

Table 3-3. 30-day Average Objective for Ammonia-N for Freshwaters Not Designated SPWN (mg N/L)

pH	Temperature, °C								
	0-7	8	9	10	11	12	13	14	15*
6.5	10.8	10.1	9.51	8.92	8.36	7.84	7.35	6.89	6.46
6.6	10.7	9.99	9.37	8.79	8.24	7.72	7.24	6.79	6.36
6.7	10.5	9.81	9.20	8.62	8.08	7.58	7.11	6.66	6.25
6.8	10.2	9.58	8.98	8.42	7.90	7.40	6.94	6.51	6.10
6.9	9.93	9.31	8.73	8.19	7.68	7.20	6.75	6.33	5.93
7.0	9.60	9.00	8.43	7.91	7.41	6.95	6.52	6.11	5.73
7.1	9.20	8.63	8.09	7.58	7.11	6.67	6.25	5.86	5.49
7.2	8.75	8.20	7.69	7.21	6.76	6.34	5.94	5.57	5.22
7.3	8.24	7.73	7.25	6.79	6.37	5.97	5.60	5.25	4.92
7.4	7.69	7.21	6.76	6.33	5.94	5.57	5.22	4.89	4.59
7.5	7.09	6.64	6.23	5.84	5.48	5.13	4.81	4.51	4.23
7.6	6.46	6.05	5.67	5.32	4.99	4.68	4.38	4.11	3.85
7.7	5.81	5.45	5.11	4.79	4.49	4.21	3.95	3.70	3.47
7.8	5.17	4.84	4.54	4.26	3.99	3.74	3.51	3.29	3.09
7.9	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89	2.71
8.0	3.95	3.70	3.47	3.26	3.05	2.86	2.68	2.52	2.36
8.1	3.41	3.19	2.99	2.81	2.63	2.47	2.31	2.17	2.03
8.2	2.91	2.73	2.56	2.40	2.25	2.11	1.98	1.85	1.74
8.3	2.47	2.32	2.18	2.04	1.91	1.79	1.68	1.58	1.48
8.4	2.09	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25
8.5	1.77	1.66	1.55	1.46	1.37	1.28	1.20	1.13	1.06
8.6	1.49	1.40	1.31	1.23	1.15	1.08	1.01	0.951	0.892
8.7	1.26	1.18	1.11	1.04	0.976	0.915	0.858	0.805	0.754
8.8	1.07	1.01	0.944	0.885	0.829	0.778	0.729	0.684	0.641
8.9	0.917	0.86	0.806	0.756	0.709	0.664	0.623	0.584	0.548
9.0	0.790	0.740	0.694	0.651	0.610	0.572	0.536	0.503	0.471

* At 15 °C and above, the 30-day average objective for waters not designated SPWN is the same as that for waters designated SPWN. Reference: U.S. EPA 1999 Update of Ambient Water Quality Criteria for Ammonia³

³ For freshwaters not designated SPWN, the thirty-day average concentration (Criteria Continuous Concentration or CCC) of total ammonia as nitrogen (in mg N/L) shall not exceed the values described by the following equation.

$$\text{CCC or 30-day Average Concentration} = \left(\frac{0.0577}{1 + 10^{7.688 - \text{pH}}} + \frac{2.487}{1 + 10^{\text{pH} - 7.688}} \right) * 1.45 * 10^{0.028 * (25 - \text{MAX}(T, 7))}$$

Where T = temperature expressed in °C.

In addition, for freshwaters, the highest four-day average within the 30-day period shall not exceed 2.5 times the 30-day average objective as calculated above.

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

STANDARD PROVISIONS, GENERAL MONITORING AND
REPORTING REQUIREMENTS

"ATTACHMENT N"

A. General Requirements

1. Neither the disposal nor any handling of wastes shall cause pollution or nuisance.
2. Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.
3. This discharge shall not cause a violation of any applicable water quality standards 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. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Clean Water Act, and amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.
4. Wastes discharged shall not contain visible color, oil or grease, and shall not cause the appearance of color, grease, oil or oily slick, or persistent foam in the receiving waters or on channel banks, walls, inverts or other structures.
5. Wastes discharged shall not increase the natural turbidity of the receiving waters at the time of discharge.
6. Wastes discharged shall not cause the formation of sludge deposits.
7. Wastes discharged shall not damage flood control structures or facilities.
8. Oil or oily material, chemicals, refuse, or other pollutionable materials shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any spill of such materials shall be contained and removed immediately.
9. The pH of wastes discharged shall at all times be within the range 6.0 to 9.0.
10. The temperature of wastes discharged shall not exceed 100° F.
11. The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

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12. Effluent limitations, national standards of performance and toxic and pretreatment effluent standards established pursuant to Sections 301, 302, 303(d), 304, 306, 307, 316, 318 and 405 of the Federal Clean Water Act and amendments thereto are applicable to the discharge.

B. General Provisions

1. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from his liabilities under federal, state, or local laws, nor guarantee the discharger a capacity right in the receiving waters.
2. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal facility, and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.
3. The discharger must comply with all of the terms, requirements, and conditions of this order. Any violation of this order constitutes a violation of the Clean Water Act, its regulations and the California Water Code, and is grounds for enforcement action, Order termination, Order revocation and reissuance; denial of an application for reissuance; or a combination thereof.
4. A copy of these waste discharge specifications shall be maintained at the discharge facility so as to be available at all times to operating personnel.
5. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.
6. The Regional Board, EPA, and other authorized representatives shall be allowed:
 - a) Entry upon premises where a regulated facility is located or conducted, or where records are kept under conditions of this Order;
 - b) Access to copy any records that are kept under the conditions of this Order;
 - c) To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

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- (d) To photograph, sample, and monitor for the purpose of assuring compliance with this Order, or as otherwise authorized by the Clean Water Act and the California Water Code.
7. 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 Order.
 8. The discharger 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 Order has not yet been modified to incorporate the requirement. If a toxic effluent standard or prohibition is established for toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition and so notify the discharger.
 9. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - (a) Violation of any term or condition contained in this Order;
 - (b) Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;
 - (c) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
 10. In the event the discharger is unable to comply with any of the conditions of this Order due to:
 - (a) breakdown of waste treatment equipment;
 - (b) accidents caused by human error or negligence; or
 - (c) other causes such as acts of nature,

the discharger shall notify the Executive Officer by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written notification shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to correct the problem and the dates thereof, and what steps are being taken to prevent the problem from recurring.

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11. If there is any storage of hazardous or toxic materials or hydrocarbons at this facility and if the facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.
12. The discharger shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.
13. The discharger shall at all times properly operate and maintain all facilities and systems of treatment and control including sludge use and disposal facilities (and related appurtenances) that are installed or used by the discharger to achieve compliance with this Order. 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 system that are installed by a discharger only when necessary to achieve compliance with the conditions of this Order.
14. This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for a modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.
15. This Order does not convey any property rights of any sort, or any exclusive privilege.
16. The discharger 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 Order. The discharger shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.
17. All applications, reports, or information submitted to the Regional Board shall be signed:
 - (a) In the case of corporations, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which discharge originates;
 - (b) In the case of a partnership, by a general partner;
 - (c) In the case of a sole proprietorship, by the proprietor;

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- (d) In the case of municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

18. The discharger shall notify the Board of:

- (a) new introduction into such works of pollutants from a source which could be a new source as defined in section 306 of the Federal Clean Water Act, or amendments thereto, if such source were discharging pollutants to the waters of the United States,
- (b) new introductions of pollutants into such works from a source which would be subject to Section 301 of the Federal Clean Water Act, or amendments thereto, if substantial change in the volume or character of pollutants being introduced into such works by a source introducing pollutants into such works at the time the waste discharge requirements were adopted.

Notice shall include a description of the quantity and quality of pollutants and the impact of such change on the quantity and quality of effluent from such publicly owned treatment works. A substantial change in volume is considered an increase of ten percent in the mean dry-weather flow rate. The discharger shall forward a copy of such notice directly to the Regional Administrator.

19. The discharger shall notify the Board not later than 120 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing or processing facility by more than ten percent. Such notification shall include estimates of proposed production rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge appropriate filing fee.

20. The discharger shall give advance notice to the Regional Board as soon as possible of any planned physical alterations or additions to the facility or of any planned changes in the facility or activity that may result in noncompliance with requirements.

21. The discharger shall file with the Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.

22. 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

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discharge of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels:"

- (i) One hundred micrograms per liter (100 µg/l);
 - (ii) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/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 intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.

23. 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 judgement to prevent a bypass that could occur during normal periods of equipment downtime or preventive maintenance; and
- (c) The discharger submitted a notice at least ten days in advance of the need for a bypass to the Regional Board.

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The discharger 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 discharger shall submit notice of an unanticipated bypass as required in E-16.

24. A discharger that wishes to establish the affirmative defense of an upset in an action brought for non-compliance shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (a) an upset occurred and that the discharger can identify the cause(s) of the upset;
- (b) the permitted facility was being properly operated by the time of the upset;
- (c) the discharger submitted notice of the upset as required in E-16; and
- (d) the discharger complied with any remedial measures required.

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

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

25. This Order is not transferable to any person except after notice to the Regional Board. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify this Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Board. The Regional 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 Clean Water Act.

C. Enforcement

1. The California Water Code provides that any person who violates a waste discharge requirement 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 \$25 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.

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Violation of any of the provisions of the NPDES program or of any of the provisions of this Order 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.

2. The Federal Clean Water Act (CWA) provides that any person who violates a permit condition or any requirement imposed in a pretreatment program 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 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 \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both. Any person who knowingly violates permit conditions implementing these sections of the CWA is subject to a fine of not less than \$5,000, or more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or by both.
3. 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.
4. The Clean Water Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, or other document submitted or required to be maintained under this Order, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this act, shall upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 2 years per violation, or by both.

D. Monitoring Requirements

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
2. The discharger shall retain records of all monitoring information, including all calibration and maintenance monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge and application for this Order, for a period of at least five (5) 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 and shall be extended during the course of any unresolved litigation regarding this discharge.

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3. Records of monitoring information shall include:
 - (a) The date, exact place, and time of sampling or measurements;
 - (b) The individual(s) who performed the sampling or measurements;
 - (c) The date(s) analyses were performed;
 - (d) The individual(s) who performed the analyses;
 - (e) The analytical techniques or methods used; and
 - (f) The results of such analyses.
4. All sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this Order.
5. All chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by an appropriate governmental regulatory agency.
6. The discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to insure accuracy of measurements, or shall insure that both equipment activities will be conducted.
7. The discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. The annual monitoring report required in E-8 shall also summarize the QA activities for the previous year. Duplicate chemical analyses must be conducted on a minimum of ten percent (10%) of the samples, or at least one sample per sampling period, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples.

When requested by the Board or EPA, the discharger will participate in the NPDES discharge monitoring report QA performance study. The discharger must have a success rate equal to or greater than 80%.
8. Effluent samples shall be taken downstream of any addition to treatment works and prior to mixing with the receiving waters.
9. For parameters where both 30-day average and maximum limits are specified but where the monitoring frequency is less than four times a month, the following procedure shall apply:

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- (a) Initially, not later than the first week of the second month after the adoption of this permit, a representative sample shall be obtained of each waste discharge at least once per week for at least four consecutive weeks and until compliance with the 30-day average limit has been demonstrated. Once compliance has been demonstrated, sampling and analyses shall revert to the frequency specified.
- (b) If future analyses of two successive samples yield results greater than 90% of the maximum limit for a parameter, the sampling frequency for that parameter shall be increased (within one week of receiving the laboratory result on the second sample) to a minimum of once weekly until at least four consecutive weekly samples have been obtained and compliance with the 30-day average limit has been demonstrated again and the discharger has set forth for the approval of the Executive Officer a program which ensures future compliance with the 30-day average limit.

E. Reporting Requirements

1. The discharger shall file with the Board technical reports on self monitoring work performed according to the detailed specifications contained in any Monitoring and Reporting Programs as directed by the Executive Officer.
2. In reporting the monitoring data, the discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernable. The data shall be summarized to demonstrate compliance with waste discharge requirements and, where applicable, shall include results of receiving water observations.
3. For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time and submit a timetable for correction.
4. The discharger shall submit to the Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect this waste discharge, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly.
5. The discharger shall file a technical report with this Board not later than 30 days after receipt of this Order, relative to the operation and maintenance program for this waste disposal facility. The information to be contained in that report shall include as a minimum, the following:
 - (a) The name and address of the person or company responsible for operation

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and maintenance of the facility.

- (b) Type of maintenance (preventive or corrective).
- (c) Frequency of maintenance, if preventive.

If an operation and maintenance report has been supplied to the Board previously and there have been no changes, a second report need not be provided.

6. Monitoring results shall be reported at the intervals specified in the monitoring and Reporting Program.

(a) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

(b) If the discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 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.

(c) Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this Order.

7. 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.

8. By March 1 of each year, the discharger shall submit an annual report to the Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. In addition, the discharger shall discuss the compliance record and the corrective actions taken or planned which may be needed to bring the discharge into full compliance with the waste discharge requirements.

9. The discharger shall include in the annual report, an annual summary of the quantities of all chemicals, listed by both trade and chemical names, which are used for cooling and/or boiler water treatment and which are discharged.

10. Each monitoring report must affirm in writing that "all analyses were conducted at a laboratory certified for such analyses by the Department of Health Services or approved by the Executive Officer and in accordance with current EPA guideline procedures or as specified in this Monitoring Program".

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11. Each report shall contain the following completed declaration:

"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 a fine and imprisonment for knowing violations.

Executed on the ___ day of _____, 19__

at _____

_____(Signature)

_____(Title)"

12. If no flow occurred during the reporting period, the monitoring report shall so state.

13. For any analyses performed for which no procedure is specified in the EPA guidelines or in the monitoring and Reporting Program, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.

14. This Board requires the discharger to file with the Board, within 90 days after the effective date of this Order, a technical report on his preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. The technical report should:

(a) Identify the possible sources of accidental loss, untreated waste bypass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

(b) Evaluate the effectiveness of present facilities and procedures and state when they become operational.

(c) Describe facilities and procedures needed for effective preventive and contingency plans.

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- (d) Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule contingent interim and final dates when they will be constructed, implemented, or operational.

This Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events.

Such conditions may be incorporated as part of this Order, upon notice to the discharger.

- 15. In the event wastes are transported to a different disposal site during the report period, the following shall be reported in the monitoring report:

- (a) Types of wastes and quantity of each type;
- (b) Name and address for each hauler of wastes (or method of transport if other than by hauling); and
- (c) Location of the final point(s) of disposal for each type of waste.

If no wastes are transported offsite during the reporting period, a statement to that effect shall be submitted.

- 16. 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 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.

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 Order.
- (b) Any upset that exceeds any effluent limitation in the Order.
- (c) Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours.

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

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17. Should the discharger discover that it failed to submit any relevant facts or that it submitted incorrect information in a report, it shall promptly submit the missing or correct information.
18. The discharger shall report all instances of non-compliance not otherwise reported at the time monitoring reports are submitted. The reports shall contain all information listed in E-16.
19. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.
20. Analytical data reported as "less than" for the purpose of reporting compliance with permit limitations shall be the same or lower than the permit limit(s) established for the given parameter.
21. The discharger shall mail a copy of each monitoring report to:

TECHNICAL SUPPORT UNIT
CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD - LOS ANGELES REGION
101 Centre Plaza Drive
Monterey Park, CA 91754-2156

A copy of such monitoring report for those discharges designated as a major discharge shall also be mailed to:

REGIONAL ADMINISTRATOR
ENVIRONMENTAL PROTECTION AGENCY
REGION 9
75 Hawthorne Street
San Francisco, CA 94105

F. Publicly Owned Wastewater Treatment Plant Requirements
(Does not apply to any other type or class of discharger)

1. Publicly owned treatment works (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.

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- (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 Order.

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.

2. The discharger shall file a written report with the Board within 90 days after the average dry-weather waste flow for any month equals or exceeds 75 percent of the design capacity of his waste treatment and/or disposal facilities. The discharger's senior administration officer shall sign a letter which transmits that report and certifies that the policy-making body is adequately informed about it. The report shall include:

- (a) Average daily flow for the month, the date on which the instantaneous peak flow occurred, the rate of that peak flow, and the total flow for that day.
- (b) The discharger's best estimate of when the average daily dry weather flow rate will equal or exceed the design capacity of his facilities.
- (c) The discharger's intended schedule for studies, design, and other steps needed to provide additional capacity for his waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units.

3. The flow measurement system shall be calibrated at least once per year or more frequently, to ensure continued accuracy.

4. The discharger shall require any industrial user of the treatment works to comply with applicable service charges and toxic pretreatment standards promulgated in accordance with Sections 204(b), 307, and 308 of the Federal Clean Water Act or amendments thereto. The discharger shall require each individual user to submit periodic notice (over intervals not to exceed nine months) of progress toward compliance with applicable toxic and pretreatment standards developed pursuant to the Federal Clean Water Act or amendments thereto. The discharger shall forward a copy of such notice to the Board and the Regional Administrator.

5. Collected screening, biosolids (sludges), and other solids removed from liquid wastes shall be disposed of at a legal point of disposal and in accordance with the provisions of Section 405(d) of the Federal Clean Water Act and Division 7 of the California Water Code. For the purpose of this requirement, a legal point of disposal is defined as one for which waste discharge requirements have been

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prescribed by a Regional Water Quality Control Board and which is in full compliance therewith.

6. Supervisors and operators of publicly owned wastewater treatment plants shall possess a certificate of appropriate grade in accordance with regulations adopted by the State Water Resources Control Board.

The annual report required by E-8 shall address operator certification and provide a list of current operating personnel and their grade of certification. The report shall include the date of each facility's Operation and Maintenance Manual, the date the manual was last reviewed, and whether the manual is complete and valid for the current facilities. The report shall restate, for the record, the laboratories used by the discharger to monitor compliance with this order and permit and provide a summary of performance.

G. Definitions

1. "Biosolids" (sludge) means the solids, semi-liquid suspensions of solids, residues, screenings, grit, scum, and precipitates separated from, or created in, wastewater by the unit processes of a treatment system. It also includes, but is not limited to, all supernatant, filtrate, centrate, decantate, and thickener overflow/underflow in the solids handling parts of the wastewater treatment system.
2. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility whose operation is necessary to maintain compliance with the terms and conditions of this Order.
3. "Chlordane" means the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonchlor-alpha, nonchlor-gamma and chlordane.
4. "Composite sample" means, for flow rate measurements, the arithmetic mean of no fewer than eight individual measurements taken at equal intervals for 24 hours or for the duration of discharge, whichever is shorter.
"Composite sample" means, for other than flow rate measurement,
 - (a) A combination of at least eight individual portions obtained at equal time intervals for 24 hours, or the duration of the discharge, whichever is shorter. The volume of each individual portion shall be directly proportional to the discharge flow rate at the time of sampling;

OR

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- (b) A combination of at least eight individual portions of equal volume obtained over a 24-hour period. The time interval will vary such that the volume of wastewater discharged between samplings remains constant.

The compositing period shall equal the specified sampling period, or 24 hours, if no period is specified.

5. "Daily discharge" means:

(a) For flow rate measurements, the average flow rate measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling.

(b) For pollutant measurements, the concentration or mass emission rate measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling.

6. The "daily discharge rate" shall be obtained from the following calculation for any calendar day:

$$\text{Daily discharge rate} = \frac{8.34 \cdot N}{N} \sum (Q_i)(C_i)$$

in which N is the number of samples analyzed in any calendar day, Q_i and C_i are the rate (MGD) and the constituent concentration (mg/l), respectively, which are associated with each of the N grab samples which may be taken in any calendar day. If a composite sample is taken, C_i is the concentration measured in the composite sample and Q_i is the average flow rate occurring during the period over which samples are composited.

7. "Daily maximum" limit means the maximum acceptable "daily discharge" for pollutant measurements. Unless otherwise specified, the results to be compared to the "daily maximum" limit are based on composite samples.

8. "DDT" means the sum of the 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD and 2,4'-DDD. DDT is dichloro diphenyl trichloroethane.

9. "Degrade" means to impair. Determination of whether degradation has occurred and of the extent to which it has occurred shall be made by analysis of species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species.

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

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11. "Duly authorized representative" is one whose:
 - (a) Authorization is made in writing by a principal executive officer or ranking elected official;
 - (b) 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.); and
 - (c) Written authorization is submitted to the Regional Board and EPA Region 9. If an authorization becomes no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements above must be submitted to the Regional Board and EPA Region 9 prior to or together with any reports, information, or applications to be signed by an authorized representative.
12. "Grab sample" is defined as any individual sample collected in a short period of time not exceeding 15 minutes. "Grab samples" shall be collected during normal peak loading conditions for the parameter of interest, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with "daily maximum" limits and the "instantaneous maximum" limits.
13. "Halomethanes" means the sum of bromoform, bromomethane (methylbromide), chloromethane (methylchloride), chlorodibromomethane and dichlorobromomethane.
14. "Hazardous substance" means any substance designated under 40 CFR 116 pursuant to Section 311 of the Clean Water Act.
15. "HCH" shall mean the sum of the alpha, beta, gamma (Lindane), and delta isomers of hexachlorocyclohexane.
16. "Heavy metals" are for purposes of this Order, arsenic, cadmium, chromium, copper, lead, mercury, silver, nickel, and zinc.
17. "Heptachlor" means the sum of heptachlor and heptachlor epoxide.
18. "Indirect discharger" means a non-domestic discharger introducing pollutants into a publicly owned treatment and disposal system.

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19. "Initial dilution" is the process which results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

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

Numerically, initial dilution is expressed as the ratio of the volume of discharged effluent plus ambient water entrained during the process of initial dilution to the volume of discharged effluent.

20. "Instantaneous maximum" concentration is defined as the maximum value measured from any single "grab sample."

21. "Interference" discharge which, alone or in conjunction with discharges from other sources, inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use, or disposal and is a cause of a violation of the POTW's NPDES permit or prevents lawful sludge use or disposal.

22. "Kelp beds" are, for purposes of the bacteriological standards of this order and permit, significant aggregations of marine algae of the genus Macrocystis. Kelp beds include the total foliage canopy of Macrocystis plants throughout the water column. Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacteriological standards.

23. Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

24. "Log mean" is the geometric mean. Used for determining compliance with bacteriological standards, it is calculated with the following equation:

$$\text{Log Mean} = (C_1 \times C_2 \times \dots \times C_N)^{1/N}$$

in which 'N' is the number of days samples that were analyzed during the period and 'C' is the concentration of bacteria (MPN/100mL) found on each day of sampling.

25. "Mass emission rate" is obtained from the following calculation for any calendar day:

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$$\text{Mass emission rate (lb/day)} = \frac{8.435}{N} \sum_{i=1}^N Q_i C_i$$

$$\text{Mass emission rate (kg/day)} = \frac{3.785}{N} \sum_{i=1}^N Q_i C_i$$

in which 'N' is the number of samples analyzed in any calendar day. 'Q_i' and 'C_i' are the flow rate (MGD) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' grab samples which may be taken in any calendar day. If a composite sample is taken, 'C_i' is the concentration measured in the composite sample and 'Q_i' is the average flow rate occurring during the period over which samples are composited.

The daily concentration of all constituents shall be determined from the flow-weighted average of the same constituents in the combined waste streams as follows:

$$\text{Daily concentration} = \frac{1}{Q_t} \sum_{i=1}^N Q_i C_i$$

in which 'N' is the number of component waste streams. 'Q_i' and 'C_i' are the flow rate (MGD) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' waste streams. 'Q_t' is the total flow rate of the combined waste streams.

26. "Maximum allowable mass emission rate," whether for a 24-hour, 7-day, 30-day (monthly), or 6-month period, is a limitation expressed as a daily rate determined with the formulas in paragraph A.20., above, using the effluent concentration limit specified in this order and permit for the period and the specified allowable flow.
27. MDL (Method Detection Limit) is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136 Appendix B.
28. "Median" of an ordered set of values is the value which the values above and below is an equal number of values, or which is the arithmetic mean of the two middle values, if there is no one middle value.
29. "Monthly average" is the arithmetic mean of daily concentrations, or of daily "mass emission rates", over the specified monthly period:

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$$\text{Average} = \frac{1}{N} \sum_{i=1} X_i$$

in which 'N' is the number of days samples were analyzed during the period and 'X_i' is either the constituent concentration (mg/L) or mass emission rate (kg/day or lb/day) for each sampled day.

30. "Overflow" means the intentional or unintentional diversion of flow from the collection and transport systems, including pumping facilities.
31. "PAHs" (polynuclear aromatic hydrocarbons) mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.
32. "Pass through" defines as the discharge through the POTW to navigable waters which, alone or in conjunction with discharges from other sources, is a cause of a violation of POTW's NPDES permit.
33. "PCBs" (polychlorinated biphenyls) mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.
34. "PQL" (Practical Quantitation Level) is the lowest concentration of a substance which can be consistently determined within +/-20% of the true concentration by 75% of the labs tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL* for carcinogens is the MDL*x 5, and for noncarcinogens is the MDL*x 10.
35. "Priority pollutants" are those constituents referred to in 40 CFR §401.15 and listed in the EPA NPDES Application Form 2C, pp. V-3 thru V-9.
36. "Removal efficiency" is the ratio of pollutants removed by the treatment facilities to pollutants entering the treatment facilities. Removal efficiencies of a treatment plant shall be determined using "30-day averages" of pollutant concentrations ('C' in mg/L) of influent and effluent samples collected at about the same time and using the following equation (or its equivalent):

Removal Efficiency (%) = 100 x [1 - (C_{Effluent}/C_{Influent})]

When preferred, the discharger may substitute mass loadings and mass emissions for the concentrations.
37. "Shellfish" are organisms identified by the California Department of Health Services

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as shellfish for public health purposes (i.e., mussels, clams, and oysters).

38. "Sludge" see biosolids.
39. "6-month median" means a moving "median" of daily values for any 180-day period in which daily values represent flow-weighted average concentrations within a 24-hour period. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred.
40. "7-day" and "30-day average" shall be the arithmetic average of the values of daily discharge calculated using the results of analyses of all samples collected during any 7 and 30 consecutive calendar day periods, respectively.
41. TCDD equivalents mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below:

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

42. "Toxic pollutant" means any pollutant listed as toxic under Section 307(a)(1) of the Clean Water Act or under 40 CFR §122, Appendix D. Violation of maximum daily discharge limitations are subject to the 24-hour reporting requirement (paragraph E.4.).

43. "Toxicity" means:

Acute toxicity: measures effects of relatively short-term exposures on a selected organism, with mortality the generally designated endpoint.

Chronic toxicity: measures effects of exposure on selected organisms, with either

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mortality or various sublethal effects generally the designated endpoints. The chronic tests are usually longer-term than acute tests or test a very critical life stage of the organism.

44. "Toxicity concentration" shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response.

a. The acute toxicity concentration (TC_a) expressed in toxicity units (tu_a) is calculated as:

$$TC_a (tu_a) = 100 / [96\text{-hr } LC_{50}]$$

Where: LC_{50} is the Lethal Concentration (the percent waste giving 50 percent survival of test organisms)

The LC_{50} shall be determined by static or continuous flow bioassay techniques specified in "Methods for Measuring the Acute Toxicity of Effluent to Freshwater and Marine Organisms" (March 1985, EPA/600/4-85/013). Submission of bioassay results should include the information noted on pp. 45-49 of the Methods. The fathead minnow Pimephales promelas shall be used as the test species. In addition, the Regional Board and/or EPA may specify test methods which are more sensitive than those specified above. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC_{50} may be determined after the test samples are adjusted to remove the influence of those substances, subject to Executive Officer notification and authorization.

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

$$TC_a (tu_a) = \text{Log} (100 - S) / 1.7$$

where: S = percent survival in 100 percent waste. If $S > 99$, Tc shall be reported as zero.

b. The chronic toxicity concentration (TC_c) expressed in chronic toxicity units (tu_c) is calculated as:

$$TC_c (tu_c) = 100/\text{NOEC}$$

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where: NOEC is the No Observable Effect Concentration which is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism as determined by the result of a critical life stage toxicity test conducted according to the protocols listed in Appendix II of the California Ocean Plan adopted on March 22, 1990.

NOEC shall be determined based on toxicity tests having chronic end-points.

45. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations in the order and permit because of factors beyond the reasonable control of the discharger. It does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, careless or improper operation, or those problems the discharger should have foreseen.
46. "Waste", "waste discharge", "discharge of waste", and "discharge" are used interchangeably in this order and permit. The requirements of this order and permit are applicable to the entire volume of water, and the material therein, which is disposed of to ocean waters.
47. Water Reclamation: The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.
48. "Weekly average" is the arithmetic mean of daily concentrations, or of daily mass emission rates, over the specified weekly period:

$$\text{Average} = \frac{1}{N} \sum_{i=1}^N X_i$$

in which "N" is the number of days samples were analyzed during the period and "X_i" is either the constituent concentration (mg/L) or mass emission rate (kg/day or lb/day) for each sampled day.

49. "Zone of initial dilution" (ZID) means, for purposes of designating monitoring stations, the region within a horizontal distance equal to a specified water depth (usually depth of outfall or average depth of diffuser) from any point of the diffuser or end of the outfall and the water column above and below that region, including the underlying seabed.

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

MONITORING AND REPORTING PROGRAM NO. 6027

for

**THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
(CA0001309)**

I. Reporting Requirements

- A. The Boeing Company (Discharger) shall implement this monitoring program on the effective date of this Order. All monitoring reports shall be submitted quarterly and must be received by the Regional Board by the dates in the following schedule. All monitoring reports should be addressed to the Regional Board, Attention: Information Technology Unit. The first monitoring report under this Program is due by August 15, 2009.

<u>Reporting Period</u>	<u>Report Due</u>
January – March	May 15
April – June	August 15
July – September	November 15
October – December	February 15

- B. If there is no discharge during any reporting period, the report shall so state. The Discharger shall submit an annual summary report (for both dry and wet weather discharges), containing a discussion of the previous year's effluent and receiving water monitoring data, as well as graphical and tabular summaries of the data. The data shall be submitted to the Regional Board on hard copy and CD or electronically. Submitted data must be IBM compatible, preferably using EXCEL software. This annual report is to be received by the Regional Board by March 1 of each year following the calendar year of data collection.
- C. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.

Each quarterly report shall contain a separate section titled "Reasonable Potential Analysis" which discusses whether or not reasonable potential was triggered for pollutants which do not have a final effluent limitation in the NPDES permit. This section shall contain the following statement, "The analytical results for this sampling period did/did not trigger reasonable potential." If reasonable potential was triggered, then the following information should be provided:

- a. A list of the pollutant(s) that triggered reasonable potential;
 - b. The Basin Plan or CTR criteria that was exceeded for each given pollutant;
 - c. The concentration of the pollutant(s);
 - d. The test method used to analyze the sample; and
 - e. The data and time of sample collection.
- D. The Discharger shall inform the Regional Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.
- F. Any mitigation/remedial activity including any pre-discharge treatment conducted at the site must be reported in the quarterly monitoring report.
- G. Database Management System – The Regional Board is developing a compliance monitoring database management system that may require the Discharger to submit the monitoring and annual reports electronically when it becomes fully operational.

II. Effluent Monitoring Requirements

- A. Sampling station(s) shall be established for the point of discharge and shall be located where representative samples of that effluent can be obtained. Provisions shall be made to enable visual inspection of the discharge. All visual observations shall be included in the monitoring report.
- B. This Regional Board shall be notified in writing of any change in the sampling stations once established, or in the methods for determining the quantities of pollutants in the individual waste streams.
- C. Pollutants shall be analyzed using the methods described in 40 CFR 136.3, 136.4, and 136.5 (revised March 12, 2007); or where no methods are specified for a given pollutant, methods approved by Regional Board or State Board. Laboratories analyzing monitoring samples shall be certified by the California Department of Public Health and must include quality assurance/quality control (QA/QC) data with their report. For the purpose of monitoring pH, dissolved oxygen, residual chlorine, and temperature, tests may be conducted at the field sampling location provided that all requirements of the approved analytical methods for NPDES use in 40 CFR 136 are met.

The monitoring report shall specify the USEPA analytical method used, the Method Detection Limit (MDL) and the Minimum Level (ML) for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported by one of the following methods, as appropriate:

1. An actual numerical value for sample results greater than, or equal to, the ML;
or,
2. "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML; or,
3. "Not-Detected (ND)" for sample results less than the laboratory's MDL with MDL indicated for the analytical method used.

Current MLs (Attachment T-A) are those published by the State Water Resources Control Board (State Board) in the *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP), February 21, 2005.

- D. Where possible, the MLs employed for effluent analyses shall be lower than the permit limits established for a given parameter. If the ML value is not below the effluent limitation, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year (in the annual report), the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory quality assurance/quality control (QA/QC) procedures.

The Regional Board, in consultation with the State Board Quality Assurance Program, shall establish a ML that is not contained in Attachment T-A to be included in the Discharger's permit in any of the following situations:

1. When the pollutant under consideration is not included in Attachment T-A;
2. When the Discharger and Regional Board agree to include in the permit a test method that is more sensitive than those specified in 40 CFR 136 (revised May 14, 1999);
3. When the Discharger agrees to use an ML that is lower than that listed in Attachment T-A;
4. When a Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment T-A and proposes an appropriate ML for their matrix; or,
5. When the Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the USEPA-approved Method 1613 for dioxins and furans, Method 1624 for volatile organic substances, and Method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Regional Board, and the State Board shall agree on a lowest quantifiable limit, and that limit will

substitute for the ML for reporting and compliance determination purposes.

- E. Laboratory analyses – all chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services Environmental Laboratory Accreditation Program (ELAP). A copy of the laboratory certification shall be submitted with the Annual Report.
- F. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR section 136.3. All QA/QC samples must be run as specified by the EPA methodology and the results must be reported in the Regional Board format if available, and submitted with the laboratory reports.
- G. All analyses shall be accompanied by the chain of custody, including but not limited to data and time of sampling, sample identification, and name of person who performed sampling, date of analysis, name of person who performed analysis, QA/QC data, method detection limits, analytical methods, copy of laboratory certification, and a perjury statement executed by the person responsible for the laboratory.
- H. Quarterly effluent analyses are typically performed during the months of February, May, August and November. Annual effluent analyses shall be performed during the month of February. Due to the intermittent nature and unpredictable frequency of discharges from SSFL, periodic sampling should be conducted during the first opportunity presented during the prescribed monitoring period.
- J. In coordination with interested stakeholders in the Calleguas Creek Watershed and within the Los Angeles River Watershed, the Discharger shall conduct instream bioassessment monitoring once a year, during the spring/summer period (unless an alternate sampling period is approved by the Executive Officer). Over time, bioassessment monitoring will provide a measure of the physical condition of the waterbody and the integrity of its biological communities.
 - 1. The bioassessment program shall include an analysis of the community structure of the in stream macroinvertebrate assemblages and physical habitat assessment at the monitoring stations RSW-001U and RSW-002D. This program shall be implemented by appropriately trained staff. Alternatively, a professional subcontractor qualified to conduct bioassessments may be selected to perform the bioassessment work for the Discharger. Analyses of the results of the bioassessment monitoring program, along with photographs of the monitoring site locations taken during sample collection, shall be submitted in the corresponding annual report. If another stakeholder, or interested party in the watershed subcontracts a qualified professional to conduct bioassessment monitoring during the same season and at the same location as specified in the MRP,

then the Discharger may, in lieu of duplicative sampling, submit the data, a report interpreting the data, photographs of the site, and related QA/QC documentation in the corresponding annual report.

2. The Discharger must provide a copy of their Standard Operation Procedures (SOPs) for the Bioassessment Monitoring Program to the Regional Board upon request. The document must contain step-by-step field, laboratory and data entry procedures, as well as, related QA/QC procedures. The SOP must also include specific information about each bioassessment program including: assessment program description, its organization and the responsibilities of all its personnel; assessment project description and objectives; qualifications of all personnel; and the type of training each member has received.
3. Field sampling must conform to the SOP established for the California Stream Bioassessment Procedure (CSBP) or more recently established sampling protocols, such as used by the Surface Water Ambient Monitoring Program (SWAMP). Field crews shall be trained on aspects of the protocol and appropriate safety issues. All field data and sample Chain of Custody (COC) forms must be examined for completion and gross errors. Field inspections shall be planned with random visits and shall be performed by the Discharger or an independent auditor. These visits shall report on all aspects of the field procedure with corrective action occurring immediately.
4. A taxonomic identification laboratory shall process the biological samples that usually consist of subsampling organisms, enumerating and identifying taxonomic groups and entering the information into an electronic format. The Regional Board may require QA/QC documents from the taxonomic laboratories and examine their records regularly. Intra-laboratory QA/QC for subsampling, taxonomic validation and corrective actions shall be conducted and documented. Biological laboratories shall also maintain reference collections, vouchered specimens (the Discharger may request the return of their sample voucher collections) and remnant collections. The laboratory should participate in an (external) laboratory taxonomic validation program at a recommended level of 10% or 20%. External QA/QC may be arranged through the California Department of Fish and Game's Aquatic Bioassessment Laboratory located in Rancho Cordova, California.
5. The Executive Officer of the Regional Board may modify the Monitoring and Reporting Program to accommodate the watershed-wide monitoring.
 - I. For parameters that both monthly average and daily maximum limits are specified and the monitoring frequency is less than four times a month, the following shall apply. If an analytical result is greater than the monthly average limit; the sampling frequency shall be increased (within one week of receiving the test results) to a minimum of once weekly at equal intervals, until at least four

consecutive weekly samples have been obtained, and compliance with the monthly average limit has been demonstrated.

III. Effluent Monitoring Program

- A. The rainfall in inches is recorded at the time the sample is collected. Daily rainfall measurements in inches per day are recorded and reported.
- B. The following shall constitute the effluent monitoring program for the final effluent at Discharge Nos. 001, 002, 011, 018, and 019.

Constituent	Units	Type of Sample	Minimum Frequency of Analysis¹
Total waste flow	gal/day	----	once per discharge event
Temperature	°F	grab	once per discharge event
pH	pH Units	grab	once per discharge event
Rainfall	Inches	continuous	continuous
Hardness as CaCO ₃	mg/L	composite	annually
Conductivity at 25°C	µmhos/cm	grab	once per discharge event
Total suspended solids	mg/L	composite	once per discharge event
Settleable solids	ml/L	grab	once per discharge event
BOD ₅ (20°C)	mg/L	composite	once per discharge event
Oil and grease	mg/L	grab	once per discharge event
Turbidity	NTU	composite	once per discharge event
Total residual chlorine	mg/L	grab	annually
Total organic carbon	mg/L	composite	annually
Total dissolved solids	mg/L	composite	once per discharge event
Chloride	mg/L	composite	once per discharge event
Sulfate	mg/L	composite	once per discharge event

¹ During wet weather flow, a discharge event is greater than 0.1 inch of rainfall in a 24-hour period. No more than one sample per week need be obtained during extended periods of rainfall and a storm must be preceded by at least 72 hours of dry weather. Sampling shall be during the first hour of discharge or at the first safe opportunity. The reason for delay shall be included in the report. If the rain event is not sufficient to produce flow from the area, the observation must be documented with date, time condition and rainfall amount. During dry weather flow, whenever Outfalls 001, 002, 011, 018, or 019 is discharging, minimum sampling frequency during operations generating discharges shall be once per month.

© The thirty day average at pH = 7.9 and 20°C, when hourly samples are collected and composited or only one grab sample is collected. The one hour average WLA at 7.9 pH and 20°C, applies if hourly samples are taken throughout the storm and each is analyzed. No single sample may exceed the 10.1 mg/L limit. Analysis for the temperature and pH of the receiving water at the same time as the discharge would provide data for a site-specific determination of the ammonia limit using Attachment H to the WDR. Shall there be no receiving water present, the pH and temperature of the effluent at the monitoring location shall be determined and reported.

Constituent	Units	Type of Sample	Minimum Frequency of Analysis¹
Detergents (as MBAS)	mg/L	composite	once per discharge event
Nitrate + Nitrate-N	mg/L	composite	once per discharge event
Ammonia-N	mg/L	composite	once per discharge event [Ⓞ]
Nitrate-N	mg/L	composite	once per discharge event
Nitrite-N	mg/L	composite	once per discharge event
Cyanide ²	µg/L	grab	once per discharge event
Copper ²	µg/L	composite	once per discharge event
Lead ²	µg/L	composite	once per discharge event
Mercury ²	µg/L	composite	once per discharge event
1,1-Dichloroethylene	µg/L	grab	once per discharge event
Perchlorate	µg/L	composite	once per discharge event
2,4,6-Trichlorophenol	µg/L	composite	once per discharge event
2,4-Dinitrotoluene	µg/L	composite	once per discharge event
Alpha-BHC	µg/L	composite	once per discharge event
Bis(2-ethylhexyl)phthalate	µg/L	composite	once per discharge event
N-Nitrosodimethylamine	µg/L	composite	once per discharge event
Pentachlorophenol	µg/L	composite	once per discharge event
Trichloroethylene	µg/L	grab	once per discharge event
TCDD*	µg/L	composite	once per discharge event
Volatile organic compounds	µg/L	grab	once per discharge event**
Boron	mg/L	composite	annually ⁶
Fluoride	mg/L	composite	annually ⁶
Barium	mg/L	composite	annually ⁶
Iron	mg/L	composite	annually ⁶
Manganese ²	µg/L	composite	annually ⁶
Antimony ²	µg/L	composite	annually ⁶
Arsenic ²	µg/L	composite	annually ⁶
Beryllium ²	µg/L	composite	annually ⁶
Cadmium ²	µg/L	composite	once per discharge event
Chromium (VI) ^{2,3}	µg/L	grab	annually ⁶
Nickel ²	µg/L	composite	annually ⁶

* Analysis must be completed for TCDD and all congeners. After four consecutive samples are reported as nondetect the sampling frequency may be decreased to quarterly. If detected subsequently, the frequency reverts back to once per discharge event.

** Analyses must include benzene, carbon tetrachloride, chloroform, 1,1-dichloroethane, 1,2-dichloroethane, ethylbenzene, tetrachloroethylene, toluene, xylenes, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichlorofluoromethane, and vinyl chloride. Analyses shall be performed once per discharge event for two years, if all results are nondetect the frequency of monitoring is decreased to quarterly.

² Total recoverable results are required.

³ The Discharger has the option to meet the hexavalent chromium limitations with a total chromium analysis. However, if the total chromium level exceeds the hexavalent chromium limitation, it will be considered a violation unless an analysis has been made for hexavalent chromium in replicate sample and the result is reported within the hexavalent chromium limits.

Constituent	Units	Type of Sample	Minimum Frequency of Analysis¹
Selenium ²	µg/L	composite	once per discharge event
Silver ²	µg/L	composite	annually ⁶
Thallium ²	µg/L	composite	annually ⁶
Zinc ²	µg/L	composite	once per discharge event
Cobalt	µg/L	composite	annually
Vanadium	µg/L	composite	annually
Radioactivity- Gross Alpha	pCi/L	composite	once per discharge event
Gross Beta ⁴	pCi/L	composite	once per discharge event
Combined Radium 226 & Radium 228 ⁵	pCi/L	composite	once per discharge event
Tritium ⁴	pCi/L	composite	once per discharge event
Strontium-90 ⁴	pCi/L	composite	once per discharge event
H-3 (Radioactive Hydrogen) (Tritium)	pCi/L	composite	once per discharge event
K-40 (Potassium-40)	pCi/L	composite	once per discharge event
CS-137	pCi/L	composite	once per discharge event
Uranium	pCi/L	composite	once per discharge event
PCBs	µg/L	composite	annually
TPH ¹⁰	µg/L	grab	annually
Monomethylhydrazine	µg/L	composite	annually
cis-1,2-Dichloroethene	µg/L	grab	annually
1,4-Dioxane	µg/L	composite	annually
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	composite	quarterly
1,2-Dichloro-1,1,2-trifluoroethane	µg/L	composite	annually
Cyclohexane	µg/L	grab	annually

⁴ Analyze these radiochemicals by the following USEPA testing methods: method 900.0 for gross alpha and gross beta, method 903.0 or 903.1 for radium-226, method 904.0 for radium-228, method 906.0 for tritium, method 908.0 for uranium, method 901.0 or 901.1 for Cesium, and method 905.0 for strontium-90.

⁵ Gross alpha and gross beta analysis must be performed. Gross alpha analysis must be <15 pCi/L. If gross alpha is >15 pCi/L, uranium analysis must be performed and must be less than 30 µg/L (20 pCi/L). Radium-228 analysis must be performed, and combined Radium-226 and Ra-228 activity must be < 5pCi/L. Radium 226 analysis can be performed, or if gross alpha is <5 pCi/L, one can assume Ra-226 activity = gross alpha activity for purposes of meeting the 5 pCi/L limit.

Gross Beta, H-3, K-40, and Sr-90 analyses must be performed. The gross beta limit is 15 pCi/L, after subtraction of K-40 activity. The K-40 is assumed to be all natural. H-3 limit is 20,000 pCi/L, and the Sr-90 limit is 8 pCi/L. If gross beta >15 pCi/L (after subtracting K-40 activity) gamma isotopic analysis must be performed for Cs-137 (the most likely emitter associated with the site). The sum of the fractions technique must be used to demonstrate that the gamma emitters don't exceed 4 mrem/year (200 pCi/L for Cs 137). The sum of the fractions must include H-3 and Sr-90. If the limit is exceeded, which is an annual average, the frequency of the sampling is increased to once per discharge event until the annual average is below the specified limit. If the analyses of these constituents demonstrates exceedances, of the annual average effluent limitations (determined at each sampling point) the monitoring frequency is increased to once per discharge until four consecutive analyses demonstrates compliance with the effluent limitations.

⁶ If detected concentration exceeds the criteria, the frequency of analysis must be increased to once per discharge. After four consecutive samplings demonstrating compliance the frequency reverts back to annually.

Constituent	Units	Type of Sample	Minimum Frequency of Analysis¹
Remaining USEPA priority pollutants excluding asbestos ¹¹	µg/L	composite/ grab for VOCs	annually ⁶
Acute toxicity	% survival	composite	annually
Chronic toxicity	TU _c	composite	First and second rain events of each year

C. The following shall constitute the storm water monitoring program for Outfalls 003, through 010.

Constituent	Units	Type of Sample	Minimum Frequency of Analysis¹
Rainfall	inches	continuous	continuous
pH	pH Units	grab	once per discharge event
Oil and grease	mg/L	grab	once per discharge event
Temperature	°F	grab	once per discharge event
Total dissolved solids	mg/L	composite	once per discharge event
Chloride	mg/L	composite	once per discharge event
Sulfate	mg/L	composite	once per discharge event
Nitrate + Nitrate-N	mg/L	composite	once per discharge event
Ammonia-N ^(Outfall 008 only)	mg/L	composite	once per discharge event [©]
Nitrate-N ^(Outfall 008 only)	mg/L	composite	once per discharge event
Nitrite-N ^(Outfall 008 only)	mg/L	composite	once per discharge event
Total suspended solids	mg/L	composite	annually
Boron ²	mg/L	composite	annually ⁶
Fluoride	mg/L	composite	annually
Iron	mg/L	composite	annually
Antimony ²	µg/L	composite	once per discharge event
Cadmium ²	µg/L	composite	once per discharge event
Copper ²	µg/L	composite	once per discharge event
Lead ²	µg/L	composite	once per discharge event
Mercury ²	µg/L	composite	once per discharge event
Thallium	µg/L	composite	once per discharge event
Selenium ^(Outfall 008 only)	µg/L	composite	once per discharge event
Zinc ^(Outfall 008 only)	µg/L	composite	once per discharge event
Vanadium ²	µg/L	composite	annually
Aluminum ²	µg/L	composite	annually
TCDD ⁹	µg/L	composite	once per discharge event

Constituent	Units	Type of Sample	Minimum Frequency of Analysis¹
Perchlorate	µg/L	composite	once per discharge event ⁷
Remaining USEPA priority pollutants excluding asbestos ¹¹	µg/L	composite/ grab for VOCs	annually ⁶
Chlorpyrifos	µg/L	composite	annually ⁶
Diazinon	µg/L	composite	annually ⁶
Radioactivity ⁵ Gross Alpha Gross Beta	pCi/L pCi/L	composite composite	once per discharge event once per discharge event
Combined Radium 226 & Radium 228 ⁴	pCi/L	composite	once per discharge event
Tritium ⁴	pCi/L	composite	once per discharge event
Strontium-90 ⁴	pCi/L	composite	once per discharge event
H-3 (Radioactive Hydrogen)	pCi/L	composite	once per discharge event
K-40 (Potassium-40)	pCi/L	composite	once per discharge event
Cs-137	pCi/L	composite	once per discharge event
Uranium	pCi/L	composite	once per discharge event
Hardness as CaCO ₃	mg/L	composite	annually
Acute toxicity	% survival	composite	annually
Chronic toxicity	TU _c	composite	First and second rain events of each year

D. The following shall constitute the effluent monitoring program from Outfalls 012 through 014.during storm events.

Constituent	Units	Type of Sample	Minimum Frequency of Analysis¹
Rainfall	inches	continuous	continuous
Hardness as CaCO ₃	mg/L	composite	annually
pH	pH units	grab	once per discharge event ¹²
Temperature	°F	grab	once per discharge event ¹²
Suspended solids	mg/L	composite	once per discharge event ¹²
BOD ₅ 20°C	mg/L	composite	once per discharge event ¹²
Settleable solids	mg/L	grab	once per discharge event ¹²
Oil and grease	mg/L	grab	once per discharge event ¹²
Ammonia-N	mg/L	composite	once per discharge event ¹²
Nitrate-N	mg/L	composite	once per discharge event ¹²
Nitrite-N	mg/L	composite	once per discharge event ¹²
Turbidity	NTU	composite	once per discharge event ¹²

⁷ Monitor once per discharge at Happy Valley (Outfall 008). Monitor semiannually at all other storm water only outfalls. If the results are nondetect for two years the Discharger may submit a request for the monitoring frequency to be decreased to annually with Executive Officer approval.

Constituent	Units	Type of Sample	Minimum Frequency of Analysis¹
Total dissolved solids	mg/L	composite	once per discharge event ¹²
Total petroleum hydrocarbons ¹⁰	µg/L	grab	once per discharge event ¹²
Perchlorate	µg/L	composite	once per discharge event ¹²
N-Nitrosodimethylamine	µg/L	composite	once per discharge event ¹²
1,4-Dioxane	µg/L	composite	once per discharge event ¹²
1,2,3-Trichloropropane	µg/L	grab	once per discharge event ¹²
Ethylene dibromide	µg/L	grab	once per discharge event ¹²
Methyl tertiary butyl ether (MTBE)	µg/L	grab	once per discharge event ¹²
Naphthalene	µg/L	composite	once per discharge event ¹²
Di-isopropyl Ether (DIPE)	µg/L	grab	once per discharge event ¹²
Tertiary Butyl Alcohol (TBA)	µg/L	grab	once per discharge event ¹²
Monomethyl hydrazine**	µg/L	grab	once per discharge event ¹²
Chloride	µg/L	composite	once per discharge event ¹²
Boron	µg/L	composite	once per discharge event ¹²
Sulfate	µg/L	composite	once per discharge event ¹²
Fluoride	µg/L	composite	once per discharge event ¹²
Nitrate + Nitrite-N	µg/L	composite	once per discharge event ¹²
Copper ²	µg/L	composite	once per discharge event ¹²
Lead ²	µg/L	composite	once per discharge event ¹²
Mercury ²	µg/L	composite	once per discharge event ¹²
Cadmium	µg/L	composite	once per discharge event ¹²
Selenium	µg/L	composite	once per discharge event ¹²
Zinc	µg/L	composite	once per discharge event ¹²
TCDD*	µg/L	composite	once per discharge event ¹²
Acute toxicity	% survival	composite	annually
Remaining USEPA priority pollutants excluding asbestos ¹¹	µg/L	composite/ grab for VOCs	annually

¹⁰ Total petroleum hydrocarbons include all fuels, gasoline, and diesel and jet fuel. Analysis should be completed using EPA 8015 (modified) methods.

¹¹ Analysis shall include xylenes and trichlorofluoromethane. Analysis at Outfalls 008 and 009 shall include asbestos.

** This analysis is completed only for discharges from APTF.

¹² Monitoring shall occur once per discharge event for a minimum of eight discharge events or for each discharge event that occurs from December 20, 2007, through June 10, 2009. If the concentrations of the detected analytes do not exceed water quality based effluent limits established at downstream outfalls, the monitoring frequency may be decreased to annually.

IV. Toxicity Monitoring Requirements

A. Acute Toxicity Monitoring Program

1. The Discharger shall conduct acute toxicity tests on effluent grab samples by methods specified in 40 CFR Part 136 which cites USEPA's *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms*, Fifth Edition, October 2002 (EPA/821-R-012) or a more recent edition to ensure compliance in 100 % effluent.
2. The fathead minnow, *Pimephales promelas*, shall be used as the test species for fresh water discharges and the topsmelt, *Atherinops affinis*, shall be used as the test species for brackish effluent. The method for topsmelt is found in USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, October 2002 (EPA/821-R-02-013).
3. In lieu of conducting the standard acute toxicity testing with the fathead minnow, the Discharger may elect to report the results or endpoint from the first 48 hours of the chronic toxicity test as the results of the acute toxicity test.

B. Chronic Toxicity Effluent Monitoring Program

1. The Discharger shall conduct critical life stage chronic toxicity tests on effluent samples (24-hour composite) or receiving water samples in accordance with EPA's Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, October 2002 (EPA/821-R-02-013) or EPA's Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition, October 2002, (EPA/821-R-02-014).
2. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water.
3. Test Species and Methods:
 - a. The Discharger shall conduct tests as follows: with a vertebrate, an invertebrate, and an alga for the first three suites of tests. After the screening period, monitoring shall be conducted using the most sensitive species.
 - b. Re-screening is required every 15 months. The Discharger shall

re-screen with the three species listed above and continue to monitor with the most sensitive species. If the first suite of re-screening tests demonstrates that the same species is the most sensitive than the re-screening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is ambiguity then the Discharger shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites.

- c. The presence of chronic toxicity shall be estimated as specified using West Coast marine organisms according to EPA's Short-Term Methods for Estimating Chronic Toxicity of Effluent and Receiving Waters to Freshwater Organisms, Fourth Edition, October 2002 (EPA/821-R-02-013).

C. Quality Assurance

1. Concurrent testing with a reference toxicant shall be conducted. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).
2. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the test methods manuals (EPA/600/4-91/002 and EPA/821-R-02-013), then the Discharger must re-sample and re-test within 14 days of notification by the laboratory of an invalid test.
3. Control and dilution water shall be receiving water or laboratory water as described in the manual. If the dilution water used is different from the culture water, a second control using culture water shall be used.

D. Accelerated Monitoring

1. If toxicity exceeds the limitations (as defined in Order No. R4-2007-0055, Section I.D.4.a.1. and 1.D.4.b.1), then the Discharger shall immediately implement accelerated testing, as specified at Section I.D.4.a.2 and 1.D.4.b.2. The discharger shall ensure that they receive results of a failing toxicity test within 24 hours of the completion of the test and the additional tests shall begin within 3 business days of receipt of the results or at the first opportunity of discharge. If the accelerated testing shows consistent toxicity, the discharger shall immediately implement the Initial Investigation of the TRE Workplan.
2. If implementation of the initial investigation TRE workplan indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger may discontinue the TIE.

3. The first step in the initial Investigation TRE Workplan for downstream receiving water toxicity can be a toxicity test protocol designed to determine if the effluent causes or contributes to the measured downstream chronic toxicity. If this first step TRE testing shows that the outfall effluent does not cause or contribute to downstream chronic toxicity, using EPA's Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, October 2002(EPA/821-R-02-013). Then a report on this testing shall be submitted to the Board and the TRE will be considered to be completed. Routine testing in accordance with MRP No. 6027 shall be continued thereafter.

E. Steps in Toxicity Reduction Evaluation (TRE) and Toxicity Identification Evaluation (TIE)

1. Following a TRE trigger, the Discharger shall initiate a TRE in accordance with the facility's initial investigation TRE workplan. At a minimum, the Discharger shall use EPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance. The Discharger shall expeditiously develop a more detailed TRE workplan for submittal to the Executive Officer within 30 days of the trigger, which will include, but not be limited to:
 - a. Further actions to investigate and identify the cause of toxicity;
 - b. Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity;
 - c. Standards the Discharger will apply to consider the TRE complete and to return to normal sampling frequency; and,
 - d. A schedule for these actions
2. The following is a stepwise approach in conducting the TRE:
 - a. Step 1 - Basic data collection. Data collected for the accelerated monitoring requirements may be used to conduct the TRE;
 - b. Step 2 - Evaluates optimization of the treatment system operation, facility housekeeping, and the selection and use of in-plant process chemicals;
 - c. If Steps 1 and 2 are unsuccessful, Step 3 implements a Toxicity Identification Evaluation (TIE) and employment of all reasonable

efforts and using currently available TIE methodologies. The objective of the TIE is to identify the substance or combination of substances causing the observed toxicity;

- d. Assuming successful identification or characterization of the toxicant(s), Step 4 evaluates final effluent treatment options;
- e. Step 5 evaluates in-plant treatment options; and,
- f. Step 6 consists of confirmation once a toxicity control method has been implemented.

Many recommended TRE elements parallel source control, pollution prevention, and storm water control program best management practices (BMPs). To prevent duplication of efforts, evidence of implementation of these control measures may be sufficient to comply with TRE requirements. By requiring the first steps of a TRE to be accelerated testing and review of the facility's TRE workplan, a TRE may be ended in its early stages. All reasonable steps shall be taken to reduce toxicity to the required level. The TRE may be ended at any stage if monitoring indicates there is no longer toxicity (or six consecutive chronic toxicity results are less than or equal to 1.0 TU_c).

- 3. The Discharger may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. The Discharger shall use the EPA acute and chronic manuals, EPA/600/6-91/005F (Phase I)/EPA/600/R-96-054 (for marine), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III) as guidance.
- 4. If a TRE/TIE is initiated prior to completion of the accelerated testing schedule required by Part I.C.4.a.2 and Part I.C.4.b.2 of this permit, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer.
- 5. Toxicity tests conducted as part of a TRE/TIE may also be used for compliance, if appropriate.
- 6. The Board recognizes that toxicity may be episodic and identification of causes of and reduction of sources of toxicity may not be successful in all cases. Consideration of enforcement action by the Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

F. Reporting

1. The Discharger shall submit a full report of the toxicity test results, including any accelerated testing conducted during the month as required by this permit. Test results shall be reported in Toxicity Units (percent survival or TU_c) with the discharge monitoring reports (DMR) for the month in which the test is conducted.

If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, pursuant to Section IV.C.1., those results shall also be submitted with the DMR for the period in which the Investigation occurred.

2. The full report shall be submitted on or before the end of the month in which the DMR is submitted.
3. The full report shall consist of (1) the results; (2) the dates of sample collection, initiation, and completion of each toxicity tests; (3) the acute toxicity limit or chronic toxicity limit or trigger as described in Order No. R4-2009-00XX sections I.C.4.a.1. and I.C.4.b.1; and (4) printout of the ToxCalc or CETIS program results.
4. Test results for toxicity tests also shall be reported according to the appropriate manual chapter on Report Preparation and shall be attached to the DMR. Routine reporting shall include, at a minimum, as applicable, for each test:
 5. sample date(s);
 6. test initiation date;
 7. test species;
 8. end point values for each dilution (e.g., number of young, growth rate, percent survival);
 9. NOEC value(s) in percent effluent;
 10. IC_{15} , IC_{25} , IC_{40} and IC_{50} values in percent effluent;
 11. TU_c values $\left(TU_c = \frac{100}{NOEC} \right)$;
 12. Mean percent mortality (\pm standard deviation) after 96 hours in 100% effluent (if applicable);
 13. NOEC and LOEC values for reference toxicant test(s);

14. IC₂₅ value for reference toxicant test(s);
15. Any applicable control charts; and
16. Available water quality measurements for each test (e.g., pH, D.O., temperature, conductivity, hardness, salinity, ammonia).
17. The Discharger shall provide a compliance summary, which includes a summary table of toxicity data from at least eleven of the most recent samples.

The Discharger shall notify, by telephone or electronically, this Regional Board of any toxicity exceedance of the limit or trigger within 24 hours of receipt of the results followed by a written report within 14 calendar days of receipt of the results. The verbal or electronic notification shall include the exceedance and the plan the Discharger will pursue. The written report shall describe actions the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by the permit, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

V. Receiving Water Monitoring Requirements

- A. Receiving Water Monitoring for TMDL based effluent limitations established for Calleguas Creek and its tributaries and for priority pollutants in both Arroyo Simi and Bell Creek. Monitoring will occur in Arroyo Simi in the area where storm water runoff discharges enters the receiving water and where storm water discharges enter Bell Creek (downstream of the SSFL facility).

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Water velocity	Ft/second	recorder ⁸	quarterly ^{1,2}
Hardness as CaCO ₃	mg/L	grab	quarterly ^{1,2}
pH	pH units	grab	quarterly ^{1,2}
Temperature	°F	grab	quarterly ^{1,2}
Chlorpyrifos	µg/L	grab	quarterly ^{1,2}

⁸ The Discharger will use the flow of the process water used for quenching with the time of the test to calculate the total volume of water used.

⁹ All seventeen congeners of TCDD must be analyzed as stipulated in State Implementation Policy. After four consecutive samples are reported as nondetect the sampling frequency may be decreased to quarterly. If detected subsequently, the frequency reverts back to once per discharge event.

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Diazinon	µg/L	grab	quarterly ^{1,2}
Chlordane	µg/L	grab	quarterly ^{1,2}
4,4-DDD	µg/L	grab	quarterly ^{1,2}
4,4-DDE	µg/L	grab	quarterly ^{1,2}
4,4-DDT	µg/L	grab	quarterly ^{1,2}
Dieldrin	µg/L	grab	quarterly ^{1,2}
PCBs	µg/L	grab	quarterly ^{1,2}
Toxaphene	µg/L	grab	quarterly ^{1,2}
Priority pollutants	µg/L	grab	once every five years ^{2,3}

¹ Samples collected quarterly. Compliance is determined by comparing the final concentration to the limits listed in Finding I.C.1. and I.C.2. of Order R4-2009-00XX. The final concentration is the average of the samples collected over one year.

² Sampling should occur where discharges from SSFL enter Arroyo Simi.

³ Sampling should occur where discharges from SSFL enter Bell Creek.

B. The receiving water monitoring program shall include periodic surveys of receiving water and shall include studies of those physical-chemical characteristics of the receiving water that may be impacted by the discharge.

1. Receiving Water Observations. General observations of the receiving water shall be made at each discharge point on a monthly basis and shall be reported in the quarterly monitoring report. If no discharge occurred during the observation period, this shall be reported.

Observations shall be descriptive where applicable, such that colors, approximate amounts, or types of materials that are apparent. The following observations shall be made where appropriate:

- a. Tidal stage, time, and date of monitoring
- b. Weather conditions
- c. Color of water
- d. Appearance of oil films or grease, or floatable materials
- e. Extent of visible turbidity or color patches
- f. Direction of tidal flow
- g. Description of odor, if any, of the receiving water
- h. Presence and activity of California Least Tern and California Brown Pelican.

VI. Sediment Sampling

The Calleguas Creek OC Pesticides and PCBs TMDL includes requirements for the concentrations of several pesticides and PCBs in sediment. Therefore this permit includes requirements to monitor sediment for these constituents. The Discharger may choose to join the Calleguas Creek Watershed TMDL Monitoring Program (CCWTMP) and collect

the required sediment samples along with a host of other stakeholders in the watershed. This facility is located in Arroyo Simi and the Compliance Sampling Site locations stipulated in the TMDL documentation are Arroyo Simi East of Hitch Boulevard (07_HITCH) or Simi Valley Water Quality Control Plant (07D_SIMI). As an alternative the Discharger may choose to collect the sediment samples at the base of the subwatershed where the discharge occurs. The exact location of the sampling point must be stipulated in the initial self-monitoring report.

The in-stream sediment sampling shall be conducted according to methods developed by the USGS and outlined in *Guidelines for Collecting and Processing Samples of Stream Bed Sediment for Analysis of Trace Elements and Organic Contaminants for the National Water Quality Assessment Program* (1994). A brief description of the protocol also appears in the *Draft Calleguas Creek Watershed Management Plan Quality Assurance Project Plan (QAPP) Monitoring and Reporting Program Plan for Nitrogen, OC and PCBs, and Toxicity Total Maximum Daily Loads* dated September 26, 2006, beginning on page 38. Discussions include field measurements and observations, sample handling and custody, sample handling and shipping, and analytical methods.

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Sediment toxicity (chronic 10-day eohaustorius estuarius toxicity)	NA	grab	annually
48-hour Bivalve Embryo toxicity (Mytilus edulis or Crassostrea gigas)	NA	grab	annually
Total ammonia	mg/wet kg	grab	annually
% Moisture	%	grab	annually
Particle Size Distribution	um	grab	annually
Total Organic Carbon	% dry weight	grab	annually
Water velocity	ft/sec	grab	annually
pH	pH Units	grab	annually
Temperature	°C	grab	annually
Dissolved Oxygen	mg/L	grab	annually
Conductivity	umhos/cm	grab	annually
Chlordane	ng/g	grab	annually
4,4-DDD	ng/g	grab	annually
4,4-DDE	ng/g	grab	annually
4,4-DDT	ng/g	grab	annually
Dieldrin	ng/g	grab	annually
PCBs	ng/g	grab	annually
Toxaphene	ng/g	grab	annually

The Boeing Company
Santa Susana Field Laboratory
Order No. R4-2009-0058

CA0001309

VIII. Bioassessment Monitoring

The goals of the bioassessment monitoring for the Arroyo Simi and Los Angeles River are to:

- Determine compliance with receiving water limits;
- Monitor trends in surface water quality;
- Ensure protection of beneficial uses;
- Provide data for modeling contaminants of concern;
- Characterize water quality including seasonal variation of surface waters within the watershed;
- Assess the health of the biological community; and
- Determine mixing dynamics of effluent and receiving waters in the estuary.

Ordered by:



Tracy J. Egoscue
Executive Officer

Date: May 8, 2009

/CDO

SWRCB Minimum Levels in ppb ($\mu\text{g/L}$)

The Minimum Levels (MLs) in this appendix are for use in reporting and compliance determination purposes in accordance with section 2.4 of the State Implementation Policy. These MLs were derived from data for priority pollutants provided by State certified analytical laboratories in 1997 and 1998. These MLs shall be used until new values are adopted by the SWRCB and become effective. The following tables (Tables 2a - 2d) present MLs for four major chemical groupings: volatile substances, semi-volatile substances, inorganics, and pesticides and PCBs.

Table 2a - VOLATILE SUBSTANCES*	GC	GCMS
1,1 Dichloroethane	0.5	1
1,1 Dichloroethylene	0.5	2
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
1,2 Dichlorobenzene (volatile)	0.5	2
1,2 Dichloroethane	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichlorobenzene (volatile)	0.5	2
1,3 Dichloropropene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Methyl Bromide	1.0	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromo-methane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Chloromethane	0.5	2
Dichlorobromo-methane	0.5	2
Dichloromethane	0.5	2
Ethylbenzene	0.5	2
Tetrachloroethylene	0.5	2
Toluene	0.5	2
Trans-1,2 Dichloroethylene	0.5	1
Trichloroethene	0.5	2
Vinyl Chloride	0.5	2

*The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Attachment T-A - continued

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Benzo (a) Anthracene	10	5		
1,2 Dichlorobenzene (semivolatile)	2	2		
1,2 Diphenylhydrazine		1		
1,2,4 Trichlorobenzene	1	5		
1,3 Dichlorobenzene (semivolatile)	2	1		
1,4 Dichlorobenzene (semivolatile)	2	1		
2 Chlorophenol	2	5		
2,4 Dichlorophenol	1	5		
2,4 Dimethylphenol	1	2		
2,4 Dinitrophenol	5	5		
2,4 Dinitrotoluene	10	5		
2,4,6 Trichlorophenol	10	10		
2,6 Dinitrotoluene		5		
2- Nitrophenol		10		
2-Chloroethyl vinyl ether	1	1		
2-Chloronaphthalene		10		
3,3' Dichlorobenzidine		5		
Benzo (b) Fluoranthene		10	10	
3-Methyl-Chlorophenol	5	1		
4,6 Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl phenyl ether	10	5		
4-Chlorophenyl phenyl ether		5		
Acenaphthene	1	1	0.5	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo(a) pyrene		10	2	
Benzo(g,h,i)perylene		5	0.1	
Benzo(k)fluoranthene		10	2	
bis 2-(1-Chloroethoxyl) methane		5		
bis(2-chloroethyl) ether	10	1		
bis(2-Chloroisopropyl) ether	10	2		
bis(2-Ethylhexyl) phthalate	10	5		
Butyl benzyl phthalate	10	10		
Chrysene		10	5	
di-n-Butyl phthalate		10		
di-n-Octyl phthalate		10		
Dibenzo(a,h)-anthracene		10	0.1	
Diethyl phthalate	10	2		
Dimethyl phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	

Attachment T-A - continued

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Hexachloro-cyclopentadiene	5	5		
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol **	1	1		50
Pyrene		10	0.05	

* With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1,000; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1,000.

** Phenol by colorimetric technique has a factor of 1.

Table 2c - INORGANICS*	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1,000
Arsenic		2	10	2	2	1		20	1,000
Beryllium	20	0.5	2	0.5	1				1,000
Cadmium	10	0.5	10	0.25	0.5				1,000
Chromium (total)	50	2	10	0.5	1				1,000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1,000
Cyanide								5	
Lead	20	5	5	0.5	2				10,000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1,000
Selenium		5	10	2	5	1			1,000
Silver	10	1	10	0.25	2				1,000
Thallium	10	2	10	1	5				1,000
Zinc	20		20	1	10				1,000

* The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2d – PESTICIDES – PCBs*	GC
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
a-Endosulfan	0.02
alpha-BHC	0.01
Aldrin	0.005
b-Endosulfan	0.01
Beta-BHC	0.005
Chlordane	0.1
Delta-BHC	0.005
Dieldrin	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Gamma-BHC (Lindane)	0.02
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

* The normal method-specific factor for these substances is 100; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.

Techniques:

GC - Gas Chromatography

GCMS - Gas Chromatography/Mass Spectrometry

HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)

LC - High Pressure Liquid Chromatography

FAA - Flame Atomic Absorption

GFAA - Graphite Furnace Atomic Absorption

HYDRIDE - Gaseous Hydride Atomic Absorption

CVAA - Cold Vapor Atomic Absorption

ICP - Inductively Coupled Plasma

ICPMS - Inductively Coupled Plasma/Mass Spectrometry

SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)

DCP - Direct Current Plasma

COLOR - Colorimetric