

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

**ORDER NO. 86-9
NPDES NO. CA0104931**

**WASTE DISCHARGE REQUIREMENTS
FOR
SOUTHERN CALIFORNIA EDISON COMPANY
SALTON SEA GEOTHERMAL GENERATING STATION
South End of Salton Sea - Imperial County**

The California Regional Water Quality Control Board, Colorado River Basin Region, finds that:

1. Southern California Edison Company, (hereinafter also referred to as the discharger), P.O. Box 800, Rosemead, California, 91770, submitted an updated NPDES Application for Permit to Discharge, dated October 16, 1985. Said application is assigned Application No. CA0104931.
2. The discharger is discharging an average of 195,000 gallons-per-operating day of cooling tower blowdown wastewater from a 10 MW geothermal generating station into Salton Sea in the NE $\frac{1}{4}$ of Section 6, T12S, R13E, SBB&M.
3. The discharger utilizes Imperial Irrigation District water for condenser cooling. Incoming water utilized in cooling towers is treated with the following chemicals:

<u>Chemical</u>	<u>Usage</u>
Sulfuric Acid	pH control
Nalco 8339*	corrosion inhibitor
Nalco 7328*	biocide
Chlorine	biological control

*Nalco 8339 is a blend of inorganic phosphates and Nalco 7328 contains dimethyl benzyl, ammonium chloride and bistrinbutyltin oxide. These chemicals are not listed as hazardous in Section 66680, Chapter 30, Title 22 of the California Administrative Code.

4. The Water Quality Control Plan for the Colorado River Basin Region of California was adopted by the Regional Board on November 14, 1984. The Basin Plan contains water quality objectives for Imperial Hydrologic Unit.
5. Federal lands underlying the Salton Sea were withdrawn by the United States Government, viz:

*change of
name
5/12/88*

*88-77
To
EARTH ENERGY, INC
SALTON SEA GEOTHERMAL
GENERATING STATION*

*1 Allowed
to expire
1/22/91
LHR 8/90*

(a) Order of Withdrawal (Public Water Reserve No. 90, California) - Signed by President March 10, 1924, for the purpose of creating a reservoir in Salton Sea for storage of waste and seepage water from irrigated land in Imperial Valley; and

(b) Order of Withdrawal (Public Water Reserve No. 114, California No. 26) - Signed by President February 23, 1928, in order that the right to the use of the sources of water supply on the described tract may remain in the public.

In addition, the Imperial Irrigation District purchased all lands under Salton Sea previously owned by the Southern Pacific Railroad Company, and is reserving same for the purpose of storing drainage and seepage waters from irrigated lands in Imperial Valley.

6. The beneficial uses of Salton Sea to be protected by this Order are:
 - a. Recreation - water and nonwater contact.
 - b. Saline water habitat for fish and wildlife.
7. The discharge has been subject to waste discharge requirements adopted in Order No. 81-34 (NPDES No. CA0104931) which allows discharge to Salton Sea.
8. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21000 et. seq.) of Division 13 of the Public Resources Code in accordance with Water Code Section 13389.
9. The Board has notified the discharger and interested agencies and persons of its intent to update waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
10. The Board in a public meeting heard and considered all comments pertaining to the discharge.
11. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Federal Clean Water Act, or amendments thereto, and shall take effect at the end of ten days from date of hearing, provided the Regional Administrator has no objections.

IT IS HEREBY ORDERED, Southern California Edison Company, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Effluent Limitations

1. Representative samples of wastewater discharged to Salton Sea shall not contain constituents in excess of the following limits:

Constituent	Unit	30 Day Arithmetic Mean Discharge Rate	Maximum Concentration For any One Day
a. Total Dissolved Solids	lbs/day mg/l	6,505 4,000	7,318 4,500
b. Suspended Solids	lbs/day mg/l	48 30	163 100
c. Settleable Matter	ml/l	0.3	1.0
d. Zinc	lbs/day mg/l		1.6 1.0
e. Chromium (Total)	lbs/day mg/l		0.3 0.2
f. Chlorine (Free Available)	mg/l	0.2	0.5

2. Neither free available chlorine nor total residual chlorine may be discharged for more than two hours in any one day, and not more than one generating unit at the plant may discharge free available or total residual chlorine at any one time.
3. There shall be no discharge in detectable amounts of any of EPA's designated 126 priority pollutants [40 CFR Part 423.13 9(d)(1)], except as set forth for Zinc and Chromium in Effluent Limitation A.1.d. and A.1.e (above).
4. There shall be no discharge of polychlorinated biphenyl compounds.
5. The effluent values for pH shall remain within the limits of 6.0 to 9.0.

B. Receiving Water Limitations

1. Wastewater discharged to Salton Sea shall not contain any substances in combination of concentrations and quantities which are toxic to human, animal, plant or aquatic life.

2. This discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the State Water Resources Control Board as required by the Federal Clean Water Act and regulations adopted thereunder.

C. Provisions

1. Neither the treatment nor the discharge of wastewater shall cause a pollution or a nuisance as defined in Division 7 of the California Water Code.
2. Adequate protective works shall be provided to assure that a flood, which would be expected to occur on a frequency of once in a 100-year period, would not erode or otherwise render portions of the treatment and discharge facilities inoperable.
3. This Order includes the attached "Monitoring and Reporting Program No. 86-9" and future revisions thereto as specified by the Executive Officer, and Standard Provisions, dated December 23, 1985.
4. Any proposed corrosion control or biological control treatment(s) utilized in the cooling towers, shall be reported to the Board together with a listing of any of EPA's 126 priority pollutants which may be contained in said treatment(s).
5. Compliance with the limitations for the 126 priority pollutants set forth in A.3 (above) may be determined by engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical method set forth in 40 CFR Part 136.
6. Bioassays shall be performed quarterly to indicate the toxicity of the discharged wastewater. The bioassays shall be performed according to procedures approved by the Executive officer.
7. This Order expires (5) five years from January 22, 1986, and the discharger shall file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9, California Administrative Code, not later than 180 days in advance of such date as an application for issuance of new waste discharge requirements.
8. This Order supersedes this Board's Order No. 81-34.
9. When the sampling frequency is greater than one day and a value exceeds the monthly average, the sampling frequency shall be increased to daily until such time as full compliance with the daily and monthly values is indicated.
10. When any constituent which is monitored for but not limited in this order is found to be at or approaching an acute or chronic toxicity level, said toxicity shall be cause for consideration of reopening and modification of this Order.

I, Arthur Swajian, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on January 22, 1986.

Arthur Swajian

Executive Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

**MONITORING AND REPORTING PROGRAM NO. 86-9
FOR
SOUTHERN CALIFORNIA EDISON COMPANY
SALTON SEA GEOTHERMAL GENERATING STATION
South End of Salton Sea - Imperial County**

Location of Discharge: Salton Sea, NE¼ of Section 6, T12S, R13E, SBB&M

EFFLUENT MONITORING

Wastewater discharged into Salton Sea shall be monitored for the following constituents. All samples shall be taken between 6 a.m. and 6 p.m. A sampling station shall be established at the point of discharge and shall be located where representative samples of the effluent can be obtained.

<u>Constituent</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
Total Dissolved Solids	mg/l	Grab	Weekly
Flow	gallons/day	Daily	Reported Monthly*
pH	pH Units	Grab	Weekly
Copper (Cu)	mg/l	Grab	Monthly
Zinc (Zn)	mg/l	Grab	Monthly
Lead (Pb)	mg/l	Grab	Monthly
Suspended Solids	mg/l	Grab	Monthly
Settleable Matter	ml/l	Grab	Weekly
Total Chromium (Cr)	mg/l	Grab	Monthly
Free Available Chlorine	mg/l	Grab	Daily**
Bioassay	-	-	Quarterly

Prior to commencement of use of any new cooling tower maintenance chemical, the discharger shall report thereon in accordance with Provision C.4 and C.5 of Order No. 86-9.

* For each day with average monthly flow calculated.

** Daily Monday through Friday excluding holidays

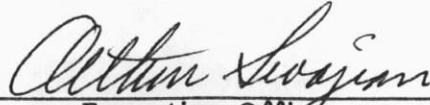
REPORTING

Daily, weekly and monthly monitoring reports shall be submitted to the Regional Board by the 15th day of the following month. Quarterly reports shall be submitted by the 15th day of January, April, July, and October.

Forward monitoring reports to:

California Regional Water Quality Control Board
Colorado River Basin Region
73-271 Highway 111, Suite 21
Palm Desert, CA 92260

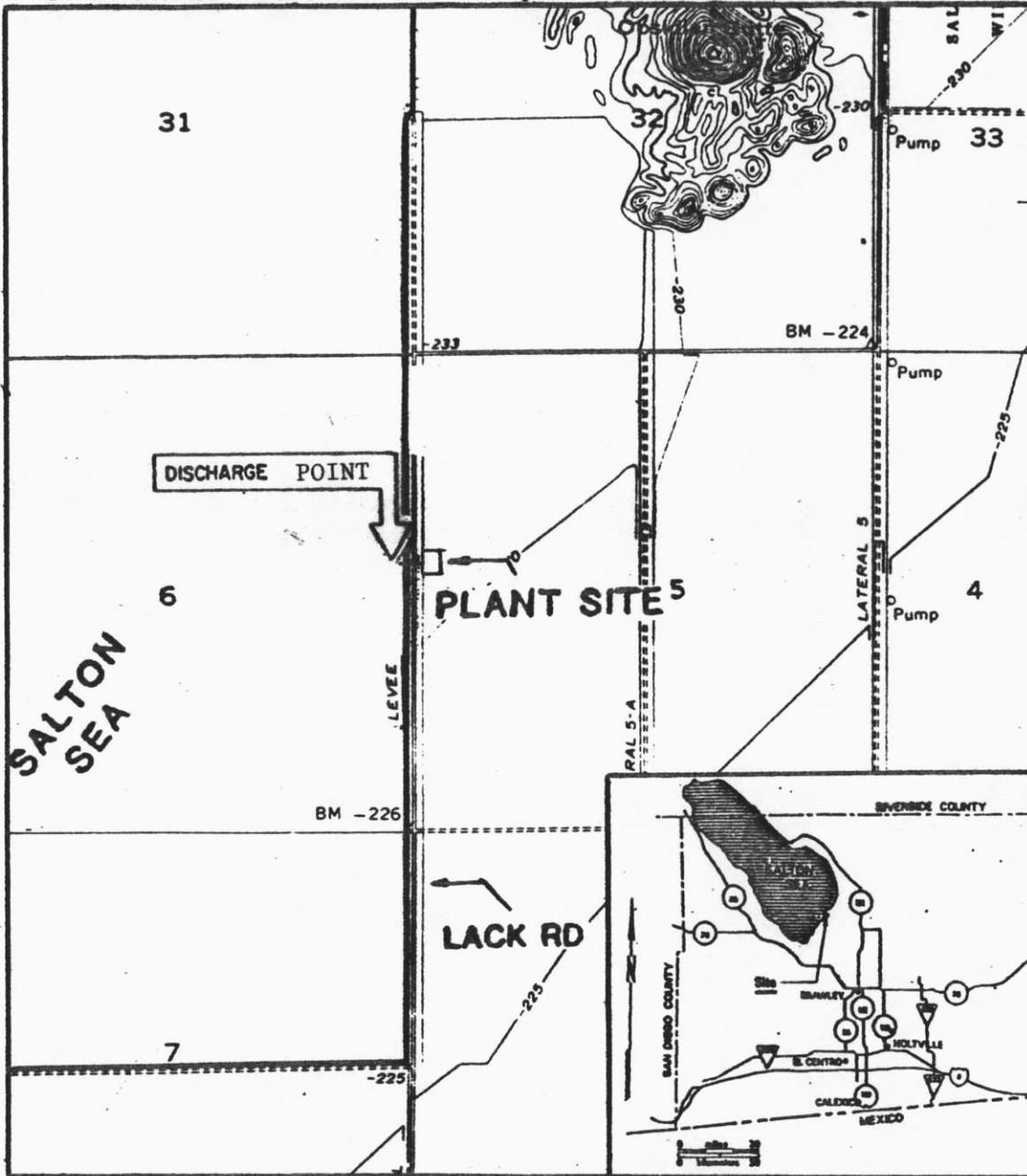
ORDERED BY:


Executive Officer

January 22, 1986

Date

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD -7



SITE MAP

SOUTHERN CALIFORNIA EDISON COMPANY
 SALTON SEA GEOTHERMAL GENERATING STATION
 South End of Salton Sea - Imperial County
 Discharge Point: NE $\frac{1}{4}$ of Section 6, T12S, R13E, SBB&M
 USGS Obsidian Butte 7.5 min. Topographic Map

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION
DECEMBER 23, 1985

STANDARD PROVISIONS
FOR
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

1. The permittee must comply with all of the terms, requirements and conditions of this permit. Any violation of this permit constitutes violation of the Clean Water Act, its regulations and the California Water Code, and is grounds for enforcement action, permit termination, permit revocation and reissuance, denial of an application for permit reissuance; or a combination thereof.*
2. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act 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)]

The California Water Code provides that any person who violates a waste discharge requirement (same as permit condition), or a provision of the California Water Code is subject to civil penalties of up to \$5,000 per day, \$10,000 per day, or \$25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to \$10 per gallon per day or \$20 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations. *

Violation of any of the provisions of the NPDES program or of any of the provisions of this permit may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation. *

3. The Clean Water Act (CWA) provides that any person who violates a permit condition implementing sections 301, 302, 306, 307, or 308 of the CWA is subject to a civil penalty not to exceed \$10,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing these sections of the CWA is subject to a fine of not less than \$2500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both. [40 CFR 122.41(a)(2)]
4. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. [40 CFR 122.41(b)]
5. 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)]

6. The permittee shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment. [40 CFR 122.41(d)]
7. 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 controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a permittee only when necessary to achieve compliance with the conditions of this permit. [40 CFR 122.41(e)]
8. This permit may be modified, revoked and reissued, or terminated for cause. 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)]
9. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 CFR 122.41(g)]
10. The permittee shall furnish, within a reasonable time, any information the Regional Board or EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit. The permittee shall also furnish to the Regional Board, upon request, copies of records required to be kept by this permit. [40 CFR 122.41(h)]
11. The Regional Board, EPA, and other authorized representatives shall be allowed:
 - (a) Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this permit;
 - (b) Access to copy any records that are kept under the conditions of this permit;
 - (c) To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - (d) To photograph, sample, and monitor for the purpose of assuring compliance with this permit, or as otherwise authorized by the Clean Water Act.

[40 CFR 122.41(i)]

12. Monitoring and records.

- (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- (b) The permittee shall retain records of all monitoring information, including all calibration and maintenance 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 Board or EPA at any time.
- (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.
- (d) Monitoring must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this permit.
- (e) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or be imprisonment for not more than six months per violation, or by both.

[40 CFR 122.41(j)]

13. All applications, reports, or information submitted to the Regional Board shall be signed and certified in accordance with 40 CFR 122.22. [40 CFR 122.41(k)(1)]
14. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both. [40 CFR 122.41(k)(2)]
15. Reporting requirements.
- (a) The permittee shall give advance notice to the Regional Board as soon as possible of any planned physical

alterations or additions to the permitted facility.

- (b) The permittee shall give advance notice to the Regional Board of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.
- (c) This permit is not transferable to any person except after notice to the Regional Board. The Regional Board may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act.
- (d) Monitoring results shall be reported at the intervals specified elsewhere in this permit.
 - (i) Monitoring results must be reported on a Discharge Monitoring Report (DMR).
 - (ii) 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.
 - (iii) Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.
- (e) 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 schedule date.
- (f) Twenty-four hour reporting.
 - (i) The permittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
 - (ii) The following shall be included as information that must be reported within 24 hours under this paragraph:
 - (A) Any unanticipated bypass that exceeds any effluent limitation in the permit.
 - (B) Any upset that exceeds any effluent limitation in the permit.
 - (C) Violation of a maximum daily discharge limitation for any of the pollutants listed in this permit to be reported within 24 hours.

(iii) The Regional Board may waive the above-required written report on a case-by-case basis.

- (g) The permittee shall report all instances of noncompliance not otherwise reported under the above paragraphs at the time monitoring reports are submitted. The reports shall contain all information listed in paragraph 13(f) above.

[40 CFR 122.41(1)]

16. Bypass (the intentional diversion of waste streams from any portion of a treatment facility) is prohibited. The Regional Board may take enforcement action against the discharger for bypass unless:

- (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that 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.);
- (b) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. 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 could occur during normal periods of equipment downtime or preventive maintenance; and
- (c) The permittee submitted a notice at least ten days in advance of the need for a bypass to the appropriate Regional Board.

The permittee may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation. In such a case, the above bypass conditions are not applicable.

The permittee shall submit notice of an unanticipated bypass as required in paragraph 13(f) above.

[40 CFR 122.41(m)]

17. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action. A permittee that

wishes to establish the affirmative defense of an upset in an action brought for noncompliance shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (a) an upset occurred and that the permittee can identify the cause(s) of the upset;
- (b) the permitted facility was being properly operated at the time of the upset;
- (c) the permittee submitted notice of the upset as required in paragraph 13(f) above; and
- (d) the permittee complied with any remedial measures required under paragraph 5.

No determination made before an action for noncompliance, such as during administrative review of claims that noncompliance was caused by an upset, is final administrative action subject to judicial review.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

[40 CFR 122.41(n)]

18. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Board as soon as they know or have reason to believe:

- (a) that any activity has occurred or will occur that would result in the discharge of any toxic pollutant that is not limited in this permit, if that discharge will exceed the highest of the following "notification levels:"
 - (i) One hundred micrograms per liter (100 ug/l);
 - (ii) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - (iii) Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
 - (iv) The level established by the Regional Board in accordance with 40 CFR 122.44(f).
- (b) that they have begun or expect to begin to use or manufacture as an intermediate or final product of byproduct any toxic pollutant that was not reported in the permit application.

[40 CFR 122.42(a)]

19. All POTWs must provide adequate notice to the Regional Board of:

(a) Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants.

(b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

[40 CFR 122.42(b)]

* This paragraph was added or modified by the State Water Quality Control Board pursuant to the California Water Code.