurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity. This Provision includes requirements for the Discharger to develop and submit a TRE Work Plan and includes procedures for accelerated chronic toxicity monitoring and TRE initiation.

i. **Toxicity Reduction Evaluation (TRE) Work Plan.** As part of the NOI process, the Discharger shall submit to the Regional Water Board a TRE Work Plan for approval by the Executive Officer. The TRE Work Plan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Work Plan must be developed in accordance with the following guidance from the U.S. EPA's Office of Research and Development.

   - *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I (EPA/600/6-91-005F).*

   - *Methods for Aquatic Toxicity Identifications, Phase II Procedures for Samples Exhibiting Acute and Chronic Toxicity (EPA/600/R-92/080), and*

   - *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity (EPA/600/R-92/081).*

ii. **Accelerated Monitoring and TRE Initiation.** When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. The Discharger shall initiate a TRE to address effluent toxicity if any WET testing results exceed the numeric toxicity monitoring trigger during accelerated monitoring.

iii. **Numeric Toxicity Monitoring Trigger.** The numeric toxicity monitoring trigger to initiate a TRE is > 1 TU_C (where TU_C = 100/NOEC) [No Observed Effect Concentration]. The monitoring trigger is not an effluent

limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring and initiate a TRE.

iv. **Accelerated Monitoring Specifications**. If the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity testing, the Discharger shall initiate accelerated monitoring within 14-days of notification by the laboratory of the exceedance. Accelerated monitoring shall consist of four (4) chronic toxicity tests conducted once every two weeks using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:

(a) If the results of four (4) consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.

(b) If the source(s) of the toxicity is easily identified (e.g., temporary treatment 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 effluent 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 begin a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of any test result exceeding the monitoring trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Regional Water Board including, at minimum:

- Propose an alternative disposal method.
- Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;
- Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
- A schedule for these actions.

- The Discharger shall correct the toxicity to the satisfaction of the Executive Officer prior to resuming a discharge to receiving water.

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

   This section of the standardized permit template is not applicable to discharges under this General Permit.

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

   a. **Operations and Maintenance Manual**

      i. All owners or operators authorized to discharge under this General Permit shall maintain and update, as necessary, a Groundwater Treatment System Operation and Maintenance (O&M) Manual to assure efficient and effective treatment of contaminated groundwater. The O&M shall address, but not limit attention to, the following.

      ii. The O&M manual shall specify both normal operating and critical maximum or minimum values for treatment process variables including influent concentrations, flow rates, water levels, temperatures, time intervals, and chemical feed rates.

      iii. The O&M manual shall specify an inspection and maintenance schedule for active and reserve systems and shall provide a log sheet format to document inspection observations and record completion of maintenance tasks.

      iv. The O&M manual shall specify safeguards to prevent noncompliance with limitations and requirements of the General Permit resulting from equipment failure, power loss, vandalism, or ten-year return frequency rainfall.

   b. **Engineering Design Report**

      For all new dischargers and existing dischargers with significant changes made since prior submittals to the Regional Water Board, the NOI shall be accompanied by an Engineering Design Report that certifies the adequacy of each major component of the proposed treatment facility. The certification shall include an analysis, based on accepted engineering practice, which demonstrated that the treatment process and the physical design of the treatment components will ensure compliance with the prohibitions, effluent limitations, and other conditions of the General Permit. The report shall also certify that:

      i. Adequate maintenance and testing schedules are included in the Groundwater Treatment System O&M Manual.

ii. Sampling points are located where representative monitoring samples of process and discharge streams can be obtained. The design engineer shall affix their signature and engineering license number to this Engineering Design Report.

c. **Granular Activated Carbon Quality Assurance / Quality Control**

The discharger shall implement a Quality Assurance / Quality Control (QA/QC) Program to assure that newly replenished granular activated carbon (GAC) in the treatment system is providing high quality effluent with respect to pH, ammonia, and inorganic constituents. Activities conducted as part of the GAC QA/QC program shall be documented in routine monitoring reports submitted for the facility.

5**. Special Provisions for Municipal Facilities (POTWs Only)**

This section of the standardized permit template is not applicable to discharges under this General Permit.

6**. Other Special Provisions**

a. **Storm Water**

i. Industrial Storm Water. If applicable, authorized dischargers shall seek coverage under and comply with the requirements of State Water Board Order No. 97-03-DWQ, NPDES General Permit No. CAS000001-Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (1997). If this Industrial General Storm Water Permit is reissued, authorized dischargers shall seek coverage under and comply with the requirements of the most recent version of the permit.

ii. Construction Storm Water. If applicable, authorized dischargers shall seek coverage under and comply with the requirements of State Water Board Order No. 2009-0009, NPDES Permit No. CAS000002-Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity. If this Construction General Storm Water Permit is reissued, authorized dischargers shall seek coverage under and comply with the requirements of the most recent version of the permit.

7. Compliance Schedules

This section of the standardized permit template is not applicable to discharges authorized under this General Permit.

VII. Compliance Determination

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

A. General.

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

B. Multiple Sample Data.

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

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

C. Average Monthly Effluent Limitation (AMEL).

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

D. Average Weekly Effluent Limitation (AWEL).

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

E. Maximum Daily Effluent Limitation (MDEL).

If a daily discharge exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

F. Instantaneous Minimum Effluent Limitation.

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

G. Instantaneous Maximum Effluent Limitation.

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

Attachment A: Notice of Intent

NOTICE OF INTENT

NEW AND EXISTING DISCHARGERS
TO COMPLY WITH ORDER NO. R1-2011-0028

For

GENERAL PERMIT FOR DISCHARGES OF HIGHLY TREATED GROUNDWATER TO SURFACE WATERS FOLLOWING EXTRACTION AND CLEANUP OF GROUNDWATER POLLUTED WITH PETROLEUM HYDROCARBONS AND VOLATILE ORGANIC COMPOUNDS ORDER
(NPDES PERMIT NO. CAG911001)

FACILITY INFORMATION

A. Facility

☐ New Discharge
☐ Existing Discharge (Reissuance)

Name:			
Physical Address:			
City:	County:	State:	Zip Code:
Assessor's Parcel Nos.	Facility:	Discharge Point:	
Mailing Address:			
City:		State:	Zip Code:
Contact Person, Title:			
Telephone Number:	E-Mail Address:		

B. Facility Owner

Name:		
Mailing Address:		
City:	State:	Zip Code:
Telephone Number:	E-Mail Address:	

C. Facility Operator

Name:		
Mailing Address:		
City:	State:	Zip Code:
Telephone Number:	E-Mail Address:	

D. DISCHARGERS CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice of Intent and all attachments, and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the Notice of Intent, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name and Title (type or print)	Signature	Date Signed

The following items must be submitted to complete this application:

PROJECT DESCRIPTION

☐ Background information including:
- Site history
- Source of groundwater contamination
- Site hydrogeology
- Describe lateral and vertical extent of groundwater contamination (including contaminant plume maps)

☐ Location map including:
- Topography of the area extending at least one mile beyond the facility boundaries,
- Receiving waters discharge point(s)
- All surface waters, including any storm sewers or ditches through which the discharge might travel.

☐ Copies of directives from the Regional Water Board and other governmental agencies requiring cleanup of contaminated groundwater.

☐ Description of the groundwater collection and treatment system, provide engineering drawings that are signed and stamped by a Registered Engineer or Geologist. Include anticipated:
- rates of groundwater extraction
- storage capacity
- discharge rate
- duration of discharge

- ☐ Identify other environmental and land use permits which have been issued or which are required for operation of the pump-and-treat facility (example air board discharge permit, well construction permit, construction permit).
- ☐ Provide proof that discharge to the local municipal wastewater treatment plant is not viable or explain why it is infeasible to connect to the wastewater treatment plant. The Discharger may submit any denial or restrictive flow letter from the wastewater treatment plant as proof that this is not a viable option.
- ☐ Other information necessary to demonstrate eligibility as defined in section I.C of this permit.

RECEIVING WATER CHARACTERIZATION

- ☐ Receiving Water Description

  _____

- ☐ Hydrologic Unit _____
- ☐ Receiving water discharge locations

  Discharge Point 001

  Latitude:_____Longitude:_____

  Discharge Point 002

  Latitude:_____Longitude:_____

  Discharge Point 003

  Latitude:_____Longitude:_____
- ☐ Receiving Water Hardness (mg/L $CaCO_3$)
  - Min:_____
  - Max:_____
- ☐ Identify water quality objectives established by Section 3 of the Basin Plan, as listed in Attachment C (Table B-1) of this Order. Specifically for:
  - total dissolved solids_____
  - specific conductance _____
  - dissolved oxygen _____
  - pH _____
  - Hardness _____
  - Boron _____
- ☐ Is the receiving water listed as impaired pursuant to Section 303 (d) of the Clean Water Act? If yes, for what pollutants?

  _____

☐ Is the receiving water part of an outstanding national, state, or local resource, such as a national or state park, wildlife refuge, or an area of exceptional recreational or ecological significance? If yes, please identify:_____

☐ What is the applicable water quality objective for temperature for the receiving water, as identified by the Basin Plan? _____

CHARACTERIZATION FOR POLLUTANTS

A. New Dischargers (Within 18 months prior to submittal)

☐ Receiving water –inorganic pollutants
☐ Influent water (contaminated/untreated groundwater) –inorganic and organic pollutants

B. Existing Dischargers

☐ Influent (contaminated/untreated groundwater) –inorganic and organic pollutants.

PLANS, REPORTS, MANUALS

New dischargers seeking coverage under the General Permit for the first time shall submit to the Regional Board as attachments to this NOI form the following documents and materials required by section VI. C. 2, 3, and 4 of Order No. R1-2011-0028.

☐ Toxicity Reduction Evaluation Workplan
☐ Operation and Maintenance Manual
☐ Engineering Design Report.

FEE

☐ See Regional Water Board case workers or web site for applicable fee. www.waterboards.ca.gov/resources/fees

ATTACHMENT B – DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as

appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

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

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

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

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

Standard Deviation (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.

Toxicity Reduction Evaluation (TRE) is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity,

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

ATTACHMENT C – WATER QUALITY OBJECTIVES FOR THE NORTH COAST REGION
TABLE 3-1

SPECIFIC WATER QUALITY OBJECTIVES FOR NORTH COAST REGION

	Specific Conductance (micromhos) @ 77°F		Total Dissolved Solids (mg/L)		Dissolved Oxygen (mg/L)				Hydrogen Ion (pH)		Hardness (mg/L)	Boron (mg/L)	
	90%	50%	90%	50%			90%	50%			50%	90%	50%
Waterbody[1]	**Upper Limit[3]**	**Limit[2]**	**Limit[3]**	**Limit[2]**	**Upper Min**	**Upper Limit[3]**	**Upper Limit[2]**		**Upper Max**	**Lower Min**	**Lower Limit[2]**	**Limit[3]**	**Limit[2]**
					Lost River HA								
Clear Lake Reservoir & Upper Lost River	300	200			5.0		8.0		9.0	7.0	60	0.5	0.1
Lower Lost River	1000	700			5.0		-		9.0	7.0	-	0.5	0.1
Other Streams	250	150			7.0		8.0		8.4	7.0	50	0.2	0.1
Tule Lake	**1300**	**900**			**5.0**		**-**		**9.0**	**7.0**	**400**	**-**	**-**
Lower Klamath Lake	1150	850			5.0		-		9.0	7.0	400	-	-
Groundwaters [4]	1100	500			-		-		8.5	7.0	250	0.3	0.2
Butte Valley HA													
Streams	150	100			7.0		9.0		8.5	7.0	30	0.1	0.0
Meiss Lake	2000	1300			7.0		8.0		9.0	7.5	100	0.3	0.1
Groundwaters [4]	800	400			-		-		8.5	6.5	120	0.2	0.1
Shasta Valley HA													
Shasta River	800	600			7.0		9.0		8.5	7.0	220	1.0	0.5
Other Streams	700	400			7.0		9.0		8.5	7.0	200	0.5	0.1
Lake Shastina	300	250			6.0		9.0		8.5	7.0	120	0.4	0.2
Groundwaters [4]	800	500			-		-		8.5	7.0	180	1.0	0.3
Scott River HA													
Scott River	350	250			7.0		9.0		8.5	7.0	100	0.4	0.1
Other Streams	400	275			7.0		9.0		8.5	7.0	120	0.2	0.1
Groundwaters [4]	500	250			-		-		8.0	7.0	120	0.1	0.1
Salmon River HA													
All Streams	150	125			9.0		10.0		8.5	7.0	60	0.1	0.0
Middle Klamath River HA													
Klamath River above Iron Gate Dam including Iron Gate & Copco Reservoirs	425	275			[13]		[13]		8.5	7.0	60	0.3	0.2
Klamath River below Iron Gate Dam	350	275			[13]		[13]		8.5	7.0	80	0.5	0.2
Other Streams	300	150			7.0		9.0		8.5	7.0	60	0.1	0.0
Groundwaters [4]	750	600			-		-		8.5	7.5	200	0.3	0.1
Applegate River HA													
All Streams	250	175			7.0		9.0		8.5	7.0	60	-	-
Upper Trinity River HA													
Trinity River [5]	200	175			7.0		10.0		8.5	7.0	80	0.1	0.0
Other Streams	200	150			7.0		10.0		8.5	7.0	60	0.0	0.0
Clair Engle Lake and Lewiston Reservoir	200	150			7.0		10.0		8.5	7.0	60	0.0	0.0

TABLE 3-1 (CONTINUED)
SPECIFIC WATER QUALITY OBJECTIVES FOR NORTH COAST REGION

	Specific Conductance (micromhos) @ 77°F		Total Dissolved Solids (mg/L)		Dissolved Oxygen (mg/L)			Hydrogen Ion (pH)		Hardness (mg/L)	Boron (mg/L)	
	90%	50%	90%	50%		90%	50%			50%	90%	50%
Waterbody[1]	Upper Limit[3]	Upper Limit[2]	Upper Limit[3]	Upper Limit[2]	Min	Upper Limit[3]	Upper Limit[2]	Upper Max	Lower Min	Lower Limit[2]	Lower Limit[3]	Lower Limit[2]
Hayfork Creek												
Hayfork Creek	400	275			7.0		9.0	8.5	7.0	150	0.2	0.1
Other Streams	300	250			7.0		9.0	8.5	7.0	125	0.0	0.0
Ewing Reservoir	250	200			7.0		9.0	8.0	6.5	150	0.1	0.0
Groundwaters [4]	350	225			-		-	8.5	7.0	100	0.2	0.1
S.F. Trinity River HA												
S.F. Trinity River	275	200			7.0		10.0	8.5	7.0	100	0.2	0.0
Other Streams	250	175			7.0		9.0	8.5	7.0	100	0.0	0.0
Lower Trinity River HA												
Trinity River	275	200			8.0		10.0	8.5	7.0	100	0.2	0.0
Other Streams	250	200			9.0		10.0	8.5	7.0	100	0.1	0.0
Groundwaters [4]	200	150			-		-	8.5	7.0	75	0.1	0.1
Lower Klamath River HA												
Klamath River	300[6]	200[6]			[13]		[13]	8.5	7.0	75[6]	0.5[6]	0.2[6]
Other Streams	200[6]	125[6]			8.0		10.0	8.5	6.5	25[6]	0.1[6]	0.0[6]
Groundwaters [4]	300	225			-		-	8.5	6.5	100	0.1	0.0
Illinois River HA												
All Streams	200	125			8.0		10.0	8.5	7.0	75	0.1	0.0
Winchuck River HU												
All Streams	200[6]	125[6]			8.0		10.0	8.5	7.0	50[6]	0.0[6]	0.0[6]
Smith River HU												
Smith River-Main Forks	200	125			8.0		11.0	8.5	7.0	60	0.1	0.1
Other Streams	150[6]	125[6]			7.0		10.0	8.5	7.0	60[6]	0.1[6]	0.0[6]
Smith River Plain HSA												
Smith River	200[6]	150[6]			8.0		11.0	8.5	7.0	60[6]	0.1[6]	0.0[6]
Other Streams	**150[6]**	**125[6]**			**7.0**		**10.0**	**8.5**	**6.5**	**60[6]**	**0.1[6]**	**0.0[6]**
Lakes Earl & Talawa	-	-			7.0		9.0	8.5	6.5	-	-	-
Groundwaters [4]	350	100			-		-	8.5	6.5	75	1.0	0.0
Crescent City Harbor	-	-										
Redwood Creek HU												
Redwood Creek	220[6]	125[6]	115[6]	75[6]	7.0	7.5	10.0	8.5	6.5			
Mad River HU												
Mad River	300[6]	150[6]	160[6]	90[6]	7.0	7.5	10.0	8.5	6.5			
Eureka Plain HU												
Humboldt Bay	-	-	-	-	6.0	6.2	7.0	8.5	[7]			
Eel River HU												
Eel River	375[6]	225[6]	275[6]	140[6]	7.0	7.5	10.0	8.5	6.5			
Van Duzen River	375	175	200	100	7.0	7.5	10.0	8.5	6.5			

TABLE 3-1 (CONTINUED)
SPECIFIC WATER QUALITY OBJECTIVES FOR NORTH COAST REGION

	Specific Conductance (micromhos) @ 77°F		Total Dissolved Solids (mg/L)		Dissolved Oxygen (mg/L)			Hydrogen Ion (pH)		Hardness (mg/L)	Boron (mg/L)	
	90%	50%	90%	50%		90%	50%			50%	90%	50%
Waterbody[1]	**Upper Limit[3]**	**Upper Limit[2]**	**Upper Limit[3]**	**Upper Limit[2]**	**Lower Min**	**Upper Limit[3]**	**Upper Limit[2]**	**Upper Max**	**Lower Min**	**Lower Limit[2]**	**Upper Limit[3]**	**Upper Limit[2]**
South Fork Eel River	350	200	200	120	7.0	7.5	0.0	8.5	6.5			
Middle Fork Eel River	450	200	230	130	7.0	7.5	10.0	8.5	6.5			
Outlet Creek	400	200	230	125	7.0	7.5	10.0	8.5	6.5			
Cape Mendocino HU												
Bear River	390[6]	255[6]	240[6]	150[6]	7.0	7.5	10.0	8.5	6.5			
Mattole River	300[6]	170[6]	170[6]	105[6]	7.0	7.5	10.0	8.5	6.5			
Mendocino Coast HU												
Ten Mile River	-	-	-	-	7.0	7.5	10.0	8.5	6.5			
Noyo River	185[6]	150[6]	120[6]	105[6]	7.0	7.5	10.0	8.5	6.5			
Jug Handle Creek	-	-	-	-	7.0	7.5	10.0	8.5	6.5			
Big River	300[6]	195[6]	190[6]	130[6]	7.0	7.5	10.0	8.5	6.5			
Albion River	-	-	-	-	7.0	7.5	10.0	8.5	6.5			
Navarro River	285[6]	250[6]	170[6]	150[6]	7.0	7.5	10.0	8.5	6.5			
Garcia River	-	-	-	-	7.0	7.5	10.0	8.5	6.5			
Gualala River	-	-	-	-	7.0	7.5	10.0	8.5	6.5			
Russian River HU												
(upstream) [8]	320	250	170	150	7.0	7.5	10.0	8.5	6.5			
(downstream) [9]	375[6]	285[6]	200[6]	170[6]	7.0	7.5	10.0	8.5	6.5			
Laguna de Santa Rosa	-	-	-	-	7.0	7.5	10.0	8.5	6.5			
Bodega Bay	-	-	-	-	6.0	6.2	7.0	8.5	[7]			
Coastal Waters [10]	-	-	-	-	[11]	[11]	[11]	[12]	[12]			

1 Water bodies are grouped by hydrologic unit (HU), hydrologic area (HA), or hydrologic subarea (HSA).
2 50% upper and lower limits represent the 50 percentile values of the monthly means for a calendar year. 50% or more of the monthly means must be less than or equal to an upper limit and greater than or equal to a lower limit.
3 90% upper and lower limits represent the 90 percentile values for a calendar year. 90% or more of the values must be less than or equal to an upper limit and greater than or equal to a lower limit.
4 Value may vary depending on the aquifer being sampled. This value is the result of sampling over time, and as pumped, from more than one aquifer.
5

Daily Average Not to Exceed	Period	River Reach
60°F	July 1 - Sept. 14	Lewiston Dam to Douglas City Bridge
56°F	Sept. 15 - Oct. 1	Lewiston Dam to Douglas City Bridge
56°F	Oct. 1 - Dec. 31	Lewiston Dam to confluence of North Fork Trinity River

6 Does not apply to estuarine areas.
7 pH shall not be depressed below natural background levels.
8 Russian River (upstream) refers to the mainstem river upstream of its confluence with Laguna de Santa Rosa.
9 Russian River (downstream) refers to the mainstem river downstream of its confluence with Laguna de Santa Rosa.
10 The State's Ocean Plan applies to all North Coast Region coastal waters.
11 Dissolved oxygen concentrations shall not at any time be depressed more than 10 percent from that which occurs naturally.
12 pH shall not be changed at any time more than 0.2 units from that which occurs naturally.
13 The Site Specific Objectives (SSOs) for dissolved oxygen (DO) have been recalculated for the mainstem Klamath River and are presented separately in Table 3-1a.
- no water body specific objective available

.TABLE 3-1a[1]

Location[2]	Percent DO Saturation Based On Natural Receiving Water Temperatures[3]	Time Period
Stateline to the Scott River	90%	October 1 through March 31
	85%	April 1 through September 30
Scott River to Hoopa	90%	Year round
Downstream of Hoopa-California boundary to Turwar	85%	June 1 through August 31
	90%	September 1 through May 31
Upper and Middle Estuary	80%	August 1 through August 31
	85%	September 1 through October 31 and June 1 through July 31
	90%	November 1 through May 31
Lower Estuary	For the protection of estuarine habitat (EST), the dissolved oxygen content of the lower estuary shall not be depressed to levels adversely affecting beneficial uses as a result of controllable water quality factors.	

1 States may establish site specific objectives equal to natural background (USEPA, 1986. Ambient Water Quality Criteria for Dissolved Oxygen, EPA 440/5-86-033; USEPA Memo from Tudor T. Davies, Director of Office of Science and Technology, USEPA Washington, D.C. dated November 5, 1997). For aquatic life uses, where the natural background condition for a specific parameter is documented, by definition that condition is sufficient to support the level of aquatic life expected to occur naturally at the site absent any interference by humans (Davies, 1997). These DO objectives are derived from the T1BSR run of the Klamath TMDL model and described in Tetra Tech, December 23, 2009 *Modeling Scenarios: Klamath River Model for TMDL Development.* They represent natural DO background conditions due only to non-anthropogenic sources and a natural flow regime.

2 These objectives apply to the maximum extent allowed by law. To the extent that the State lacks jurisdiction, the Site Specific Dissolved Oxygen Objectives for the Mainstem Klamath River are extended as a recommendation to the applicable regulatory authority.

3 Corresponding DO concentrations are calculated as daily minima, based on site-specific barometric pressure, site-specific salinity, and natural receiving water temperatures as estimated by the T1BSR run of the Klamath TMDL model and described in Tetra Tech, December 23, 2009. Modeling Scenarios: Klamath River Model for TMDL Development. The estimates of natural receiving water temperatures used in these calculations may be updated as new data or method(s) become available. After opportunity for public comment, any update or improvements to the estimate of natural receiving water temperature must be reviewed and approved by Executive Officer before being used for this purpose

ATTACHMENT D –STANDARD PROVISIONS

I. Standard Provisions – Permit Compliance

A. Duty to Comply

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

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

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

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

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

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

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

G. Bypass

1. Definitions

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

   b. “Severe property damage” means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)

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

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

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

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

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

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

5. Notice

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

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

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include

noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

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

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

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

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

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

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

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

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

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

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

6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

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

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

B. Signatory and Certification Requirements

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

2. All permit applications shall be signed as follows:

   a. For a corporation: signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to

assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).);

b. For a partnership or sole proprietorship: signed by a general partner or the proprietor, respectively (40 C.F.R. 122.22 (a)(2)); or

c. For a municipality, State, federal or other public agency; signed by either a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA) (40 C.F.R. 122.22 (a) (3).

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

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

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

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

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

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

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

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.22(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)

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

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it

is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)

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

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

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

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

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

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

2. If the discharge is not an existing manufacturing, commercial, mining, or silvicultural discharge as referenced in 40 CFR 122.42 (a), the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)

   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).)

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

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 Facilites

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 section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels" (40 C.F.R. § 122.42(a)(2)):

   a. 500 micrograms per liter (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 section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations section 122.48 requires that all NPDES permits specify monitoring and reporting requirements. Water Code Sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

The Regional Water Board Executive Officer may modify the monitoring and reporting program for a specific discharger to reduce or increase monitoring frequency and/or eliminate a monitoring parameter if it can be demonstrated that any reduction in monitoring requirements will not compromise water quality. In addition, the Executive Officer may stipulate conditions and requirements in addition to those established by the MRP for all authorized discharges, including monitoring and reporting requirements, for each specific discharge to assess compliance with requirements of the General Permit and/or to characterize the discharge and/or receiving water quality. Specific monitoring requirements for each individual Discharger will be issued during enrollment in the General Permit and will be determined based on criteria established in section VI. B. of this General Permit.

I. GENERAL MONITORING PROVISIONS

A. Laboratories analyzing monitoring samples shall be certified by the Department of Health Services, in accordance with the provision of Water Code § 13176, and must include quality assurance/quality control data with their reports.

B. If the Discharger monitors any pollutant more frequently than required by this MRP, using test procedures approved by 40 CFR Part 136 or as specified in this MRP, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the Discharger's self-monitoring report.

C. Samples and measurements taken as required by this MRP shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of the Regional Water Board Executive Officer.

D. Monitoring results, including noncompliance, shall be reported at intervals and in the manner specified in this MRP.

E. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow

measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

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

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 General Permit:

Table 1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
Treatment System Influent-	**M_INF**	**Untreated groundwater at a point in the groundwater collection system immediately prior to treatment.**
Discharge Point 001	**M-001**	**Treated effluent, after treatment and before contact with the receiving water and/or dilution by any other water or waste.**
Discharge Point 002	**M-002**	**If more than one discharge point is authorized under this General Permit, compliance monitoring locations shall be named M-002, M-003, etc. and shall be located so as to allow collection of treated effluent after treatment and before contact with receiving water and/or dilution by any other water or waste.**
Receiving Water	**R-001**	**Receiving water immediately upstream of the point of discharge so that samples are representative of upstream, background conditions within the receiving stream.**
Receiving Water	**R-002**	**Receiving water at an appropriate monitoring location, downstream of the point of discharge, that adequately represents downstream water quality.**

III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor untreated groundwater/influent to the treatment facility at monitoring location M-INF in accordance with the following schedule.

Table 2: Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	Gallons per day	Continuous	Daily

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Locations M-001, M-002, etc

1. The Discharger shall monitor treated effluent at Monitoring Locations M-001, M-002, etc. in accordance with the following schedule.

Table 3: Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow[1]	Gpd	Continuous Meter	Daily	Approved test methods described in The Federal Code of Regulations at 40 CFR 136
Temperature[1]	º C	Field Monitor	1x/Month	
pH[1]	Stnd Units	Field Monitor	1x/Month	
Inorganic Pollutants[2]	µg/L	Grab	1x/Month	
Volatile Organic Compounds[2]	µg/L	Grab	1x/Month	
Semi-Volatile Organic Compounds[2]	µg/L	Grab	1x/Month	
Pesticides[2]	µg/L	Grab	1x/Month	
Polychlorinated Biphenyls[2]	µg/L	Grab	1x/Month	
Petroleum Hydrocarbons[2]	µg/L	Grab	1x/Month	
2,3,7,8-TCDD (Dioxin)[3]		Grab	4x/Year	
Acute Toxicity[1,4]	Pass/fail	Grab or Composite	1x/Year	
Chronic Toxicity[1,5]	TUc	Grab or Composite	1x/Year	

[1] Monitoring of flow, temperature, pH, acute toxicity, and chronic toxicity in the effluent discharge is required for all Dischargers at the specified frequency.
[2] Monitoring of inorganic pollutants, volatile organic compounds, semi-volatile organic compounds, pesticides, polychlorinated biphenyls, and petroleum hydrocarbons will be determined based on the reasonable potential for a pollutant to be discharged by an individual Discharger above the applicable effluent limitation. Monitoring of pollutants found to have a reasonable potential will be sampled at a monthly frequency.
[3] If dioxin is found to have reasonable potential to be discharged in the effluent, the sampling frequency will be quarterly.
[4] Whole effluent acute toxicity testing shall be conducted in accordance with section V of this MRP.
[5] Whole effluent chronic toxicity testing shall be conducted in accordance with section V of this MRP.

2. Specific monitoring requirements for individual Dischargers will be determined on a case-by-case basis, based on complete waste characterization data. Specific monitoring requirements will be issued as part of enrollment into the General Permit.

3. New Dischargers are required to demonstrate compliance with effluent monitoring requirements prior to the start of the discharge. At the time the system is turned on, the treated effluent must be characterized for all required pollutants, including CTR and Title 22 Pollutants to demonstrate compliance with effluent limitations. During this time, the discharger must store treated water on-site until authorized by the Regional Water Board's Executive Officer to discharge to surface water.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity

Dischargers shall conduct acute toxicity monitoring, in accordance with the following requirements, to determine compliance with the acute toxicity effluent limitation established by this Order.

1. Test Frequency. Dischargers shall conduct whole effluent acute toxicity testing one time per year.

2. Sample Type. For static renewal testing, grab samples representative of effluent quality shall be collected at Monitoring Location M-001.

3. Test Species. Test species for acute toxicity monitoring shall be an invertebrate, (the water flea - Ceriodaphnia dubia) and a vertebrate (the rainbow trout - Orncorhychus mykiss or the fathead minnow – Pimephales promelas), for the first two suites of tests conducted in accordance with the provisions of the General Permit. After this screening period, acute toxicity testing shall be conducted using the most sensitive species.

4. Test Methods. The presence of acute toxicity shall be determined as specified in Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (U.S. EPA Office of Water, EPA/821-R-02-012, 5th edition or subsequent editions), or other methods approved by the Executive Officer.

5. Test Failure. If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger shall re-sample and re-test as soon as possible, but not later than 7 days following notification of test failure.

6. Accelerated Monitoring. If acute toxicity test results indicate acute toxicity in effluent exceeding the effluent limitation established by the General Permit, (90 percent survival), and the test procedures meet all acceptability criteria, the Discharger shall take two more samples - one within 14 days and one within 21 days of receiving the initial sample result. If any of these accelerated monitoring samples exceed the effluent limitation, within thirty days of notification by the laboratory of test results

exceeding the effluent limitation during accelerated monitoring, the Permittee shall submit a TRE Action Plan to the Regional Water Board, including, at minimum:

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

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

c. A schedule for these actions.

If the two accelerated monitoring samples are in compliance with the acute toxicity limitation, and testing procedures meet acceptability criteria, then a TRE is not be required. If the discharge has been discontinued before the accelerated monitoring samples can be collected, the Discharger shall contact the Executive Officer within 21 days with a plan to demonstrate compliance with the acute toxicity effluent limitation.

7. Notification. The Discharger shall notify the Regional Water Board in writing within 14 days of the receipt of test results that exceed the acute toxicity effluent limitation. The notification will describe actions the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It shall also include a status report on any actions required by this Order, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

8. Following initiation of a TRE, if the cause of toxicity cannot be identified and eliminated within a reasonable period of time, as determined by the Executive Officer, the Permittee shall discontinue the discharge. The Permittee shall correct the toxicity in effluent to the satisfaction of the Executive officer prior to resuming a discharge to surface waters.

9. The Executive Officer may require a discharger to initiate a TRE, notwithstanding the results of accelerated monitoring.

B. Chronic Toxicity

The Discharger shall conduct chronic toxicity testing to determine compliance with the Basin Plan's narrative water quality objective for toxicity and shall adhere to the following chronic toxicity testing requirements.

1. Test Frequency. The Discharger shall conduct routine chronic toxicity testing at least one time every year.

2. Sample Type. For static renewal testing, grab samples representative of effluent quality shall be collected at Monitoring Location 001.

3. Test Species. The following three test species shall be used for chronic toxicity monitoring conducted pursuant to the General Permit.

Short-Term Methods for Estimating Chronic Toxicity – Fresh Waters

Species	Scientific Name	Effect	Test Duration
fathead minnow	*Pimephales promelas*	larval survival; growth	7 days
water flea	*Ceriodaphnia dubia*	survival; number of young	6 to 8 days
alga	*Selenastrum capricornutum*	growth rate	4 days

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

5. Test Dilutions. Chronic toxicity testing shall be conducted using a control and a series of five effluent dilutions (100, 85, 70, 50, and 25 percent). Control and dilution water should be receiving water or laboratory water, as appropriate, as described in the EPA guidance manual. If the dilution water used is different from the culture water, a second control using culture water shall be used.

6. Reference Toxicant. If organisms are not cultured in-house, concurrent testing with a reference toxicant shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests also shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).

7. Test Failure. If either the reference toxicant test or the chronic toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger shall re-sample and re-test as soon as possible, but not later than 7 days following notification of test failure.

8. Accelerated Monitoring Numeric Trigger. The chronic toxicity monitoring trigger is 1.0 chronic toxicity units (TUc, where TUc = 100 / NOEC). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring.

9. Notification. The Discharger shall notify the Regional Water Board in writing within 14 days of the receipt of test results exceeding the chronic toxicity monitoring trigger.

10. Accelerated Monitoring Requirements. If the result of any chronic toxicity test exceeds the monitoring trigger, and the testing meets all test acceptability criteria,

the Permittee shall initiate accelerated monitoring. Accelerated monitoring shall consist of four additional effluent samples, one test conducted approximately every week, over a four–week period. Testing shall commence within 14 days of receipt of the sample results indicating an exceedance of the toxicity monitoring trigger. If the discharge is discontinued before the additional samples can be collected, the Permittee shall contact the Executive Officer within 21 days with a plan to reduce chronic toxicity in effluent. The following protocol shall be used for accelerated monitoring and TRE implementation.

a. If the results of four consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Permittee may discontinue accelerated monitoring and resume regular chronic toxicity monitoring. If there is evidence of persistent effluent toxicity, as defined below, a TRE shall be initiated.

b. If the source(s) of the toxicity is easily identified, 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 effluent toxicity has been eliminated, the Permittee may discontinue accelerated monitoring and resume regular chronic toxicity monitoring.

c. If the result of any accelerated toxicity test exceeds the monitoring trigger, the Permittee shall discontinue accelerated monitoring and initiate a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of the test results exceeding the monitoring trigger during accelerated monitoring, the Permittee shall submit a TRE Action Plan to the Regional Water Board including, at minimum:

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

    ii. Specific actions the Permittee will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and

    iii. A schedule for these actions.

d. Following initiation of a TRE, if the cause of toxicity cannot be identified and eliminated within a reasonable period of time, as determined by the Executive Officer, the Permittee shall discontinue the discharge. The Permittee shall correct the toxicity in effluent to the satisfaction of the Executive officer prior to resuming a discharge to surface waters.

e. The Executive Officer may require a Discharger to initiate a TRE, notwithstanding the results of accelerated monitoring.

C. Additional Testing

The Executive Officer may request additional toxicity testing following any significant change in the nature of the effluent discharged due to changes in groundwater character, treatment system operation, or treatment system components.

D. Toxicity Reporting Requirements

1. Chronic toxicity monitoring results shall be reported in chronic toxicity units (TUc), where TUc = [100 / NOEC] or [100 / ICp] or [100 / ECp], where inhibition concentration (IC) and effective concentration (EC) are expressed in percent effluent. Acute toxicity monitoring results shall be reported as the percent survival in undiluted effluent.

2. Routine Reporting: Toxicity monitoring results shall be reported in accordance with the appropriate EPA guidance manuals and this MRP and shall be attached to the self monitoring reports. Reporting of acute and chronic toxicity test results shall, at a minimum, include the following information for each test. (See Attachment B for definitions.)

    a. Sample date(s),

    b. Test initiation date,

    c. Test specie(s),

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

    e. NOEC value(s), in percent effluent,

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

    g. TUc values (100 / NOEC, 100 / IC25, and 100 / EC25),

    h. Mean percent mortality (± standard deviation) after 96 hours in 100% effluent, if applicable,

    i. NOEC and lowest observed effect concentration (LOEC) values for reference toxicant test(s),

    j. IC50 or EC50 value(s) for reference toxicant test(s), and

    k. Available water quality measurements for each test (e.g. pH, dissolved oxygen, temperature, conductivity, hardness (as CaCO3), salinity, ammonia).

3. Compliance Summary: Results of acute and chronic toxicity monitoring shall be provided in the next quarterly self monitoring report and shall be tabulated to include the results all toxicity monitoring (screening, routine, and accelerated) that has been performed during the previous three years. The Compliance Summary shall clearly highlight that the Permittee is or is not in compliance with effluent limitations and other requirements of the General Permit regarding whole effluent toxicity.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

This General Permit does not authorize discharges to land.

VII. RECLAMATION MONITORING REQUIREMENTS

This General Permit does not authorize reclamation or reuse of wastewater.

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

1. The Discharger shall monitor R-001 and at R-002 if applicable, according to the following schedule:

Table 4 Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Temperature[1]	°C	Field Monitor	1x/Month	40 CFR 136
pH[1]	Stnd units	Field Monitor	1x/Month	
Dissolved Oxygen[1]	mg/L	Field Monitor	1x/Month	
Turbidity[1]	NTU	Grab	1x/Month	
Hardness[2, 4]	mg/L	Grab	1x/Month	
Total Dissolved Solids[2]	mg/L	Grab or Composite	1x/Month	
Specific Conductance[2]	µmhos/ cm	Field Monitor	1x/Month	
Boron[2]	mg/L	Grab or Composite	1x/Month	
Inorganic Pollutants[3]	µg/L	Grab or Composite	1x/Month	

[1] Monitoring of temperature, pH, dissolved oxygen, and turbidity in upstream and downstream receiving water is required for all Dischargers at a monthly frequency.

[2] Monitoring of hardness, total dissolved solids, specific conductance, and boron is required for Dischargers in which the receiving water body is specifically identified in Table 3-1 of the Basin Plan and listed in Attachment C of this General Permit.

[3] Monitoring of inorganic pollutants will be determined for each individual Discharger based on the reasonable potential for a pollutant to be discharged in the effluent above the applicable water quality objective or in exceedance of background of the receiving water. If an inorganic parameter is determined at the time of enrollment to have a reasonable potential to be discharged in the effluent, than all applicable inorganic parameters shall be monitored in the upstream and downstream of the receiving water at a monthly frequency.

[4] For discharges where hardness dependent inorganics pollutants are determined to have a reasonable potential to be discharged above water quality objectives or background, then receiving water monitoring for hardness will be required at a monthly frequency.

IX. OTHER MONITORING REQUIREMENTS

This section is not applicable as there are no additional monitoring requirements to add.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

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 submit quarterly and annual SMRs including the results of all required monitoring using US EPA approved test methods or other test methods specified in this General Permit. Quarterly reports shall be due on May 1, August 1, November 1, and February 1 following each calendar quarter. Annual reports shall be due on February 1 following each calendar year.

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

Table 5 Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Monthly	**First day of calendar month following start up (new Dischargers) or following the permit effective date (existing Dischargers).**	**1st day of calendar month through last day of calendar month**	**Quarterly Reports shall be submitted by May 1, August 1, November 1, and February 1 following each calendar quarter.**
Quarterly	**Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date.**	**January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31**	
Semiannually	**Closest of January 1 or July 1 following (or on) permit effective date.**	**January 1 through June 30 July 1 through December 31**	
Annually	**January 1 following (or on) permit effective date.**	**January 1 through December 31**	

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

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

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

   d. 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 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 violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

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

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

6. Monitoring data and reports shall also be submitted electronically to the State Water Resources Control Board's Geographical Environmental Information Management System database (Geotracker) as required by Title 23, Division 3, Chapter 30, Article 2, Sections 3890-3895 of the California Code of Regulation).

ATTACHMENT F – FACT SHEET

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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 General Permit.

This General Permit 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 General Permit that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this General Permit not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

In 1972, the Federal Water Pollution Control Action (also referred to as the Clean Water Act) was amended to provide that the discharge of pollutants to waters of the United Stated from any point source is effectively prohibited unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) Permit. On September 22, 1989, the United States Environmental Protection Agency (USEPA) granted the State of California, through the State Water Resources Control Board (State Water Board) and the Regional Water Quality Control Boards (Regional Water Boards), the authority to issue general NPDES permits pursuant to 40 Code of Federal Regulations (CFR) Parts 122 and 123.

40 CFR 122.28 provides for issuance of general Permits to regulate a category of point sources if the sources involve the same or substantially similar types of operations; discharge the same type of waste; require the same type of effluent limitations or operating conditions; require similar monitoring; and are more appropriately regulated under a general order rather than individual orders.

On October 26, 1995, the Regional Water Board adopted Order No. 95-88 (General NPDES Permit No. CAG911001) - Waste Discharge Requirements for Discharges of Extracted and Highly Treated Groundwater Resulting from Cleanup of Groundwater Polluted with Petroleum Hydrocarbons and Volatile Organic Compounds. On January 26, 2001 the General Permit was reissued by Order No. R1-2001-9. On June 26, 2006 the General Permit was reissued by Order No. R1-2006-0048. This General Permit replaces Order No. 2006-0048.

II. APPLICATION/ENROLLMENT REQUIREMENTS

A. Application for Coverage Under This General Permit

1. Notice of Intent

    a. The Notice of Intent (NOI) forms for existing and new dischargers are intended to provide the Regional Water Board with information necessary for a determination of suitability for coverage or continued coverage under the General Permit. The information required to complete the NOI meets the requirements for NOIs

established at 40 CFR 122.25 (b) (2) and satisfies the requirements for a Report of Waste Discharge established by CWC section 13260, which stated that a Report of Waste Discharge pursuant to CWC § 13260 is required to start the application process for all waste discharge requirements and NPDES permits, except for general waste discharge requirements or general NPDES permit that use the NOI to comply or specify the use of an alternative application form designed for the permit. This General Permit requires completion of a single NOI form for both new and existing dischargers as application for coverage under the General Permit, as retained from Order No-R1-2006-0048.

b. Submittal of the NOI is intended to replace the requirement of dischargers to provide State of California Form 200 and USEPA Application Forms 1 and 2D. The requirement to provide a single application form for both new and existing dischargers represents a less burdensome procedure for applicants and the Regional Water Board, while requiring submittal of all necessary information pursuant to NPDES regulations at 40 CFR 122.28 (b) (2) and CWC § 13260.

c. Both existing dischargers who wish to continue the discharge under the General Permit and new dischargers who wish to request coverage under the General Permit are required to complete the NOI as detailed in Attachment A and requires the submittal of the following information and data:

   i. General information about the facility.

   ii. General information about the Discharger and the Discharger's representatives (e.g. contractors, professional engineers, etc.).

   iii. A project description including:

      - The background of the project.
      - A site map.
      - Copies of directives from lead agency requiring cleanup of contaminated groundwater.
      - Description of the treatments system.
      - Identification of other environmental and land use permits which have been issued or which are required for operation of the pump-and-treat-facility.
      - Proof there is no alternative option for disposal of treated groundwater.
      - Other items necessary to demonstrate eligibility.

   iv. Receiving Water Information. The NOI requires owners and operators to understand applicable water quality objectives and limitations for their specific water body. Specifically:

- Receiving water hardness must be reported, as the toxicity of many metals increases with decreasing hardness. The General Permit requires authorized dischargers to meet all applicable water quality objectives for inorganics, as effluent limitations.
- Table 3-1 of the Basin Plan includes water quality objectives for specific conductance, total dissolved solids, pH, boron, dissolved oxygen, and hardness for specifically named receiving waters in the North Coast Region. If discharges are authorized to one of these specifically named receiving water streams, the General Permit requires authorized dischargers to not alter receiving water above the applicable water quality objectives listed. The NOI must identify all applicable water quality objectives applied to the specific water body.
- The Discharger must identify if receiving water is listed as impaired pursuant to § 303 (d) of the Clean Water Act. Dischargers can learn of the 303 (d) listing status of receiving waters at:

  www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls

v. Groundwater and Receiving Water Characterization. The purpose of characterizing polluted groundwater is to determine suitability for coverage under the General Permit and to conduct a reasonable potential analysis on applicable effluent limitations and sampling parameters for each individual discharger. If inorganic pollutants are present in untreated groundwater above groundwater's naturally occurring levels, the discharge is not suitable for coverage under the General Permit.

vi. New dischargers must characterize untreated groundwater and receiving water for petroleum hydrocarbons, fuel oxygenates, CTR and Title 22 Pollutants. Analysis for the CTR and Title 22 Pollutants are necessary because the USEPA and the State Department of Health Services have established applicable water quality objectives for these pollutants. The fuel oxygenates are pollutants of concern because these compounds are often present with petroleum products.

vii. The NOI requires the presentation of analytical data for groundwater and receiving water to include for each pollutant:

- The method detection limits,
- The reporting limit or the reporting detection limits, and
- The highest reported concentration.

viii. Existing dischargers will not be required to re-characterize receiving water or treated effluent for priority pollutants. As required under the Monitoring & Reporting Program for Order No. R1-2006-0048, existing dischargers have been characterizing the effluent discharge and receiving water at a semi-

annual frequency for CTR and Title 22 Pollutants. Data previously collected during routine monitoring is sufficient for evaluating continued coverage under the Permit. However, in order to determine applicable monitoring and reporting requirements, untreated groundwater must be characterized for all inorganic and organic pollutants regulated in this General Order.

Existing dischargers are required to submit analytical data as described above, reporting the highest detection in treated effluent for each pollutant over the duration of enrollment in Order No. 2006-0048 and results of recent testing of untreated influent.

ix. Plans, Reports, and Manuals. This General Permit retains the requirement of Order No. R1-2006-0048 for new dischargers to submit an Operation and Maintenance Manual, Engineering Design Report and a Toxicity Reduction Evaluation Workplan. Existing dischargers who have previously submitted these documents to the Regional Water Board are required only to state that such documents have been previously submitted.

x. Current State Water Board Adopted Permit Fees. Information concerning the application fees can be found at www.waterboards.ca.gov/resources/fees.

2. Deadlines for Submission of an NOI

Existing dischargers must submit a complete NOI within 60 days of the effective date of this General Permit. New dischargers must submit an NOI at least 120 days before the anticipated start date of the discharge. These dates are retained from Order No. R1-2006-0048.

3. Failure to Submit an NOI

Existing dischargers who fail to submit a complete NOI by the deadline established herein will be deemed as out of compliance with the General Permit and subject to all penalties allowable pursuant to applicable provisions of the Clean Water Act and the California Water Code including § 13261 thereof. New discharges will not be authorized until a complete NOI has been submitted to the Regional Water Board and the Executive Officer has given notice of authorization of coverage.

B. Regional Water Board Authorization

1. Authorization for Existing Dischargers. The Regional Water Board views existing dischargers as those who have already demonstrated suitability for coverage under the General Permit, and therefore, the requirements for continued coverage are less demanding than those seeking coverage under the General Permit for the first time. Submittal of an NOI by existing dischargers and subsequent review by the Regional Water Board will allow a determination that continued coverage is appropriate and

that there have been no material changes in the nature of the discharge. After review of the NOI, the Regional Water Board Executive Officer will notify each General Permit applicant in writing whether or not the proposed discharge is eligible for coverage or if an individual permit will be required.

2. Authorization for New Dischargers. Once the NOI of a new discharge is considered complete by the Executive Officer, the proposed discharge must first be noticed to the public. The public notice requirement is retained from Order No. R1-2006-0048 and includes the requirement to publish a one time notification in a newspaper of general circulation in the locality of the discharge, post the notification on the property in the area where the discharge will occur and distribute the notice to adjacent property owners, residences, businesses, and other interested parties. Upon completion of all public noticing requirements, the Executive Officer will notify the discharger of coverage under the General Permit.

3. Pursuant to NPDES regulations at 40 CFR 122.28 (b) (2) (vi), the Regional Water Board may authorize a discharger to discharge under the General Permit even if a complete NOI has not been submitted. This provision is not intended to relieve a discharger of its obligation to submit an NOI. Instead, it is a means by which the Regional Water Board can require a discharger, who has not submitted an NOI to operate in accordance with the terms of the General Permit.

III. DESCRIPTION OF TREATED GROUNDWATER DISCHARGES AND REQUIREMENTS

A. Description of Wastewater and Treatment

Extraction and treatment of groundwater impacted by chemical pollutants as a result of an unauthorized release is a remedial option used to reduce or eliminate petroleum hydrocarbons or volatile organic compounds (VOCs) from groundwater. This technology is also implemented for plume control by creating a hydraulic control and reducing unwanted migration of pollution in groundwater. This General Permit is intended to authorize similar discharges from groundwater treatment facilities at sites that have been impacted by petroleum related compounds and other VOCs associated with an unauthorized release of pollutants to groundwater.

The General Permit is a permitting tool used by the Regional Water Board to efficiently authorize and regulate a large number of similar dischargers. Eligibly and ineligibly requirements are described in section I.C. of the General Permit, which includes criteria that would make a discharge ineligible. Dischargers must demonstrate eligibility by submitting all information required in a NOI.

All eligibility and ineligibility conditions are retained from the previous permit, with one exception. This General Permit does not cover discharges to the Pacific Ocean. Dischargers proposing to discharge to the Pacific Ocean must apply for an individual permit to ensure compliance with the California Ocean Plan.

B. Discharge Points and Receiving Waters

The discharge points and receiving water will be described in the NOI submitted by each discharger.

The Basin Plan designates beneficial uses, establishes water quality objectives and criteria, and contains implementation plans and policies to achieve those objectives and criteria for all waters of the North Coast Region. These plans identify specific beneficial uses for groundwater and surface waters, including ocean, coastal, and inland waters. Beneficial uses of inland waters specifically identified by the Basin Plan generally apply to its tributary streams. The beneficial uses of all receiving waters within the North Coast Region are described in II. H. of the General Permit and section IV.C.1.of this Fact Sheet.

C. Summary of Existing Requirements, Order No. R1-2006-0048

1. Discharge Prohibitions, Effluent Limitations and Receiving Water Limitations

   a. The previous General Permit (Order No. R1-2006-0048) authorized discharges of treated groundwater associated with removal of contaminated groundwater to surface waters of the North Coast Region. Like this new General Permit, Order No. 2006-0048 contained discharge prohibitions, effluent limitations, and receiving water limitations. Most requirements have been retained in this General Permit. Requirements that are new to this General Permit include the following:

      - The effluent limitation for arsenic has been reduced from 50 µg/L to 10 µg/L.

      - The effluent limitation for perchlorate is 6.0 µg/L. There was no effluent limitation for perchlorate in Order No. R1-2006-0048.

      - Water quality objectives listed in Table 3-1 of the Basin Plan for dissolved oxygen, specific conductivity, total dissolved solids, boron and hardness are now set as receiving water limitations. In the previous permit, these water quality objectives were set as end-of-pipe effluent limitations. Section V.D.1.provides the anti-backsliding analysis for changing this effluent limitation to a receiving water limitation.

      - In Order No. R1-2006-0048 the effluent limitation for pH only applied to discharges to specific water bodies listed in Table 3-1. This General Permit now applies an effluent limitation to pH for all discharges.

   b. The following Discharge Prohibitions have been removed from this General Permit:

- The discharge of any priority pollutant as listed in the CTR that would cause, have the reasonable potential to cause, or contribute to an excursion above any applicable priority pollutant criterion or objective is prohibited.

- The discharge from the treatment facility of detectable levels of petroleum hydrocarbons and associated petroleum parameters is prohibited.

- Section V.A.6.provides the anti-backsliding analysis for removing these discharge prohibition.

IV. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This General Permit 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 § 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.

CEQA implementing regulations at Title 14 California Code of Regulations, Chapter 3, Article 19 describe categorical exemptions from the requirement of CEQA. The Regional Water Board, acting here as the lead agency pursuant to CEQA, has determined that this project (reissuance of the General Permit), meets the criteria of the CEQA implementing regulations for Class 7 and Class 8 categorical exemptions, as described below.

Actions by Regulatory Agencies for Protection of Natural Resources

As described by section 15307, Class 7 consists of actions taken by regulatory agencies as authorized by state law or local ordinance to assure the maintenance, restoration, or enhancement of a natural resource where the regulatory process involves procedures for protection of the environment.

Action by Regulatory Agencies for Protection of the Environment

As described by section 15308, Class 8 consists of action taken be regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment.

The pump and treat systems authorized to discharge by the General Permit are a necessary component of remedial actions which address groundwater contamination. The remedial actions are regulated by the Regional Water Board in accordance with Title 23 of the California Code of Regulations, Division 3, Chapter 16, Article 11 (Corrective Action Requirements) for the purposes of restoring groundwater quality and the environment and are undertaken in a manner which that protection of the existing environment and Resolution 92-49 Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted a Water Quality Control Plan for the North Coast Region (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan implements State Water Boards Resolution 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. In addition, the Basin Plan (Chapter 2) states that the beneficial uses of any water body, specifically identified in the Basin Plan, generally apply to its tributary streams. Beneficial uses, established by the Basin Plan for inland surface waters and coastal waters of the North Coast Region are summarized as follows:

   - Municipal and Domestic Supply (MUN)
   - Agricultural Supply (AGR)
   - Industrial Service Supply (IND)
   - Industrial Process Supply (PRO)
   - Groundwater Recharge (GWR)
   - Freshwater Replenishment (FRSH)
   - Navigation (NAV)
   - Hydropower Generation (POW)
   - Water Contact Recreation (REC-1)
   - Non-Contact Water Recreation (REC-2)
   - Commercial and Sport Fishing (COMM)
   - Aquaculture (AQUA)
   - Warm Freshwater Habitat (WARM)

- Cold Freshwater Habitat (COLD)
- Inland Saline Water Habitat (SAL)
- Estuarine Habitat (EST)
- Marine Habitat (MAR)
- Wildlife Habitat (WILD)
- Preservation of Areas of Special Biological Significance (ASBS)
- Rare, Threatened, or Endangered Species (RARE)
- Migration of Aquatic Organisms (MIGR)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Shellfish Harvesting (SHELL)
- Water Quality Enhancement (WQE)
- Flood Peak Attenuation/Flood Water Storage (FLD)
- Wetland Habitat (WET)
- Native American Culture (CUL)
- Subsistence Fishing (FISH)

All beneficial uses, established by the Basin Plan for waters of the North Coast Region are assumed to be applicable for receiving waters of dischargers authorized by the General Permit. The General Permit also implements water quality objectives established by the Basin Plan for these beneficial uses. Because the municipal and domestic supply beneficial use if assumed for all receiving waters for discharges authorized by the General Permit, applicable water quality objectives include the drinking water primary maximum contaminant levels (MCLs) established by the State Department of Health Services at Title 22 of the California Code of Regulations, Division 4, Chapter 15, Article 4 (Primary Standards-Inorganic Chemicals). For organic compounds, effluent limitations have been set as non-detectable concentrations, which are more restrictive than water quality objectives and is protective of beneficial uses.

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 and interstate waters and enclosed bays and estuaries. Requirements of this General Permit implement the Thermal Plan.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These

rules contain water quality criteria for priority pollutants and are applicable to all discharges authorized by the General Permit.

4. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

5. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 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.

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

7. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations[7] section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. As described by section V.D.1. of this Fact Sheet, the Regional Water Board has

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

determined that the General Permit is consistent with applicable anti-backsliding requirements established by the CWA and by USEPA regulations at 40 CFR 122.44 (l).

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

An impaired or threatened waterbody is any waterbody that is listed according to section 303(d) of the Clean Water Act as not attaining water quality standards. Standards may be violated due to an individual pollutant, thermal pollution, or an unknown cause of impairment. If a Discharger is proposing to discharge into a water quality limited segment of a waterbody, the Discharger must provide a wastewater analysis of the 303 (d) listed constituents of concern as part of the NOI.

In determining suitability for coverage under the General Permit, the 303 (d) status of the receiving water for a proposed discharge, as well as any total maximum daily loads (TMDLs) established in response to 303 (d) listing, will be considered by Regional Water Board staff. Dischargers will be required to seek coverage under an individual permit, if the discharge could cause further degradation to a 303 (d) listed water body, or if the discharge would be inconsistent with a TMDL.

E. Other Plans, Policies and Regulations

1. General NPDES Permits

On September 22, 1989, a Memorandum of Agreement executed by the U.S. EPA and State Water Board authorized and established procedures for the State Water Board to issue general NPDES permits pursuant to NPDES regulations at 40 CFR 122.28 and 122.44.

NPDES regulations at 40 CFR 122.28 provide for the issuance of general NPDES permits to regulate a category of point sources, which:

a. Involve the same or substantially similar types of operations;

b. Discharge the same type of wastes;

c. Require the same type of effluent limitations or operations conditions;

d. Require similar monitoring; and,

e. Are more appropriate regulations under a General Permit rather than individual permits.

Water Code Section 13263 (i) authorizes the Regional Board to prescribe general waste discharge requirements for a category of discharges, which:

a. Are produced by the same or similar operations;

b. Involve the same or similar types of waste;

c. Require the same or similar treatment standards; and,

d. Are more appropriately regulated under general discharge requirements.

V. 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. Discharger Prohibitions

1. Prohibition III. A. The creation of pollution, contamination or nuisance, as defined by section 13050 of the California Water Code, is prohibited.

   This prohibition is based on section 13050 of the Water Code. It has been retained from Order No. R1-2006-0048.

2. Prohibition III.B. The discharge of any waste, other than highly treated groundwater extracted form the site and treated, as representative by the Discharger in the NOI or as contemplated by the Executive Officer in authorization to discharge under this General Permit is prohibited, unless the discharge is regulated by another NPDES permit or is discharged to a permitted facility.

   NPDES regulations 40 CFR 122.28 and CWC section 13267 (i) authorize the issuance of general NPDES permits and general waste discharge requirements to regulate a category of point sources, which involve the same of substantially similar types of operation; discharge the same type of wastes; require the same type of effluent limitations or operation conditions; require similar monitoring; and are more appropriately regulated under a general permit rather than an individual permit.

   The advantage to the Regional Water Board in issuing a general permit is that a group of similar discharges can be regulated by one permit, instead of by individual permits, thereby reducing some administrative burden. Before authorization to discharge under this General Permit is granted, however, the Regional Water Board must be assured that all authorized discharges have similarities required by NPDES regulations and the CWC. The Regional Water Board therefore prohibits discharges

which are not treated groundwater as reported by the Discharger in the NOI or as contemplated by the Regional Water Board.

This prohibition has been retained from Order No. R1-2006-0048.

3. Prohibition III.C. The discharge of groundwater containing constituents listed in Table 3 of the General Permit in excess of the background level in the receiving water is prohibited.

   Table 3 contains inorganic pollutants contained in CTR and Title 22. Inorganics are classified as a series of pollutants which can be naturally occurring in the environment. In most cases, inorganics will generally be found in groundwater at naturally occurring levels. In some cases, groundwater may have concentrations of inorganics at higher levels than what is naturally occurring in receiving waters.

   The discharge of groundwater in which concentrations of inorganics are higher than concentrations found in receiving water may contribute to the overall increase of the pollutants in receiving water. Under this prohibition, the discharge of inorganics at concentrations higher that what exist naturally in receiving water is prohibited. This prohibition is intended to protect the beneficial uses of receiving waters by limiting the discharge of inorganics to receiving waters to maintain existing receiving water quality and as to not contribute to the potential degradation of receiving water quality.

   If inorganics pollutants are present in untreated groundwater at levels higher than what occur naturally in groundwater, those discharges will be precluded form coverage under the General Permit and will need to be covered under an individual permit.

   Additionally, effluent limitations have been established for inorganics under this General Permit and are found is section IV.B.2. of the General Permit and section V.C.4.b. of the Fact Sheet.

   This prohibition has been retained from Order No. R1-2006-0048.

4. Prohibition III.D. The discharge of extracted and treated groundwater in excess of the flow rates described by the Discharger in the NOI or as authorized by the Executive Officer is prohibited.

   Discharge rates or volumes greater than what are described in the NOI or approved by the Executive Officer may have significant adverse impacts to receiving waters, and therefore, such discharges will be deemed as unauthorized discharges and may subject the Discharger to all available and appropriate penalties pursuant to the CWC and CWA. This prohibition is retained from Order No. R1-2006-0048.

5. Prohibition III.E. Bypass or overflow of untreated or partially treated groundwater to waters of the State from the treatment system or from the collection and transport systems or from pump stations tributary to the treatment system is prohibited.

   All water discharged under this permit must be fully treated, as described in the NOI. This prohibition is retained from the Order No. R1-2006-0048.

6. Prohibitions III. F. and III G from Order No. Order R1-2006-0048 have not been retained in the General Permit. These prohibitions stated:

   The discharge of any priority pollutant as listed in the CTR that would cause, have the reasonable potential to cause, or contribute to an excursion above any applicable priority pollutant criterion or objective is prohibited.

   The discharge from the treatment facility of detectable levels of constituents listed in section IV.B3 and in Table 2 of this Order is prohibited.

   Section IV.B3 and Table 2 collectively list all organic constituents listed as CTR and Title 22 pollutants and all petroleum hydrocarbons and associated petroleum parameters. Effluent limitations have been established in this General Permit for all CTR and Title 22 Pollutants and petroleum hydrocarbons and associated petroleum parameters. Organic pollutants have been set at non-detectable concentrations. Inorganic CTR and Title 22 Pollutants have been set as applicable water quality objectives. These effluent limitations have been set to be as stringent as possible for the protection of beneficial uses.

   Based on these established effluent limitations, the Regional Water Board finds that these two prohibitions are redundant and repetitive and therefore, not necessary for the protection of beneficial uses. Because the discharge of these pollutants is already controlled by effluent limitations, the Regional Water Board has no reason to believe that existing water quality will be reduced due to the removal of these prohibitions and therefore is consistent with the State Water Board's antidegradation policy and does not constitute as backsliding.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations, require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards.

The CWA requires that technology-based effluent limitations be established according to 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 bilogoical oxygen demand (BOD), total suspended solids (TSS), fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

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

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

2. **Applicable Technology-Based Effluent Limitations**

Contaminated groundwater is being treated to remove organic pollutants, including petroleum hydrocarbons and volatile organic compounds. Available treatment technologies are capable of removing organic pollutants to non-detectable concentrations. The Regional Water Board has therefore established an effluent limitation for all organic pollutants to non-detectable concentrations, based on BPJ, as defined below and are retained from Order No. R1-2006-0048:

a. Detectable concentrations of organic CTR pollutants are concentrations equal to or exceeding their respective Minimum Levels (MLs) of detection as established by the State Water Board in the *Policy for Implementation of*

Toxic Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (2005).

b. Detectable concentrations of organic Title 22 pollutants are concentrations equal to or exceeding the respective Detection Limit for Purposes of Reporting (DLRs) as established by the State Department of Health Services at Title 22 of the California Code of Regulations, Section 64445.1.

c. Detectable concentrations of petroleum hydrocarbons and associated petroleum parameters are concentrations equal to or exceeding the MLs established for these pollutants and retained from the previous General Permit.

Only select effluent limitations are applicable to each discharger enrolled under the General Permit. Constituents of concern can vary at different cleanup sites, resulting in differing pollutants requiring treatment at each site. To be as broad as possible, this General Permit identifies effluent limitations for numerous organic pollutants. Not all of these compounds, however, are applicable to each discharger. Only those organic pollutants identified as pollutants of concern at each individual site are subject to applicable effluent limitations.

For existing dischargers, waste characterization collected through the previous General Permit cycle provides a complete data set to determine applicable organic pollutant effluent limitations. New dischargers will have to provide adequate characterization for Regional Board staff to determine applicable organic pollutants. Applicable pollutants are identified as those which are detected in either the influent or effluent.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

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

proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

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

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

   a. Beneficial Uses. Beneficial uses for receiving waters of the North Coast Region are established in the Basin Plan and are discussed in detail in section IV.C.1of this Fact Sheet.

   b. Basin Plan Water Quality Objectives. The Basin Plan contains narrative objectives for color, tastes and odors, floating material, suspended material, settable material, oil and grease, biostimulatory substances, sediment, turbidity, pH, dissolved oxygen, bacteria, temperature, toxicity, pesticides, chemical constituents, and radioactivity that apply to inland surface waters, enclosed bays and estuaries and coastal waters. For waters designated for use as domestic or municipal supply (MUN), the Basin Plan establishes as applicable water quality criteria the Maximum Contaminant Levels (MCLs) established by the Department of Public Health for the protection of public water supplies at Title 22 of the California Code of Regulations section 64431 (inorganic pollutants) and section 64444 (organic pollutants).

   c. State Implementation Plan (SIP), CTR, and NTR. Water quality criteria and objectives applicable to North Coast Region receiving waters are established by the California Toxics Rule (CTR), established by the USEPA at 40 CFR 131.38; and the National Toxics Rule (NTR), established by the USEPA at 40 CFR 131.36, Criteria for most of the 126 priority pollutants area contained within the CTR and the NTR.

3. **Determining the Need for WQBELs**

   CWA section 301 (b)(1) requires NPDES permit to include effluent limitations that achieve technology-based standards and any more stringent limitations necessary to meet water quality standards. Water quality standards include Regional Water Board Basin Plan beneficial uses and narrative and numeric water quality objectives, State Water Board adopted standards, and federal standards, including CTR and NTR. Basin Plans include numeric site specific water quality objectives and narrative objectives for toxicity, chemical constituents, and tastes and odors.

Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard.

The chemical constituents of concern regulated by this General Permit include pollutants associated with cleanup activities including petroleum related organic compounds and other volatile organic compounds and naturally occurring inorganic compounds. As described in section V.B. above, technology-based effluent limitations have been established for all volatile organic compounds regulated under this General Permit.

Inorganic pollutants, however, are naturally occurring and not treated as part of the groundwater pump and treat system. Therefore, inorganic pollutants in the effluent have the potential to cause or contribute to exceedances of applicable water quality criteria for receiving waters. Therefore effluent limitations are established as WQBELs in this General Permit.

4. **WQBEL**

a. pH. The effluent limitations for pH are specific to receiving water and are based on the water quality objectives for pH established in Chapter 3 and identified in Table 3-1 of the Basin Plan. This effluent limitation is retained from Order No. R1-2006-0048.

   For waters not listed in Table 3-1 of the Basin Plan and where pH objectives are not otherwise prescribed, the General Permit requires that the pH of the discharge be not less than 6.5 nor greater than 8.5, based on the general pH water quality objective specified in the Basin Plan. In Order No. R1-2006-0048, only Dischargers subject to water quality objectives established in Table 3-1 of the Basin Plan where required to comply with pH effluent limitations. This General Permit now requires all Dischargers to comply with pH effluent limitations. This requirement is consistent with watershed wide requirements in the North Coast Region.

b. Inorganic Pollutants. This General Permit establishes effluent limitations for inorganic pollutants. These effluent limitations are protective of beneficial uses under all discharge conditions and based on the most protective water quality criteria for priority pollutants from the CTR and Title 22 Pollutants. All effluent limitations for inorganics have been retained from Order No. R1-2006-0048, except for two pollutants:

   - The effluent limitation for arsenic has been reduced from 50 µg/L to 10 µg/L. This effluent limitation is established based on the MCL adopted in CCR Title 22, section 64431.

- This General Permit includes an effluent limitation of perchlorate set at 6.0 µg/L. There was no effluent limitation for perchlorate in Order No. R1-2006-0048. This effluent limitation is established based on the MCL adopted in CCR Title 22, section 64431.

5. **Whole Effluent Toxicity (WET)**

Effluent limitations for acute WET protect the receiving water from the aggregate effect of a mixture of pollutants that may be present in the effluent. There are two types of WET tests-acute and chronic. An acute toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and/or growth. The Basin Plan establishes a narrative water quality objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are toxic to, or produce other detrimental responses in aquatic organisms.

This General Permit includes an effluent limitation for acute toxicity in accordance with the Basin Plan, which requires an absence of toxicity in the treated effluent. Discharges shall be in compliance with this limitation when the survival of aquatic organisms in a 96-hour bioassay of undiluted waste complies with a 90 percent survival. This effluent limitation is retained from Order No. R1-2006-0048.

In addition to the Basin Plan requirements, section 4 of the SIP states that chronic toxicity limitations are required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. This General Permit does not establish an effluent limitation for chronic toxicity; however, accelerated chronic Whole Effluent Toxicity (WET) monitoring is required when a trigger of 1.0 TUc has been exceeded.

In addition to WET monitoring, Special Provisions described in section VI.C.2.a.require the Discharger to submit to the Regional Water Board a TRE Work Plan for approval by the Executive Officer, to ensure the Discharger has a plan to immediately move forward with a TRE, if persistent effluent toxicity is encountered.

D. Final Effluent Limitations

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

All effluent limitations and restrictions in this General Permit are at least as stringent as those established by Order No. R1-2006-0048, with one exception: limitations for dissolved oxygen, specific conductivity, total dissolved solids, boron, and hardness, are now expressed as receiving water limitations, as described below.

Order No. R1-2006-0048 established WQBEL for specific conductance, total dissolved solids, pH, boron, dissolved oxygen, and hardness based on water quality

objectives for specific water bodies, as published as Table 3-1 of the Basin Plan. The effluent limitation stated:

> *For receiving waters identified by Table 3-1 of the Basin Plan, effluent limits apply for specific water quality parameters. Discharges to those waters shall meet applicable water quality objectives for specific conductance, total dissolved solids, pH, boron, dissolved oxygen and hardness for that specific receiving water as end-of-pipe effluent limitations.*

This effluent limitation has not been retained in this General Permit. Regulation of these parameters, except pH, are now established as receiving water limitations, which state:

> *Unless more stringent water quality objective for dissolved oxygen are established for a specific receiving water body by Table 3-1 of the Basin Plan, authorized discharges shall not cause the dissolved oxygen concentration of receiving waters to be depressed below 7.0 mg/L at any time nor below 9.0 mg/L during critical spawning and egg incubation periods. In the event that receiving waters have background dissolved oxygen concentrations of less than these levels, discharges shall not depress dissolved oxygen concentrations below existing levels.*
>
> *Authorized discharges shall not substantially contribute to exceedances of water quality objectives for specific waters of the North Coast Region that are established in Table 3-1 of the Basin Plan for specific conductance, total dissolved solids, hardness, and boron. In the event that receiving waters have background conditions for these parameters at levels that already exceed water quality objectives, dischargers shall not cause or contribute to a further exceedance of existing conditions.*

The Discharger is not allowed to cause or contribute to an exceedance of applicable water quality objectives or natural conditions of these parameters in receiving waters, thereby still protecting the beneficial use of receiving waters.

Applying water quality objectives in Table 3-1 of the Basin Plan as effluent limitations as described in Order No. R1-2006-0048 appears to be an anomaly, as these numeric limitations are consistently applied as receiving water limitations throughout the North Coast Region. A review of the administrative record for Order No. R1-2006-0048 does not explain why this deviation occurred. Accordingly, setting these parameters as effluent limitations in Order No. R1-2006-0048 appears to have been a mistake. Establishing these parameters as receiving water limitations is routine in Region-wide NPDES permits for non ocean discharges.

CFR 40 section 122.44 (2)(i) states that a permit may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutants if (2)

the Administrator determined that technical mistakes or mistaken interpretations of law were made in using the previous permit. It appears that applying these parameters as effluent limitations was a technical mistake and is now being corrected in this General Permit. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

2. **Satisfaction of Antidegradation Policy**

The Regional Water Board has determined that discharges authorized under the General Permit will be consistent with applicable antidegration requirements of State Water Board Resolution No. 68-16, as well as USEPA policy established at 40 CFR 131.12. These provisions require that, at a minimum, existing instream water uses and the level of water quality necessary to protect those existing uses must be maintained. Where the existing water quality is better than the water quality objectives set to protect existing and potential beneficial uses, that quality must be maintained, unless specific findings are made.

Pursuant to the Antidegradation Policy, the lowering of water quality can be allowed only if beneficial uses are protected and if there is a maximum benefit to the people of the State. Setting dissolved oxygen, specific conductivity, total dissolved solids, boron, and hardness as receiving water limitations may result in a slight decrease in water quality. However, the Discharger is not allowed to cause or contribute to an exceedance of applicable water quality objectives or natural conditions of these parameters in receiving waters, thereby still protecting the beneficial use of receiving waters.

The discharge itself results from the treatment of contaminated groundwater, which is an activity that significantly benefits water quality. The additional operational costs associated with meeting dissolved oxygen, specific conductivity, total dissolved solids, boron, and hardness consistently at the end-of-pipe is substantial and may be a barrier to certain treatment operations. Accordingly, considering the water-quality benefits to be derived from treating contaminated groundwater basins, setting dissolved oxygen, specific conductivity, total dissolved solids, boron, and hardness as receiving water limitations is to the maximum benefit to the people of the state."

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

This General Permit contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on organic pollutants, including CTR, Title 22 Pollutants, petroleum hydrocarbons, and associated petroleum parameters. Restrictions on organic pollutants are discussed in V.B.2 of the Fact Sheet. This General Permit's technology-based pollutant restrictions implement the minimum, applicable federal

technology-based requirements. In addition, these requirements include some limitations that are 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. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). Collectively, this General Permit's water quality based effluent limitations on individual pollutants are no more stringent than required to implement the requirements of the CWA.

This General Permit contains pollutant restrictions that are more stringent than applicable federal requirements and standards. Specifically, this General Permit includes effluent limitations for organic pollutants that are more stringent than applicable federal standards, but that are nonetheless necessary to meet numeric objectives or protect beneficial uses. The rationale for including these limitations is explained in V.B.2 of the Fact Sheet.

E. Interim Effluent Limitations

This General Permit does not include interim effluent limitations.

F. Land Discharge Specifications

This General Permit does not include land discharge specifications.

G. Reclamation Specifications

This General Permit is not applicable to dischargers that are solely reclamation uses of wastewater.

VI. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the North Coast Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (40 CFR 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this General Permit are retained from Order No. R1-2006-0048, but have been updated to reflect Basin Plan objectives for inland surface waters, enclosed bays, and estuaries contained in Chapter 3 of the Basin Plan.

Additionally, the Basin Plan contains water quality objectives applicable to specific water bodies in the North Coast Region. Water body specific objective have been published as Table 3-1 in the Basin plan and include objectives for specific conductivity, total dissolved solids, dissolved oxygen, pH, hardness, and boron for applicable water bodies. This General Permit establishes receiving water limitations based on these specific water quality objectives which are applicable to any discharge occurring in a listed water body. Receiving water limitations retained from Order No. R1-2006-0048 for specific water bodies include:

Unless more stringent water quality objective for dissolved oxygen are established for a specific receiving water body by Table 3-1 of the Basin Plan, authorized discharges shall not cause the dissolved oxygen concentration of receiving waters to be depressed below 7.0 mg/L at any time nor below 9.0 mg/L during critical spawning and egg incubation periods. In the event that receiving waters have background dissolved oxygen concentrations of less than these levels, discharges shall not depress dissolved oxygen concentrations below existing levels.

Unless more stringent water quality objectives for pH are established for a specific receiving water by Table 3-1 of the Basin Plan, authorized discharges shall not cause the pH of receiving waters to be depressed below 6.5 nor raised above 8.5. Within this ranges, authorized dischargers shall not cause receiving water pH to change more that 0.5 pH units at any time.

Additionally this General Permit establishes the following receiving water limitation:

Authorized discharges shall not substantially contribute to exceedances of water quality objectives for specific waters of the North Coast Region that are established in Table 3-1 of the Basin Plan for specific conductance, total dissolved solids, hardness, and boron. In the event that receiving waters have background conditions for these parameters at levels which already exceed water quality objectives, dischargers shall not cause or contribute to a further exceedance of existing conditions.

This receiving water limitation has been added to this General Permit to appropriately address all parameters included in Table 3-1.

B. Groundwater

Groundwater limitations are not applicable to this General Permit.

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

A. Influent Monitoring

Flow. Daily flow monitoring is required for influent flow into the treatment system. Flow data is necessary in order to document the volume of water being treated compared to the volume of water being discharged. This requirement is retained from Order No. R1-2006-0048.

B. Effluent Monitoring

The Monitoring and Reporting Program established the following effluent monitoring requirements for discharges authorized under this General Permit.

1. **Flow**. Daily flow monitoring is required to allow for comparison of actual discharge rate/volume with the rate/volume described in the NOI. This requirement is retained from Order NO. 2006-0048.

2. **Temperature**. Monthly monitoring of temperature is required to ensure compliance with receiving water limitations established in this General Permit. This requirement is retained from Order No. R1-2006-0048.

3. **pH**. Monthly monitoring of pH is required to ensure compliance with both effluent and receiving water limitations established in this General Permit. This requirement is retained from Order No. R1-2006-0048.

4. **Inorganic Pollutants.** Monthly monitoring is required for inorganic pollutants determined to have a reasonable potential to be discharged above background or

water quality objectives. Due to the variability between Dischargers, monitoring requirements for inorganic pollutants will vary for each individual Discharger.

Order No. R1-2006-0048 required semi-annual monitoring of inorganic parameters. The frequency has been increased to monthly to protect beneficial uses of water and ensure compliance with associated effluent limitations. Additionally, for a more focused effort will be established to determine the appropriate inorganic pollutants for monitoring based on the waste characterization of individual discharges. During this process, excessive pollutants that do not have a reasonable potential to be discharged above water quality objectives or above background will be eliminated from monitoring requirements.

5. **Organic Pollutants**. Monthly monitoring is required for organic pollutants determined to have a reasonable potential to be discharged above established effluent limitations. Like the inorganic pollutants, only those organic pollutants which have a reasonable potential to be discharged in the effluent will require monthly monitoring.

   Order No. R1-2006-0048 required monthly monitoring for organic pollutants where associated with the unauthorized release to groundwater. All other organic pollutants, including CTR and Title 22 Pollutants where required to be sampled semi-annually. Sampling frequency for all organics has been increased to monthly. However, only those organic pollutants that are determined to have a reasonable potential to be discharged in the effluent will require monthly sampling, based on waste characterization by individual discharges. This will reduce the burden of sampling for organic pollutants which are not reported in untreated groundwater and are demonstrated to have no potential to be discharged.

6. **Total Dissolved Solids, Specific Conductance, Dissolved Oxygen, Hardness, and Boron.** Order No. R1-2006-0048 required semi-annual monitoring of these parameters to determine compliance with effluent limitations. The requirement to sample for these parameters has been removed from this General Permit. These parameters are now regulated as receiving water limitations in the General Permit and monitoring in the effluent is no longer applicable.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity**. Annual monitoring for acute toxicity is required to ensure compliance with the applicable effluent limitation. This requirement is retained from Order No. R1-2006-0048.

2. **Chronic Toxicity**. Annual monitoring for chronic toxicity is required to ensure compliance with the narrative water quality objective for toxicity. This is an increase in frequency from Order No. R1-2006-0048, which requied chronic toxicity monitoring once per permit cycle. A reduction in sampling frequency may be

authorized if the Discharger can demonstrate the effluent does not exceed 1TUc. For Dischargers with frequent or a history of exceeding 1 TUc, then annual monitoring, including implementation of TRE workplan when necessary, is a sufficient monitoring frequency.

D. Receiving Water Monitoring

1. Surface Water

Surface water monitoring is required to assess potential impacts to receiving water and to determine compliance with receiving water limitations established by the General Permit.

a. **Temperature, pH, dissolved oxygen, and turbidity**. Monthly monitoring of receiving waters is required for these parameters to ensure compliance with receiving water limitations. This requirement is retained from Order No. R1-2006-0048.

b. **Hardness, total dissolved solids, specific conductance, and boron.** Monthly sampling of these parameters is required for compliance with receiving water limitations for discharges subject to specific water quality objectives listed in Table 3-1 of the Basin Plan. Additionally, hardness is required for any discharge subject to hardness dependent effluent limitations for select inorganics.

c. **Inorganic Pollutants.** Monthly monitoring in receiving water is required for any inorganic pollutants that are required to be monitored in the effluent discharge. This requirement is to ensure compliance with the discharge prohibition which prohibits the discharge of inorganics above background water quality of the receiving water.

d. Order No. R1-2006-0048 required semi-annual monitoring of CTR and Title 22 Pollutants. This requirement has been removed from this General Permit, except when a Discharger is required to monitor receiving water for inorganic parameters. However, for organic pollutants listed in CTR and Title 22, sampling of the receiving water provides no meaningful information related to compliance with this General Permit. Because organic pollutants are required to be treated and discharged at non-detectable levels, concentrations reported in the effluent limitation provide enough information to confirm receiving waters are protected from organic pollutants.

E. Groundwater

Groundwater monitoring is not required as part of this General Permit.

F. Other Monitoring Requirements

There are no other monitoring requirements regulated as part of this General Permit.

VIII. 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. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in this General Permit. 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 General Permit 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 General Permit incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

Standard Revisions (Provision VI. C.1.a). This provision contains a reopener provision that allows the Regional Water Board to reopen this General Permit to modify its conditions and requirements in accordance with 40 CFR section 122.62.

2. Special Studies and Additional Monitoring Requirements

Toxicity Reduction Requirements

Dischargers are required to prepare, maintain, and update, as necessary, a Toxicity Reduction Evaluation (TRE) Workplan, which must be implemented when acute or chronic toxicity is persistent in effluent as determined by accelerated monitoring. The TRE Workplan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Workplan must be developed in accordance with guidance from the USEPA's Office of Research and Development. Resources can be found at:

http://water.epa.gov/scitech/swguidance/methods/wet/index.cfm

Following initiation of a TRE, if the cause of toxicity cannot be identified and eliminated within a reasonable period of time, as determined by the Executive Officer, the Discharger shall discontinue the discharge to receiving water and submit an evaluation to the Regional Water Board regarding alternate disposal methods or treatment system modifications that are proposed to correct the toxicity in the effluent. The Discharger shall correct the toxicity to the satisfaction of the Executive Officer prior to resuming a surface water discharge.

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

   This section of the standarized permit template is not applicable to discharges under this General Permit.

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

   a. Operation and Maintenance Manual

      The requirements for a Dischargers to prepare, maintain, and update, as necessary an O&M Manual is retained from Order No. R1-2006-0048.

   b. Engineering Design Report

      The requirements for all Dischargers to submit an Engineering Design Report is retained from Order No. R1-2006-0048.

   c. Granular Activated Carbon Quality Control/Quality Assurance

      Where applicable, Dischargers must implement a Quality Control/Quality Assurance (QA/QC) Program to ensure that newly replenished granular activated carbon in the treatment system is providing high quality effluent with respect to pH, ammonia, and inorganic constituents. Activities conducted as part of the GAC/QC program shall be documented in routine Discharge Monitoring Reports submitted for the facility.

5. **Special Provisions for Municipal Facilities (POTWs Only)**

   This General Permit is not applicable to discharges from POTWs.

6. **Other Special Provisions**

   Stormwater. This provision requires each Discharger to comply with the State's regulation of industrial and construction stormwater activities.

7. **Compliance Schedules**

This General Permit does not include compliance schedules.

IX. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a General National Pollutant Discharge Elimination System (NPDES) permit for the discharge of treated groundwater. As a step in the WDR adoption process, Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation during the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified Dischargers enrolled in Order No. R1-2006-0048 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 to interested parties through the following public information outlets:

Internet posting on the Regional Water Board's Website:
www.waterboards.ca.gov/northcoast/

Specific mailings to interested parties	February 10, 2011
Press Democrat, Santa Rosa for Sonoma County, Marin County and Mendocino County	February 10, 2011
Times Standard, Eureka, for Humboldt County	February 10, 2011
Daily Triplicate, Crescent City, for Del Norte County	February 10, 2011
Siskiyou Daily News, Yreka for Siskiyou County	February 10, 2011
Trinity County Branch Library, Weaverville, for Trinity County	February 10, 2011
Fort Bragg Library, Fort Bragg, for Mendocino County	February 10, 2011

B. Written Comments

Staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person, by e-mail or by US Postal mail to the Executive Office at the Regional Water Board at the address on the cover page of this General Permit.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on **March 14, 2011.**

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: May 5, 2010
Time: 8:30 A.M.
Location: Wharfinger Building
#1 Marina Way
Eureka, California

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 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.

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, phone number and e-mail address.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Colleen Hunt at 707-576-2831 or at chhunt@waterboards.ca.gov.