

California Regional Water Quality Control Board
North Coast Region

ORDER NO. R1-2001-45
NPDES PERMIT NO. CA 0005622
I.D. NO. 1B82085OHUM

WASTE DISCHARGE REQUIREMENTS

FOR

PACIFIC GAS AND ELECTRIC COMPANY
HUMBOLDT BAY POWER PLANT

Humboldt County

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

1. Pacific Gas & Electric Company (hereinafter PG&E or permittee) submitted a Report of Waste Discharge dated August 19, 1999 and applied for renewal of its permit to discharge cooling water, industrial process water, and storm water under the National Pollutant Discharge Elimination System (NPDES) from the Humboldt Bay Power Plant.
2. The permittee owns and operates a power plant with three power generating units located on the east shore of Humboldt Bay in the SW ¼ of Section 8, T4N, R1W, HB&M, as shown on Attachments "A" and "B" incorporated herein and made part of this Order. Units No. 1 and No. 2, constructed in 1956 and 1958, respectively, are driven by fossil fuel (oil and gas) and have a gross generating capacity of 53 megawatts (MW) each. Unit No. 3, constructed in 1963, was nuclear-fueled and had a gross generating capacity of 65 MW. Unit No. 3 has been shut down permanently; however, some wastewater discharges from Unit No. 3 still occur. Additionally, two diesel-powered turbine Mobile Electric Power Plants (MEPPs), with a capacity of 15 MW each, run intermittently.
3. The facility uses about 76 million gallons per day (mgd) of bay water for once-through cooling purposes in the active power generation units. The cooling water is pumped from Humboldt Bay through Fisherman's Channel and returned to the Bay via a discharge canal. Section 316(b) of the Clean Water Act requires that the location, design, construction and capacity of cooling water intake structures reflect the Best Technology Available (BTA) for minimizing adverse environmental impacts. A December 1983 study of the cooling water intake was submitted to the Regional Water Board which concluded the facilities at the Humboldt Bay Power Plant reflect the BTA. The study was conducted for a duration of one year, after the plant had been in operation for over twenty years. PG&E's intake structure has not been modified significantly since the 1983 study was conducted, and the intake structure still reflects BTA.

4. The temperature of the cooling water is raised approximately 20°F during normal operation. Additionally, thermal treatments of each cooling water system are conducted once per month to remove mussels from the system. The temperature is raised approximately 50°F for a short period of time within the unit undergoing demusseling. The short-duration thermal treatment removes mussels growing on the intake and outfall systems and heat exchangers. During 1971 and 1973, PG&E conducted an evaluation of the effect of cooling water discharges on the beneficial uses of the receiving waters at the facility. These field studies demonstrated that the beneficial uses of the receiving waters had not been adversely affected by the thermal discharge. Due to changes in operating conditions in July 1976, additional thermal studies were requested by the Regional Water Board (Order 82-85, Provision C.6). PG&E performed studies during 1982-83. These studies showed that no adverse effect on beneficial uses has resulted from the cooling water discharges. The studies were conducted for a duration of one year, after the plant had been in operation for over twenty years. There have been no significant thermal changes to the discharge since the 1983 study, and the finding of no adverse effects on beneficial uses is still relevant.
5. All waste streams are combined in the cooling water canal prior to discharge through a short outfall into Humboldt Bay. A mixing zone for the combined discharge is provided and can be applied to effluent limitations for chronic and acute toxicity and priority pollutants. The minimum initial dilution to determine compliance with effluent limitations is defined as follows: for single unit operation (Unit 1 or Unit 2) initial dilution is calculated as 5.06:1; and for two unit operation initial dilution is calculated as 6.06:1. The location of each waste stream is shown on Attachment "B". Waste discharges are described in the Report of Waste Discharge as submitted on August 19, 1999.
 - a. Surface water discharges (all flows are intermittent except cooling water):

Discharge No. 001 – Combined Cooling Water Discharge

Cooling water for steam condensers and other miscellaneous service cooling systems is pumped from Humboldt Bay via Fisherman's Channel and returned to the Bay through the cooling water discharge canal. Wastewater discharges into the once-through cooling water system include:

Discharge

Serial No. Flow

Description

001A 76 MGD
(Total)

Once-through cooling water for Units No. 1 and No. 2. Intake temperatures range from 53°F to 59°F and discharge temperatures range from 66°F to 78°F. In addition to heat, trace amounts of metal due to electrolysis and corrosion may be present.

001B	40,000 GPD (Average)	<u>Oil/water separators</u> for Units No. 1 and No. 2. Comprised of rainfall runoff, building floor-drainage, and runoff from areas directly around fuel oil storage tanks. Yard drain discharge (No. 003A) may be routed to the separators in the event of an oil spill entering the yard drain system. Oil and solids accumulating in the system are disposed as hazardous waste.
001C	160,000 GAL every 10 to 15 YR	<u>Boiler metal cleaning waste</u> is generated approximately twice every 10 to 15 years. Metal cleaning waste is treated in portable tanks. Treatment consists of pH neutralization, chemical precipitation and filtration. Treated wastewater is discharged from tanks in batches (approximately 20,000 gal. each) over a period of weeks. Filters and solids are disposed as hazardous waste.
001D	50,000 GAL every 3 to 5 YR	<u>Boiler fireside wash and air preheater wash</u> is generated at approximately 3- to 5-year intervals depending on the frequency of fuel oil burns. Wastewater is treated in portable tanks. Treatment consists of pH neutralization, chemical precipitation, and filtration. Treated wastewater is discharged from tanks in batches (approximately 20,000 gal. each) over a period of days. Filters and solids are disposed as hazardous waste.
001E	7,000 GPD	<u>Liquid low-level radioactive waste</u> is comprised of treated, filtered, and stored liquids from Unit 3. Treated batches up to 7,500 gallons are discharged.
001F	2.3 MGD	<u>Noncontact cooling water.</u> Units No. 1 and No. 2 Bearing Cooling Water (BCW) System is comprised of once-through, noncontact cooling water. This system is used to remove heat from the closed cooling water system referred to as the Bearing Cooling Water (BCW) system. The closed cooling system contains a molybdenum/glycol-based corrosion inhibitor. Small amounts of this corrosion inhibitor may be present in the noncontact cooling water system due to leakage. Similar to Discharge 001A, the discharge of this noncontact cooling water system contains heat and trace quantities of metals resulting from corrosion.

001G	20 GPD	<u>Unit 3 caisson groundwater.</u> Infiltrating groundwater is removed by a sump pump from the crushed rock bed beneath the caisson. This groundwater may be either directly discharged to circulating water or routed to No. 001E, liquid low-level radioactive waste.
001H	5,000 GPD	<u>Boiler blowdown, evaporator blowdown, and scale cracking.</u> Boiler blowdown and evaporator scale cracking occur weekly. Evaporator blowdown occurs daily. Approximately one gallon/day of nonhazardous chemical laboratory waste is routed to this discharge. Wastewater from these activities is collected in the low-volume waste sump, filtered, and discharged to the cooling water tunnels prior to entering the discharge canal. In a spill emergency where discharge 001B does not meet discharge limitations, the discharge may be routed to the low-volume waste sump and discharge 001H routed to the ponds (See Discharge Serial No. 003F). Filters and solids are disposed as nonhazardous waste at a legal point of disposal.

Discharge No. 002 – Intake Screen Wash

Discharge Serial No.	Flow	Description
002A	48,000 GPD	<u>Intake screen wash</u> for Unit No. 1. Large debris collected from screen wash is disposed as nonhazardous waste at a legal point of disposal.
002B	48,000 GPD	<u>Intake screen wash</u> for Unit No. 2. Large debris collected from screen wash is disposed as nonhazardous waste at a legal point of disposal.

Discharge No. 003 – Yard Storm Drains

Discharge Serial No.	Flow	Description
003A	Variable	<u>Central Yard storm drain</u> includes rainfall runoff Runoff from the central yard area, miscellaneous steam

tracings, and fire water system flush. In the event of spills, runoff may be routed to the oil/water separator (001B) or to the low-level radioactive water system (001E) for treatment.

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| 003B | Variable | <u>Fuel oil storage tank storm drain</u> includes rainfall Runoff runoff from the fuel oil tank storage areas, except runoff from the area immediately adjacent to the tank drains, which is directed to the oil/water separator. |
| 003C | Variable | <u>South yard storm drain</u> includes runoff from the Runoff south yard area, including the switchyard. |
| 003D | Variable
Runoff | <u>Mobile emergency power plants (MEPPS) storm drain</u> includes runoff from the MEPPS area. |
| 003E | Variable | <u>Intake channel screening collection pit</u> is used to Runoff facilitate seaweed removal from the intake screen. Drainage is manually operated and returns to the intake channel. |
| 003F | Variable
Runoff | <u>Large and small ponds.</u> Rainfall that accumulates in the large and small ponds is discharged periodically. The discharge is directed through the existing discharge structure also used for Discharge Nos. 001C and 001D. In the event of a spill emergency at the site, the spill may be routed from the yard drain system to the low-volume waste sump and then to the ponds for collection. The contained liquid will be removed for treatment and/or disposal offsite. |

Discharge No. 004 – Remote Storm Drains

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| 004A &
004B | Variable
Runoff | <u>Northeast plant storm drains</u> include runoff from the hillside northeast of the plant. |
| 004C | Variable | <u>Plant entrance storm drains</u> include runoff from Runoff various portions of the entrance road and parking lot. Discharge is directed at several drainage points to the intake channel. |

- b. Domestic wastewater is discharged into the Humboldt Community Services District wastewater collection system.

- c. Solidified, concentrated, radioactive waste liquids; solidified ion exchange resin; and filters are hauled away by a licensed carrier and disposed of at a federally-approved disposal site.
 - d. Oil and oily sludge from the oil/water separators and miscellaneous sources are removed by a licensed hazardous waste transporter to a permitted recycling facility or a hazardous waste disposal site.
 - e. Prior to removal of solids/sludge accumulating in the ponds, the material will be evaluated and characterized to assure proper disposal. Wastewater filters generated from filtration of hazardous and nonhazardous wastewater will be evaluated and characterized to assure proper disposal.
 - f. It is the policy of the permittee to purchase electrical equipment that does not contain PCBs. No known transformers or capacitors with concentrations of PCB greater than 500 mg/L currently are in use at this facility. Some electrical equipment at the facility may contain PCB-contaminated oils at levels less than 500 mg/L. Disposal of PCB-contaminated waste oils is handled in accordance with applicable hazardous waste regulations.
 - g. This facility does not use chlorine or biocides to control slime growths in cooling water tubes.
6. This facility is a major discharger as defined by the U.S. Environmental Protection Agency (U.S. EPA).
7. The Water Quality Control Plan for the North Coast Region (Basin Plan) includes water quality objectives, implementation plans for point source and nonpoint source discharges, prohibitions, and statewide plans and policies. By reference, the Plan includes the Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (the Thermal Plan) and the Water Quality Control Policy for the Enclosed Bays and Estuaries of California.
8. The Basin Plan contains a narrative objective (standard) for toxicity that requires:

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

The survival of aquatic life in surface waters subjected to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary for other control water that is consistent with the requirements for "experimental water" as described in *Standard Methods for the Examination of Water and Wastewater*, 18th Edition (1992). As a

minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour bioassay.

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

9. The State Water Resources Control Board (State Water Board) adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (also known as the State Implementation Plan or SIP) on March 2, 2000. All provisions of the Policy became effective as of May 22, 2000^a. The Policy applies to discharges of toxic pollutants into the inland surface waters, enclosed bays, and estuaries of California subject to regulation under the state's Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) and the federal Clean Water Act (CWA). This Policy establishes: (1) implementation provisions for priority pollutant criteria promulgated by the U.S. EPA through the National Toxics Rule (NTR) and through the California Toxics Rule (CTR), and for priority pollutant objectives established by Regional Water Boards in their basin plans; (2) monitoring requirements for 2,3,7,8-TCDD equivalents; and (3) chronic toxicity control provisions.
10. Insufficient background and effluent data exist to determine whether any of the priority pollutants are, or may be, discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard. In accordance with the SIP, the discharger is required to obtain the data. After the data is gathered, the reasonable potential analysis (RPA) will be performed and the permit reopened to include additional effluent limitations, if necessary.
11. Effluent limitation guidelines for the Steam Electric Power Generating Point Source Category have been promulgated by the U.S. EPA requiring the application of the best available technology economically achievable (BAT). Additional effluent limitation guidelines were proposed, but not promulgated by the U.S. EPA, for best conventional pollutant control technology (BCT). BAT effluent limitation guidelines became effective and replaced best practicable control technology currently available (BPT) on July 1, 1983. Some effluent limitations contained in this Order are derived from the promulgated Federal guidelines, and others are based on the Water Quality Control Plans listed in No. 7 above. Together, they are considered the best professional judgment of the Regional Water Board. Limits are subject to reconsideration if and when final guidelines are promulgated.

^a This Policy was effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the National Toxics Rule and to the priority pollutant objectives established by Regional Water Quality Control Boards in their water quality control plans (basin plans), with the exception of the provision on alternate test procedures in section 2.3., item (1) of the SIP. The alternate test procedures provision was effective on May 22, 2000. This Policy was effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the U.S. EPA through the California Toxics Rule.

12. Federal Regulations for storm water discharges were issued by the U.S. EPA on November 16, 1990 (40 CFR parts 122, 123, and 124). The regulations require generators of steam electric power to obtain an NPDES permit and to implement BAT and BCT to reduce or eliminate industrial storm water pollution. On January 5, 1994, the permittee submitted a Notice of Intent to comply with the

terms of the State Water Board's General Permit to Discharge Storm Water. Storm water discharges are best regulated in conjunction with the terms of this individual permit, and regulation by the Statewide General Permit was terminated by Order No. 95-3. Implementation of the provisions of this Permit constitutes compliance with Federal storm water requirements.

13. The permittee has prepared a Storm Water Pollution Prevention Plan (SWPPP) and has implemented the provisions of the SWPPP. The SWPPP includes source identification, practices to reduce or eliminate pollutant discharge to storm water, an assessment of potential pollutant sources, a materials inventory, a preventative maintenance program, spill prevention and response procedures, general storm water management practices, employee training, recordkeeping, and elimination of non storm water discharges to the storm water system. It also includes a storm water monitoring plan to verify the effectiveness of the SWPPP.
14. Due to the large number of storm water discharges and the complex nature of storm water discharges, it is not feasible at this time to establish numerical storm water discharge effluent limits for those facilities that are not covered in 40 CFR Subchapter N. Instead, implementation of the provisions of this Permit constitutes compliance with BAT/BCT requirements and requirements to achieve water quality standards. Best Management Practices (BMPs) to control and abate the discharge of pollutants in storm water are authorized where numeric effluent limits are infeasible and the BMPs are reasonably necessary to achieve compliance with effluent limitations or water quality standards.
15. As set forth in the Basin Plan, beneficial uses of Humboldt Bay include:
 - a. agricultural supply
 - b. industrial service supply
 - c. navigation
 - d. water contact recreation
 - e. noncontact water recreation
 - f. commercial and sport fishing
 - g. cold freshwater habitat
 - h. wildlife habitat
 - i. preservation of rare and endangered species
 - j. marine habitat
 - k. migration of aquatic organisms
 - l. spawning, reproduction, and/or early development

- m. shellfish harvesting
 - n. estuarine habitat
 - o. aquaculture
16. Effluent limitations and toxic and pretreatment effluent standards established pursuant to Sections 208(b), 301, 302, 303(d), 304, 306, and 307 of the CWA and amendments thereto are applicable to the permittee.
 17. The permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Resources Control Board Resolution No. 68-16. The impact on existing water quality will be insignificant.
 18. The permittee is presently governed by Waste Discharge Requirements Order No. 95-3, adopted by the Regional Water Board on February 23, 1995.
 19. The action to renew an NPDES Permit is exempt from Chapter 3 of the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., in accordance with Section 13389 of the California Water Code, and is also exempt from CEQA pursuant to Title 14, California Code of Regulations, Section 15301.
 20. The Regional Water Board has notified the permittee and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations.
 21. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.
 22. This Order will serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the CWA, or amendments thereto, and will take effect upon adoption by the Regional Water Board.

THEREFORE, IT IS HEREBY ORDERED that Waste Discharge Requirements Order No. 95-3 is rescinded and the permittee, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. The discharge of any waste not specifically regulated by this Permit is prohibited.
2. Creation of a pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code (CWC), is prohibited.
3. The discharge of noncontact cooling water containing any pollutant except pollutants at levels above ambient as measured at the intake canal, heat, or insignificant quantities of metals from electrolysis prevention devices and corrosion is prohibited.

4. The discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid and capacitor dielectric is prohibited.
5. The discharge of total residual chlorine (or total residual oxidants) above background concentrations is prohibited.
6. The discharge of any high-level radioactive waste is prohibited.

B. EFFLUENT LIMITATIONS

1. Representative samples from the following outfalls shall not contain constituents in excess of the following limits:

Outfall No. 001A

<u>Constituent</u>	<u>Units</u>	<u>Daily Maximum</u>
Chronic Toxicity	TUc	6.06 (during single unit operation) 7.06 (during dual unit operation)

Outfall Nos. 001B, 001E, 001F, 001H

<u>Constituents</u>	<u>Units</u>	<u>Daily Maximum</u>	<u>30-Day Average</u>
Suspended Solids	mg/L	100	30
Grease and Oil	mg/L	20	15

Outfall Nos. 001C, 001D

<u>Constituents</u>	<u>Units</u>	<u>Daily Maximum</u>	<u>30-Day Average</u>
Suspended Solids	mg/L	100	30
Grease and Oil	mg/L	20	15
Copper (total)	mg/L	1.0	1.0
Iron (total)	mg/L	1.0	1.0

<u>Constituents</u>	<u>Units</u>	<u>1-Hour Average</u>	<u>4-Day Average</u>
Copper (dissolved)	ug/L	4.8	3.1

2. In the event that waste streams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled in Effluent Limit

B.1 of this section attributable to each controlled waste source shall not exceed the specified limitation for that waste source.

3. The pH for all discharges to the cooling intake channel or discharge canal shall have a pH within the range of 6.0 to 9.0.
4. There shall be no acute toxicity in the discharge to Humboldt Bay. Effluents are considered acutely toxic when there is less than 90 percent survival 70 percent of the time based on any monthly median, or less than 70 percent survival 100 percent of the time.

C. RECEIVING WATER LIMITATIONS

The following Receiving Water Limitations apply beyond the zone of initial dilution in the vicinity of the discharge.

1. The waste discharge shall not cause the dissolved oxygen concentration of the receiving waters to be depressed below 6.0 mg/l. Additionally, the discharge shall not cause the dissolved oxygen content of the receiving water to fall below 7.0 mg/l more than 50 percent of the time, or below 6.2 mg/l more than 10 percent of the time.
2. The discharge shall not cause the pH of the receiving waters to be depressed below background levels nor raised above 8.5. Within this range, the discharge shall not cause the pH of the receiving waters to be changed at any time more than 0.2 units from that which occurs naturally.
3. The discharge shall not cause the turbidity of the receiving waters to be increased more than 20 percent above naturally occurring background levels.
4. The discharge shall not cause the receiving waters to contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
5. The discharge shall not cause the receiving waters to contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.
6. The discharge shall not cause esthetically undesirable discoloration of the receiving waters.
7. The discharge shall not cause bottom deposits in the receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses.

8. The discharge shall not contain concentrations of biostimulants that promote objectionable aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses of the receiving waters.
9. The discharge 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. The discharge shall not cause concentrations of toxic pollutants in the water column, sediments, or biota that adversely affect beneficial uses.
10. Elevated temperature wastes shall not adversely affect beneficial uses of Humboldt Bay.
11. The discharge shall not cause bioaccumulation of pesticide, fungicide, wood treatment chemical, or other toxic pollutant concentrations in bottom sediments or aquatic life to levels that are harmful to human health.
12. The discharge 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.
13. The discharge shall not contain concentrations of suspended material that cause nuisance or adversely affect beneficial uses of receiving waters.
14. The discharge shall not contain chemical constituents in amounts that adversely affect agricultural use.
15. The discharge shall not cause radionuclides to be present in receiving waters in concentrations that are deleterious to human, plant, animal or aquatic life nor which result in an accumulation in the food web to an extent which presents a hazard to human, plant, animal, or indigenous aquatic life.

D. SOLIDS DISPOSAL

Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of at a legal point of disposal and in accordance with the State Water Board promulgated provisions of Title 27, Division 2, of the California Code of Regulations.

E. GENERAL PROVISIONS

1. Duty to Comply

The permittee shall comply with all of the conditions of this Permit. Any Permit noncompliance constitutes a violation of the CWA and the Porter-Cologne Water Quality Control Act and is grounds for enforcement action; Permit termination,

revocation and reissuance, or modification; or denial of a Permit renewal application. [40 CFR 122.41(a)]

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Permit has not yet been modified to incorporate the requirement. [40 CFR 122.41(a)(1)]

2. Duty to Reapply

This Permit expires on April 26, 2006. If the permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, the permittee shall apply for and obtain a new Permit. The application, including a report of waste discharge in accordance with Title 23, California Code of Regulations shall be received by the Regional Water Board no later than October 26, 2005. [40 CFR 122.41(b)]

The Regional Administrator of the U.S. EPA may grant permission to submit an application at a later date prior to the Permit expiration date; and the Regional Administrator of the U.S. EPA may grant permission to submit the information required by paragraphs (g)(7), (9), and (10) of 40 CFR 122.21 after the Permit expiration date. [40 CFR 122.21(d)(2)]

3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit. [40 CFR 122.41(c)]

4. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this Permit that has a reasonable likelihood of adversely affecting human health or the environment. [40 CFR 122.41(d)]

5. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with this Permit. Proper operation and maintenance includes adequate laboratory control and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a permittee only when necessary to achieve compliance with the conditions of this Permit. [40 CFR 122.41(e)]

6. Permit Actions

This Permit may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

- a. Violation of any terms or conditions of this Permit; or
- b. Obtaining this Permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. A change in any condition that requires either a temporary or a permanent reduction or elimination of the authorized discharge; or
- d. A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by Permit modification or termination.

If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant that is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this Permit, this Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the permittee so notified. [40 CFR 122.44(b)]

The filing of a request by the permittee for a Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any Permit condition. [40 CFR 122.41(f)]

7. Property Rights

This Permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. [40 CFR 122.41(g)]

8. Duty to Provide Information

The permittee shall furnish the Regional Water Board, State Water Board, or U.S. EPA, within a reasonable time, any information which the Regional Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit or to determine compliance with this Permit. The permittee shall also furnish to the Regional Water Board, upon request, copies of records required to be kept by this Permit. [40 CFR 122.41(h)]

The permittee shall conduct analysis on any sample provided by U.S. EPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to U.S. EPA's DMQA manager.

9. Inspection and Entry

The permittee shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or other authorized representatives upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Permit;
- b. Have access to and copy any records that shall be kept under the conditions of this Permit;
- c. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and
- d. Sample or monitor for the purposes of assuring Permit compliance or as otherwise authorized by the CWA, any substances or parameters at any locations.
[40 CFR 122.41(i)]

10. Monitoring and Records

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- b. The permittee shall calibrate and perform maintenance procedures in accordance with manufacturer's specifications on all monitoring instruments and equipment to ensure accurate measurements. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Permit, and records of all data used to complete the application for this Permit, for a period of at least three years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Water Board, State Water Board, or U.S. EPA at any time. All monitoring instruments and devices used by the permittee to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least annually, to ensure their continued accuracy.
- c. Records of monitoring information shall include:
 - i. The date, exact place, and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The date(s) analyses were performed;
 - iv. The individual(s) who performed the analyses;

- v. The analytical techniques or methods used; and
 - vi. The results of such analyses.
 - vii. The method detection limit (MDL); and
 - viii. The practical quantitation level (PQL) or the limit of quantitation (LOQ).
- d. Unless otherwise noted, all sampling and sample preservation shall be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All analyses shall be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this Permit or approved by the Executive Officer of the Regional Water Board (Executive Officer). Unless otherwise specified, all metals shall be reported as total metals. Test fish for bioassays and test temperatures shall be specified by the Executive Officer. Bioassays shall be performed in accordance with guidelines approved by the Regional Water Board and the Department of Fish and Game.

11. Signatory Requirements

- a. All Permit applications submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed by a responsible corporate officer. For purposes of this provision, 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 employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- b. Reports required by this Permit, other information requested by the Regional Water Board, State Water Board, or U.S. EPA may be signed by a duly authorized representative provided:
 - i. The authorization is made in writing by a person described in paragraph (a) of this provision;
 - ii. 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; and

- iii. The written authorization is submitted to the Regional Water Board prior to or together with any reports, information, or applications signed by the authorized representative. [40 CFR 122.22(b)(c)]
- c. Any person signing a document under paragraph (a) or (b) of this provision shall make the following certification:

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

12. Reporting Requirements

- a. Planned changes: The permittee shall give notice to the Regional Water Board as soon as possible of any planned physical alteration or additions to the permitted facility. Notice is required under this provision only when:
 - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - 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 the Permit, nor the notification requirements under Provision 12 (g).
- b. Anticipated noncompliance: The permittee shall give advance notice to the Regional Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with Permit requirements.
- c. Transfers: This Permit 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 this Order to change the name of the permittee and incorporate such other requirements as may be necessary under the CWA.[40 CFR 122.41(l)(3)]

- d. Definitions: The following definitions shall apply unless otherwise specified in this Permit:
 - i. "Daily discharge" means the discharge of a pollutant measured during a calendar day of any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" shall be the concentrations of the composite sample. When grab samples are used, the "daily discharge" determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during the sampling day.
 - ii. "Daily average" discharge limitation means 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.
 - iii. "Daily Maximum" discharge limitations means that highest allowable "daily discharge" during the calendar month.
- e. Monitoring reports: Monitoring results shall be reported at the intervals specified in the self monitoring program. By February 28 of each year, the permittee shall submit an annual report to the Regional Water Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. In addition, the permittee shall discuss the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with the Permit. If the permittee monitors any pollutant more frequently than required by this Permit, using test procedures approved under 40 CFR Part 136 or as specified in this Permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
- f. Compliance schedules: Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 14 days following each scheduled date.
- g. Noncompliance reporting: The permittee shall report any noncompliance at the time monitoring reports are submitted. 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 recurrence of the noncompliance.

The following events shall be reported orally as soon as the permittee becomes aware of the circumstances, and the written report shall be provided within five days of that time.

- i. Any unanticipated bypass that violates any prohibition or exceeds any effluent limitation in the Permit.
- ii. Any upset that exceeds any effluent limitation in the Permit.
- iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Regional Water Board in this Permit.
- iv. Any noncompliance that may endanger health or the environment.

The Executive Officer may waive the above-required written report.

- h. Other information: Where the permittee becomes aware that it failed to submit any relevant facts in a Permit application, or submitted incorrect information in a Permit application or in any report to the Regional Water Board, the permittee shall promptly submit such facts or information. [40 CFR 122.41(1)]

13. Enforcement

The Clean Water Act provides that any person who violates a Permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA is subject to a civil penalty not to exceed \$25,000 per day of violation. Any person who negligently violates Permit conditions implementing Sections 301, 302, 306, 307, or 308 of the Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment of not more than one year, or both. Higher penalties may be imposed for knowing violations and for repeat offenders. The Porter-Cologne Water Quality Control Act provides for civil and criminal penalties comparable to, and in some cases greater than, those provided under the CWA.

14. Availability

A copy of this Permit shall be maintained at the discharge facility and be available at all times to operating personnel.

15. Change in Discharge

In the event of a material change in the character, location, or volume of a discharge, (including any point or nonpoint discharge to land or groundwater) the permittee shall file with this Regional Water Board a new report of waste discharge at least 180 days

before making any such change. [CWC Section 13376]. A material change includes, but is not limited to, the following:

- a. Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.
- b. Significant change in disposal method, e.g., change from a land disposal to a direct discharge to water, or change in the method of treatment which would significantly alter the characteristics of the waste.
- c. Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area, significantly removed from the original area, potentially causing different water quality or nuisance problems.
- d. Increase in area or depth to be used for solid waste disposal beyond that specified in the waste discharge requirements. [CCR Title 23 Section 2210]

16. Severability

Provisions of these waste discharge requirements are severable. If any provision of these requirements is found invalid, the remainder of these requirements shall not be affected.

17. Monitoring

The Regional Water Board or State Water Board may require the permittee to establish and maintain records, make reports, install, use, and maintain monitoring equipment or methods (including biological monitoring methods), sample effluent as prescribed, and provide other information as may be reasonably required. [CWC Section 13267 and 13383].

The permittee shall comply with the Contingency Planning and Notification Requirements Order No. 74-151 and the Monitoring and Reporting Program No. R1-2001-##* and any modifications to these documents as specified by the Executive Officer. Such documents are attached to this Permit and incorporated herein. The permittee 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 State Department of Health Services. In the event a certified laboratory is not available to the permittee, analyses performed by a noncertified laboratory will be accepted provided 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 staff of the Regional Water Board. The quality assurance/quality control program shall conform to U.S. EPA or State Department of Health Services guidelines.

All Discharge Monitoring Reports shall be sent to:

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

U.S. EPA, Region IX
Attn: WTR-7, NPDES/DMR
75 Hawthorne Street
San Francisco, CA 94105

18. Compliance with Acute Toxicity Effluent Limitation

The permittee shall have the effluent analyzed for acute toxicity in order to demonstrate compliance with the Basin Plan narrative toxicity objective. Compliance with this requirement shall be achieved in accordance with the following:

- a. The permittee shall conduct routine acute toxicity monitoring in accordance with the Monitoring and Reporting Program No. R1-2001-##*.
- b. Testing procedures shall be specified in *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms* (EPA 600/4-90-027F, 4th edition or subsequent editions).
- c. The test results shall be reported according to the acute toxicity manual chapter on Report Preparation, and shall be attached to the Discharger's Monitoring Report (DMR).

If the acute toxicity effluent limitation is repeatedly exceeded, the permittee shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with

E. GENERAL PROVISION 20. Toxicity Identification and Reduction Evaluation.

The permittee may petition the Regional Water Board to acknowledge an Acute-Chronic Ratio (ACR), once sufficient data has been collected. An ACR is calculated as the average of the ratios between at least 10 pairs of acute and chronic toxicity test results for the same species. If approved by the Regional Water Board the, ACR and results from a chronic toxicity test may be used to determine compliance with the Acute Toxicity Effluent Limitation.

19. Compliance with Chronic Toxicity

In accordance with the SIP (see Finding 9), the permittee shall have the effluent analyzed for chronic toxicity in order to demonstrate compliance with the Basin Plan narrative toxicity objective. Compliance with this requirement shall be achieved in accordance with the following:

- a. The permittee shall conduct routine chronic toxicity monitoring in accordance with the Monitoring and Reporting Program No. R1-2001-##*.
- b. If data from routine monitoring exceed the effluent limit for chronic toxicity, then the permittee shall conduct accelerated chronic toxicity monitoring. Accelerated monitoring shall consist of monitoring at frequency intervals of one half the interval given for routine monitoring.
- c. If data from accelerated monitoring tests are found to be in compliance with the evaluation parameters, then routine monitoring shall be resumed. If accelerated monitoring test results repeatedly exceed the chronic toxicity effluent limitation then the permittee shall initiate a TRE in accordance with **E. GENERAL PROVISION 20. Toxicity Identification and Reduction Evaluation.**

20. Toxicity Identification and Reduction Evaluations

If the discharge repeatedly exceeds effluent limitations or receiving water limitations for chronic toxicity, the permittee shall implement a TRE in accordance with the following:

- a. The TRE shall be specific to the discharge and permitted facility.
- b. The permittee shall submit a TRE work plan to the Regional Water Board for approval within 60 days of the effluent limit exceedance.
- c. The TRE shall be performed in accordance with the *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070), which describes a tiered evaluation process, as summarized below:
 - i. Tier 1 consists of basic data collection.
 - ii. Tier 2 consists of evaluation of optimization of the treatment process, including operation practices, housekeeping practices, and in-plant process chemicals.
 - iii. Tier 3 consists of a Toxicity Identification Evaluation (TIE). The objective of the TIE shall be to identify the substance or combination of substances causing the

- observed toxicity. All reasonable efforts using currently available TIE methodologies shall be employed.
- iv. Tier 4 consists of determining which process streams are significant sources of final effluent toxicity.
 - v. Tier 5 consists of evaluation of options for modifications of in-plant treatment processes.
 - vi. Tier 6 consists of implementation of selected toxicity control measures, and follow-up monitoring and confirmation of implementation success.
- d. The TRE may be ended at any stage if monitoring shows there is no longer repeated toxicity in the effluent or receiving water.
- e. Many recommended TRE elements parallel required or recommended efforts of source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of compliance with requirements or recommended efforts of such programs may be acceptable to comply with TRE requirements.
- f. The Regional Water Board recognizes that chronic toxicity may be episodic and identification of causes of and reduction of sources of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based in part on the permittee's actions and efforts to identify and control or reduce sources of consistent toxicity.

21. Pollutant Minimization Program

The permittee shall, as required by the Executive Officer, conduct a Pollutant Minimization Program in accordance with the SIP when there is evidence that the priority pollutant is present in the effluent above an effluent limitation or when a sample result is reported as detected and not quantified and the effluent limitation is less than the reported minimum level; or when a sample result is reported as not detected and the effluent limitation is less than the method detection limit.

22. Reopener

The Regional Water Board may modify, or revoke and reissue, this Order and Permit if present or future investigations demonstrate that the permittee governed by this Order is causing or significantly contributing to, adverse impacts on 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 a State Water Board order, a court decision, or State or Federal statute or regulation, the effluent limitations for toxic pollutants contained in this Order may be revised to be consistent with the order, decision, statute or regulation.

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

The Regional Water Board shall notice a reconsideration of this permit within 60 days of the final judgment by the San Francisco Superior Court in *Waterkeepers Northern California, et al.*, Case No. 312513, for the purpose of modifying the permit to make it consistent with the judgment of the Court in this matter where any term, limitation, or provision is inconsistent with the judgment. The permit shall be modified within the time period established by the Court in this matter.

23. Storm water discharges permitted by this Order shall be managed by implementation of the Storm Water Pollution Prevention Plan (SWPPP) described in Finding 12 of this Order. The SWPPP shall be revisited as necessary to reflect changes in site characteristics that affect storm water runoff as well as changes in Best Management Practices (BMPs). All revisions shall be submitted to the Regional Water Board and certified in accordance with Provision 11 of this Order. The SWPPP is considered a report that is available to the public under Section 308(b) of the Clean Water Act.

F. SPECIAL PROVISIONS

1. Special Study - Ambient Background Concentrations of Priority Pollutants

In accordance with the SIP (see Finding 9), the permittee shall take two ambient background receiving water samples and have them analyzed for the constituents listed in Table 2, of the Monitoring and Reporting Program No. R1-2001-##*. The samples shall be collected from a location out of the influence of the discharge. A sampling plan shall be submitted to the Executive Officer for approval prior to sampling. This submittal shall include time schedule for performing the work. The permittee shall notify the Regional Water Board in writing within 14 days of each scheduled sampling event, to report whether or not the sampling was performed. When all of the required data collection has been completed, the permittee shall submit a report of the results to the Regional Water Board. Reporting requirements are outlined in Monitoring Program R1-2001-##*. The report shall be submitted no later than April 28, 2003.

The permittee may choose to coordinate with other NPDES permittees discharging to the same water body in order to acquire the same information required of them.

Translators for Metals and Selenium. To derive total recoverable effluent limitations for aquatic life metals and selenium criteria/objectives that are expressed in the dissolved form, a translator first shall be applied to the criterion/objective to express it as total recoverable. In addition, should the permittee request to use a translator for metals and selenium different than the U.S. EPA conversion factor, it shall complete a translator study within two years from the date of the issuance of this permit. In the event a translator study is not completed within the specified time, the U.S. EPA conversion factor-based effluent limitation as specified in the CTR shall be effective as a default limitation.

Tasks	Completion Date
a. Submit a sampling plan for approval by the Executive Officer.	6 months after permit adoption
b. Commence work in a timely fashion in accordance with the sampling plan.	Dates listed in sampling plan.
c. Notify the Regional Water Board in writing as to whether or not the scheduled sampling occurred.	Within 14 days of each sampling event listed in the sampling plan.
d. (Optional) Complete translator study.	Two years from the date of permit adoption.
e. Submit a report, to the Regional Water Board, detailing the sampling and results of analyses.	April 28, 2003

2. Special Study – Effluent Characterization

In accordance with the SIP (see Finding 9), the permittee shall take four samples of the discharge and have them analyzed for the constituents listed in Table 2, of the Monitoring and Reporting Program No. R1-2001-##*. A sampling plan shall be submitted to the Executive Officer for approval prior to sampling. This submittal shall include time schedule for performing the work. The permittee shall notify the Regional Water Board in writing within 14 days of each scheduled sampling event, to report whether or not the sampling was performed. When all of the required data collection has been completed, the permittee shall submit a report of the results to the Regional Water Board. Reporting requirements are outlined in Monitoring Program R1-2001-##*. The report shall be submitted no later than April 28, 2003.

Tasks	Completion Date
a. Submit a sampling plan for approval by the Executive Officer.	6 months after permit adoption
b. Commence work in a timely fashion in accordance with the sampling plan.	Dates listed in sampling plan.

c. Notify the Regional Water Board in writing as to whether or not the scheduled sampling occurred.	Within 14 days of each sampling event listed in the sampling plan.
d. Submit a report, to the Regional Water Board, detailing the sampling and results of analyses.	April 28, 2003

3. Special Study – Dioxin Study of the Effluent

In accordance with the SIP (see Finding 9), major dischargers shall conduct effluent monitoring for the seventeen 2, 3, 7, 8-tetrachlorodibenzodioxin (TCDD) congeners listed in Table 3 of Monitoring and Reporting Program R1-2001-##*. The permittee shall monitor the effluent once during the dry weather and once during the wet weather each year for a period of three consecutive years. A sampling plan shall be submitted to the Executive Officer for approval, prior to sampling. Within 14 days of each sampling event, the Regional Water Board shall be notified as to whether the sampling event occurred. When all of the required data collection has been completed, the permittee shall submit a report of the results to the Regional Water Board. Reporting requirements are outlined in Monitoring Program R1-2001-##*. The report shall be submitted no later than three years from the date of adoption of this Order. The monitoring requirements for compliance with this provision are detailed in Monitoring and Reporting Program No R1-2001-##*.

Tasks	Completion Date
a. Submit a sampling plan for approval by the Executive Officer.	6 months after permit adoption
b. Commence work in a timely fashion in accordance with the sampling plan.	Dates listed in sampling plan.
c. Notify the Regional Water Board in writing as to whether or not the scheduled sampling occurred.	Within 14 days of each sampling event listed in the sampling plan.
d. Submit a report, to the Regional Water Board, detailing the sampling and results of analyses.	Three years from the date of adoption of this permit.

Certification

I, Lee A. Michlin, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, North Coast Region, April 26, 2001.

Lee A. Michlin
Executive Officer

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