California Regional Water Quality Control Board

Los Angeles Region

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July 12, 2004

Mr. Steve Lafflam, Division Director
The Boeing Company
P. O. Box 7922
Canoga Park, California 91309

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED
No. 7000 0520 0024 7127 9600

Dear Mr. Lafflam:

WASTE DISCHARGE REQUIREMENTS – THE BOEING COMPANY, SANTA SUSANA FIELD LABORATORY, SIMI HILLS (NPDES NO. CA0001309, CI NO. 6027, ORDER NO. R4-2004-0111)

Our letter dated March 25, 2004, transmitted the revised-tentative Order for renewal of your permit to discharge wastes under the National Pollutant Discharge Elimination System (NPDES).

Pursuant to Division 7 of the California Water Code, this Regional Board at a public hearing held on May 6, 2004, reviewed the revised-tentative requirements, considered all factors in the case, and continued the hearing to a future date with additional direction to staff to review several issues of concern. Board staff was directed to:

1. Revisit the reasonable potential analysis to potentially include volatile organic compounds that have not been detected during the tenure of the current permit using Tier 3 (Best Professional Judgement).
2. Investigate a request for the Discharger to provide timely public outreach and reliable information regarding site activities.
3. Investigate directing the Discharger to create a website, which would display the current data.
4. Investigate a requirement for independent testing conducted along with routine testing. The proposed testing would be paid for by the Discharger.
5. Increase the sampling frequency for Outfalls 001 and 002.

The item was scheduled for the July 1, 2004, hearing. During the Board hearing, staff reported the findings on each item and suggested changes to the revised-tentative permit as reflected in a change sheet which was disseminated to interested parties. During the hearing, the Board again considered the revised-tentative requirements with the suggested changes, and heard verbal comments offered from interested parties. The Regional Board subsequently adopted the permit with the following changes in addition to those proposed by Board staff.

1. Included two Findings (Finding No. 70 and 71 on Page 26 of the WDR) describing the basis for including an effluent limit for trichloroethylene.
2. Included a daily maximum effluent limit of 5 µg/L and the daily maximum mass of 6.7 lbs/day for trichloroethylene (Page 31 of the WDR).
3. Edited Item B7 on Page 35 of the WDR to read:

   "With the exception of Outfalls 001 and 002, in the event that an effluent limitation set for the above for a pollutant other than a radioactive material is exceeded and the Discharger presents within 30 days of the date of discovery documentation that (I) discharges from a solid waste management unit (unit) regulated by DTSC are causing or contributing to the violation, and (ii) the Discharger was in compliance with all applicable requirements of DTSC permits and corrective action requirements for the unit, and (iii) modifications to DTSC's permit or corrective action requirements are necessary to consistently comply with this Order, the Discharger, DTSC, and Regional Board will work cooperatively to develop a schedule that is as short as possible to take appropriate actions under the RCRA corrective action requirements or permits, as appropriate, to ensure compliance with this Order. This Order may be reopened and modified, in accordance with applicable laws and regulations, or a Time Schedule Order issued to incorporate appropriate interim limits while the appropriate actions are being taken under the RCRA corrective action requirements or permits."

4. Item III. A. of the WDR on Page 42 was amended. The following statement was added to the end of the Finding.

   "Boeing shall report to the Regional Board any monitoring data that exceeds the detection limit for monitored constituents without effluent limitations. The report shall be reported, via facsimile, within 24 hours of the Discharger receiving the data from the lab. Regional Board staff will bring a reopener to the Regional Board within 90 days of determining that reasonable potential exists to cause or to contribute to an exceedance of water quality standards."

5. Trichloroethylene was inserted as a separate analyte on Page T-6 of the Monitoring and Reporting Program No. 6027 with a monitoring frequency of once per discharge event.
6. Trichloroethylene was deleted from footnote ♦♦ that appears on Page T-6 of the Monitoring and Reporting Program No. 6027.
7. Item V.G. was edited on Page 29 of the Fact Sheet. Two paragraphs were added to describe the Best Professional Judgement rationale used to include an effluent limit for trichloroethylene.
8. Item VI.A. of the Fact Sheet (Page 34) which includes effluent limits for Outfalls 001 and 002, was edited to include a daily maximum effluent limit for trichloroethylene of 5 µg/L with the rationale specified as the BPJ and the Basin Plan Objective to protect groundwater recharge beneficial use.

The Discharger also volunteered to establish a website to post NPDES data. The website will be available for the 2004-2005 rainy season. Board staff was directed to also post the data on the Board's website and to continue participation in the Santa Susana Field Laboratory Workgroup Meetings.

The Regional Board adopted Order No. R4-2004-0111 (copy attached) relative to this waste discharge incorporating the changes referenced above.

This Order serves as a NPDES permit, and expires on June 10, 2009. Section 13376 of the California Water Code requires that an application/Report of Waste Discharge for a new permit must be filed at least 180 days before the expiration date.

The "Monitoring and Reporting Program" requires you to implement the monitoring program on the effective date of this Order (August 20, 2004). Your first monitoring report for the period of July 2004 through September 2004 is due by November 15, 2004. Monitoring reports should be sent to the Regional Board, ATTN: Information Technology Unit.

When submitting monitoring or technical reports to the Regional Board per these requirements, please include a reference to Compliance File CI-6027 and NPDES No. CA0001309, which will assure that the reports, are directed to the appropriate file and staff. Please do not combine your discharge monitoring reports with other reports, such as progress reports. Submit each type of report as a separate document.

The Regional Board adopted the revised-tentative requirements incorporating the changes enumerated above. We are sending the final copy of the permit only to the Discharger. For those on the mailing list who would like access to a copy of the final permit, please go to the Regional Board's website at www.swrcb.ca.gov/rwqcb4/html/permits/generalpermits.html.

If you have any question please contact Cassandra Owens at (213) 576-6750.

Sincerely,

Blythe Ponek-Backowski

for David Hung, Chief
Industrial Permitting Unit

Enclosures

cc: see Mailing List

MAILING LIST

Honorably Sheila Kuehl, Senator, 23rd District
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Mr. Thomas Kelly, Environmental Protection Agency, Region 9, (WTR-5)
Environmental Protection Agency, Region 9, Office of Radiation Programs
Mr. Michael Lopez, U.S.D.O.E., Oakland
Ms. Mary Gross, U.S. D. O. E., Oakland
Mr. Dean Kunihiro, U.S. Nuclear Regulatory Commission
U.S. Army Corps of Engineers
NOAA, National Marine Fisheries Service
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Mr. Michael Lauffer, State Water Resources Control Board, Office of Chief Counsel
Mr. William Paznokas, Department of Fish and Game, Region 5
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Ms. Karen Baker, Department of Toxic Substances Control
Ms. Pauline Batarseh, Department of Toxic Substances Control, Sacramento
Mr. Peter Bailey, Department of Toxic Substances Control, Sacramento
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California Coastal Commission, South Coast District
Department of Health Services, Public Water Supply Branch
Los Angeles County, Department of Public Works, Environmental Programs Division
Los Angeles County, Department of Health Services
City of Los Angeles, Bureau of Engineering, Wastewater Systems Engineering Division
ULARA Watermaster
Water Replenishment District of Southern California
Ventura County Air Pollution Control District
Ventura County Public Works
Ventura County Department of Public Health
Ms. Sally Coleman, Ventura County Watershed Protection District
Ms. Darla Weiss, Ventura County Watershed Protection District
Ms. Linda Parks, Ventura County Board of Supervisors
City Manager, City of Simi Valley
Dr. Mark Gold, Heal the Bay
Mr. David Beckman, NRDC
Mr. Damon Wing, Wishtoyo Foundation
Friends of the Los Angeles River
Los Angeles and San Gabriel Rivers Watershed Council
Bell Creek Homeowners Association, c/o Jerry Murphy
Ms. Carol Henderson, Office Manager, Bell Canyon Association
Ms. Barbara Johnson, Susana Knolls Homeowners, Inc.
Ms. Gayle Demirtas, Simi Valley Library
Mr. Howard Kaplan and Mr. Arthur Pinchey, Brandeis-Bardin Institute
Dr. Joseph K. Lyou, Executive Director, Committee to Bridge the Gap (CBG)

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Mr. William McIlvaine, Boeing
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Mr. Lee Solomon, Tetra Tech

State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. R4-2004-0111

WASTE DISCHARGE REQUIREMENTS
FOR
THE BOEING COMPANY
(Santa Susana Field Laboratory)
(NPDES NO. CA0001309)

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), finds:

Background

1. The Boeing Company (hereinafter Boeing or Discharger) discharges waste from its Santa Susana Field Laboratory (SSFL) facility under waste discharge requirements, which serve as a National Pollutant Discharge Elimination System (NPDES) permit, contained in Order No. 98-051 adopted by this Regional Board on June 29, 1998 (NPDES Permit No. CA0001309).

2. Boeing has filed a report of waste discharge and has applied for renewal of its waste discharge requirements and NPDES permit for discharge of wastes to surface waters.

Description of Facility

3. SSFL is located at the top of Woolsey Canyon Road in the Simi Hills, Ventura County, California (Figure 1). The developed portion of the site comprises approximately 1,500 acres. There is 1,200-acres of undeveloped land located to the south. Recently, an additional 150-acre undeveloped land has been purchased to the north of the site. SSFL is owned by both Boeing and the National Aeronautical Space Agency (NASA). The United States Department of Energy (DOE) also owns several buildings located in Area IV, with the land being under the ownership of Boeing.

4. Boeing operations at SSFL since 1950 include research, development, assembly, disassembly, and testing of rocket engines, missile components, and chemical lasers. DOE conducted past operations in research and development of energy related programs, and seismic testing experiments. Current DOE activities onsite are solely

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Revised: January 14, 2004
Revised: February 27, 2004
Revised: March 25, 2004
Revised: June 22, 2004
Revised: July 1, 2004

related to facility decontamination, decommissioning, and environmental remediation and restoration.

5. Current Boeing activities at SSFL that contribute to discharges from the site include rocket engine testing where water is used to cool flame deflectors, fire suppression equipment, and pressure testing of equipment used to support rocket engine testing. Other facility support activities such as cooling, heating, domestic waste treatment, and ground water treatment contribute to discharges from the site as well.

6. Surface Impoundments: There are nine closed surface impoundments at the SSFL that are regulated under the Resource Conservation Recovery Act (RCRA). The nine impoundments are closed and regulated by Department of Toxic Substances Control (DTSC) under two postclosure permits issued in 1995. These impoundments include: Engineering Chemistry Laboratory(ECL), Advanced Propulsion Test Facility (APTF) 1 & 2, Storable Propellant Area (SPA) 1 & 2, Systems Test Lab (STL) IV 1 & 2, Delta skim pond and the Alfa Bravo skim pond. A tenth surface impoundment, the Propellant Load Facility (PLF), was clean closed and did not require a postclosure permit.

7. Nuclear Operations Decontamination and Decommissioning: There are currently no programs at the SSFL that employ special nuclear materials. Current decommissioning activities have reduced the inventory of radioactive waste to approximately 5 curies. Essentially all this material is stored in shielded vaults located at the Radioactive Materials Handling Facility (RMHF). SSFL continues to utilize radioisotopes in the form of calibration sources that are necessary to calibrate radiation detectors and counting equipment. Periodic radiological monitoring of surface waters is conducted under the existing NPDES permit. Three radiological facilities located in Area IV of the SSFL remain to be decomissioned and storm water run-off from the area is monitored for radioactivity. The DOE is responsible for the cost of decontamination and decommissioning, the California Department of Health Services (Radiological Health Branch) has radiological oversight responsibilities at SSFL.

8. Monomethyl Hydrazine Usage: Monomethyl hydrazine (MMH), a propellant, has been used for research, development and testing of rocket engines at SSFL since 1955. MMH that is released as a result of testing operations is captured and treated by an ozonation unit under a variance granted by DTSC. As a result, MMH is not released to the ponds from this area. MMH may be used at the Systems Test Lab 4 (STL-4) and may be stored at the SPA. MMH will not be used at APTF.

9. Energy Technology Engineering Center (ETEC) Cogeneration Operations: The Sodium Component Testing Installation (SCTI) (cogeneration) unit of ETEC utilized two cooling tower operations, Power Pac and E-5. Both systems have been shut down and will not be reactivated. The facility has been decommissioned and was demolished in July, 2003.

10. CTL-3 Chemical Laser Testing: CTL-3 is shut down and the facility is not expected to be reactivated. There is no discharge currently from this area.

11. Future Operations: Since SSFL is a test facility, it is difficult to anticipate future test projects and possible wastewater generation. Following are discussions of potential future operations:

Treatment Under Tiered Permitting Rules: Boeing may explore the feasibility of treating certain waste streams by either a mobile or fixed hazardous waste treatment unit operating under DTSC Permit-By-Rule requirements. The waste streams to be treated would be classified under these regulations as non-RCRA, RCRA, or RCRA exempt hazardous waste. Treated effluent would then be released into the ponds.

Other Wastestreams: Waste streams that may contain trace quantities of certain toxic materials used in cleaning, assembly, testing and support operations may be generated that will be discharged to the receiving ponds.

Description of Waste Discharge

12. SSFL has the potential (based on the 24-hour duration, 10 year return storm event) to discharge a total of approximately 272 million gallons per day (MGD) of storm water runoff that has the potential to contain pollutants from the facilities. Approximately 60% of the discharge exits the property via two southerly discharge points (Discharge Outfalls 001 and 002) to Bell Creek, a tributary to the Los Angeles River, a water of the United States, with its confluence located near the intersection of Bassett Street and Owensmouth Avenue in Canoga Park, above the estuary (see Figure 1).

The remaining storm water is discharged via Outfalls 003 through 007, 009 and 010 to the northwest toward the Arroyo Simi, Outfall 008 in Happy Valley towards Dayton Canyon Creek and via various drainages toward Arroyo Simi, Runkel, Dayton, and Woolsey Canyon. The storm water runoff from Happy Valley flows via Dayton Canyon Creek to Chatsworth Creek. Chatsworth Creek flows south to Bell Creek southwest of the intersection of Shoup Avenue and Sherman Way. Bell Creek subsequently flows southeast to the Los Angeles River.

13. Groundwater Remediation: During the early 1950s to the mid-1970s, volatile organic compounds were utilized for the cleaning of hardware and rocket engine thrust chambers, and for the cleaning of other equipment. These solvents migrated into the subsurface, contaminating groundwater primarily with trichloroethylene (TCE) and 1,2-dichloroethylene (1,2-DCE).

As a result, there is now an extensive groundwater remediation/investigation program in progress at the SSFL, which includes pumping, treating and storing groundwater at the facility. Currently, this system is composed of eight treatment systems, five active and three inactive, which have the capability of producing up to 578 million gallons per year of groundwater treated to remove the volatile and in some cases semi-volatile organic compounds. The treatment system is not designed to treat other pollutants such as perchlorate or metals. Treated groundwater is discharged directly into one of five ponds included in the water reclamation system via naturally occurring streambeds and in some cases man made watercourses present onsite. The chemical treatment used for the

groundwater treatment systems consists of ultraviolet light and hydrogen peroxide oxidation, and carbon adsorption. The physical treatment consists of air stripping towers. These treatment systems are regulated under RCRA hazardous waste permits or administrative order issued by DTSC, and various air quality control permits issued by Ventura County. Future plans to add new wells may increase the volume into the system by 25%. Pumping rates in the future may increase or decrease, depending upon the outcome of the groundwater remediation-testing program. In addition, there will also be intermittent pilot projects where test wells will be drilled and groundwater treated to determine optimum locations for future wells.

14. Water used at SSFL for personnel and for industrial purposes (such as quenching during engine test operations) is supplied by both the Calleguas Water District and a bottled water supplier. The water used for industrial purposes may after use be discharged to the onsite streambeds and watercourses and ponds.

15. Two package-type activated sludge sewage treatment plants (STP1 and STP3) previously provided secondary and tertiary treatment for most of the domestic sewage generated onsite. Disinfected sewage effluents from the activated sludge facilities were directed to the reclaimed water system reservoirs (unlined ponds). Water from the reservoirs was routinely reused for industrial purposes. A third activated sludge sewage treatment plant (STP2) is available, but has not been used recently.

    Operations terminated at STP3 in October 2001 and at STP1 in December 2001. Domestic sewage, which was previously treated at the sewage treatment plants, has been diverted offsite. The STP1 and STP3 basins are currently used as collection points. Every few days, vacuum trucks transport the accumulated waste off site for treatment. The Discharger has requested that the permit include effluent limits for potential future discharges from the plants.

16. The SSFL utilizes a system of natural, unlined and man-made ponds and channels to collect and reuse water as a cooling media and for fire suppression during rocket engine and component hot fire testing and to provide for storm water settling as a BMP. Water supplied to the system comes from any one, or a combination of the following, sources: storm water, treated groundwater, tertiary treated sanitary sewage, recycled test cooling water, or domestic water purchased from an established purveyor. The water is stored in a series of steel tanks located in Area 2 called Skyline. The water is transferred by gravity to either the Alfa or Bravo test facilities for use as cooling and fire protection water during test operations. Excess water from these operations is returned to the ponds through open, unlined channels. The water is then pumped back to the storage tanks at Skyline for reuse. If the demand for water exceeds the reclaimed water supply, domestic water is used to make up the difference. The reclaimed water system is separated from the domestic water supply by air gaps and backflow prevention devices.

    Area I utilizes the R-1 Pond as a reservoir for the reclaimed water system. Water retained in the R-1 Pond is comprised of primarily effluent from groundwater treatment systems. Other sources include effluent from Sewage Treatment Plant 1 and seasonal rain events. If the supply of reclaimed water exceeds requirements, the R-1 Pond will overflow into Perimeter Pond; excess water from Perimeter Pond will then flow south to

Bell Creek through Outfall 001. Discharges through Outfall 001 are rare, and will usually only occur after extensive rainfall over an extended period.

Areas II, III, and IV share a common system for reclaimed water collection and distribution, which will be referred to as Area IV. Area IV uses Silvernale Pond and R-2A Pond as reservoirs for the reclaimed water system. As in Area I, the primary source of water stored in the ponds comes from groundwater treatment operations. Other sources include effluent from Sewage Treatment Plant 3, cooling water runoff from test operations and seasonal rain events. If the supply of reclaimed water exceeds requirements, the water will be discharged to the south through R-2A Pond, and then to Bell Creek through Outfall 002. Reclaimed water may be pumped from either Silvernale or R-2A Pond to the reclaimed water storage tanks located at Skyline, as needed.

Industrial operations onsite discharge untreated wastewater directly to either constructed or natural drainage areas and streambeds. The wastewater flows to ponds located onsite and may subsequently be used in other industrial activities such as quenching operations during engine tests. These natural drainage areas and streambeds are waters of the United States.

17. The water reclamation system located onsite consists of five active ponds (Figure 2) used for collection and storage of reclaimed water. They are:

R-1 Pond	capacity 3.7 million gallons
Perimeter Pond	capacity 1.3 million gallons
Silvernale Pond	capacity 6.0 million gallons
R2-B Pond	capacity 200,000 gallons
R2-A Pond	capacity 2.5 million gallons

Also shown on Figure 2 is the Coca Pond. This pond was previously used as a retention basin to collect water from the space shuttle main engine testing area. When Coca Pond is filled to capacity, it discharges to the R-2 Pond. The pond is currently used to collect water that may leak from the fire suppression system located in the former test area. If sufficient leaks occur, the pond discharges to R-2.

18. SSFL has the capability to redirect the flow in each of the five ponds via unlined channels, water lines, or pumping into water storage tanks as follows:

R-1 Pond	Flow may be discharged to Perimeter Pond or pumped to the Reclaimed Water Storage Tanks.
Perimeter Pond (PP)	Flow may be released to Bell Canyon or pumped to R-1 Pond.
Silvernale Pond	Effluent flows by gravity to R2-A Pond.
R2-B Pond	This pond is a silt inlet to R-2A Pond. Flow goes directly to R-2A Pond.

R2-A Pond — Flow may be released to Bell Canyon, pumped to Silvernale Pond.

Air agitation is used at these ponds to control algae blooms. Chemical addition, such as copper sulfate, bromine or chlorine, are not used, but may become necessary in the future if agitation alone proves to be inadequate to control algae blooms.

19. The SSFL is underlain by alluvium, weathered bedrock and unweathered bedrock. The alluvium occurs in narrow drainages and alluvial valleys. The alluvium is underlain by the Chatsworth Formation. The Chatsworth Formation consists of fractured sandstone with interbeds of siltstone and claystone, which can transmit water as well as contaminants.

The groundwater system at the SSFL is divided into two aquifers; the shallow and the deep. The alluvium and weathered bedrock comprise the shallow aquifer, and the unweathered and fractured Chatsworth Formation comprise the deep aquifer.

The groundwater surface in the shallow aquifer generally reflects surface topography. In April 2002, groundwater depths in the shallow aquifer ranged from approximately 6 feet to 40 feet below grade. Wells in the deeper aquifer contained groundwater between approximately 23 feet to approximately 520 feet below grade.

20. Excess water from the onsite wastewater reclamation system is intermittently discharged to the southern Discharge Outfalls 001 and 002 (See Figure 3 Process Diagram)

The intermittent wastewater flows are listed below.

Domestic Wastewater

LOCATION		FLOWS (MGD)		
From	To	Max	Average	Design
Area I	R-1 (PP)	0.012	0.012	0.04
Area II	Area III	0.0	0.0	0.05
Area III	R-2	0.022	0.008	0.0236
Totals		0.034	0.000	0.1136

Industrial Wastewater

LOCATION		FLOWS (MGD)		
From	To	Max	Average	Design
APTF	R-1	0.013	0.0003	0.013
Alfa Test Area 1	R-2	0.002	0.002	0.002
Alfa Test Area 3	R-2	0.002	0.002	0.002
Bravo Test Area	R-2	0.00003	0.0000	0.00003
Groundwater	R-2	0.835	0.050	0.835
Groundwater	PP	0.648	0.000	0.648
STL-IV (Alt. Test)	R-2B	0.0016	0.0000	0.0016
STL-IV (AM. Test)	R-2B	0.0005	0.0000	0.0005
STL-IV (Firex)	R-2B	0.00004	0.00000	0.00004
RNTF Bldg. 222	R-2	0.0004	0.0004	0.0004
CTL-3	R-1	0.0100	0.0000	0.0100
Totals		1.5123	0.0547	1.5123

21. The current Order included estimates of discharges from the Seismic Test Area of 0.0002 mgd. The operations at that area have ceased, the building is inactive and scheduled for demolition. Hence, there are no projected discharges from that location.

    The current Order also includes a total design flow from industrial discharges of 1.6338 mgd. The design flow in this Order is 1.5123 mgd. The decrease in the design flow is due to operations that have ceased, facilities that have been demolished, and a decrease in the pump rate for the groundwater treatment systems.

22. Previously, in dry weather, ongoing activities were normally sufficient to use the water generated from onsite groundwater treatment systems. However, in recent years this water balance has changed. Water now being added into the system from the Calleguas Water District, plus the reduction of testing activities, has caused releases from R-2A Pond (located upstream from Outfall 002) to become intermittent. During hot weather, the water released will either evaporate or percolate into the ground without reaching Discharge Outfall 002. Thus, no offsite discharge of water occurs during dry weather.

23. The wastewater, which is a combination of storm water runoff, treated sewage effluent, treated groundwater, and water from industrial processes, is discharged offsite through Outfall 001, located at Latitude 34° 12' 49.7" North and Longitude 118° 41' 43.7" West, or through Outfall 002, located at Latitude 34° 13' 2.4" North and Longitude 118° 42' 15.4" West. These two discharge outfalls are located approximately 6,000 feet south of the final retention ponds located at the edge of the developed portion of the site.

24. Many of the areas discharging wastewater to the drainage areas and streambeds are associated with activities that are being regulated by DTSC under RCRA. DTSC is exercising its RCRA authority through Post Closure Permits and corrective action oversight of contaminated areas. The corrective action oversight includes delineation of areas of contamination, as well as subsequent cleanup operations at solid waste management units (SWMUs) and areas of concern onsite. The Post Closure Permits cover the operation of the groundwater treatment systems used during the cleanup.

25. The 1995 Final SB 1082 Framework which was issued on December 14, 1995 documents the framework for implementing Health and Safety Code Section 25204.6(b) dealing with jurisdictional overlap between the DTSC and the Regional Water Quality Control Boards (RWQCBs). SB 1082 requires that "sole jurisdiction over the supervision of that action [meaning oversight of those corrective action activities] is vested in either the department or the State Water Resources Control Board and the California Regional Water Quality Control Boards." Since many of the identified wastewater sources are currently involved in the RCRA corrective action or the Post Closure Permits with DTSC as the oversight agency and consistent with RCRA, DTSC will ensure that the discharges from these operations meet the substantive Clean Water Act requirements. Regional Board staff will provide appropriate comments during the revision of the RCRA permits, which is scheduled for renewal in May 2005, to ensure the Clean Water Act, Porter-Cologne Act, and the Basin Plan requirements are met. This Order requires the final, downstream outfalls (Serial Nos. 001 and 002) to comply with water quality standards, and these outfalls are regulated under this Order.

There are several other operations that are ongoing which are not included in the RCRA corrective action that discharge wastewater to the onsite drainageways and streambeds. These activities will be covered by this NPDES permit.

26. The operation evaluated at SSFL and the agency (RWQCB or DTSC) with primary oversight authority and the NPDES outfall number associated with the operation if the Regional Board has oversight are listed below (Figure 2).

Operation	Current NPDES Outfall No.	Agency
1. Wastewater and Storm water runoff	001	RWQCB
2. Wastewater and storm water runoff	002	RWQCB
3. Storm water Radioactive Material Handling Facility	003	RWQCB
4. Storm water Sodium Reactor Exp.	004	RWQCB
5. Storm water Sodium Burn Pit 1	005	RWQCB
6. Storm water Sodium Burn Pit 2	006	RWQCB
7. Storm water Building 100	007	RWQCB
8. Storm water Happy Valley	008	RWQCB
9. Storm water WS-13 Drainage	009	RWQCB
10. Storm water Building 203	010	RWQCB
11. R-1 Pond	-----	DTSC
12. Perimeter Pond	011	RWQCB

Operation	Current NPDES Outfall No.	Agency
13. R-2 Ponds (R-2A and R-2B)	-----	DTSC
14. R-2 Spillway	018	RWQCB
15. Silvernale Pond	-----	DTSC
16. Alfa Test Stand	012	RWQCB
17. Bravo Test Stand	013	RWQCB
18. WS-5 Groundwater Treatment System (GWTS)/ Ultraviolet light/perioxidation (UV/P)	-----	DTSC
19. RD-9 GWTS UV/P	-----	DTSC
20. Alfa GWTS/Air Stripping Towers (AST)	-----	DTSC
21. Delta GWTS/AST	-----	DTSC
22. STLV-IV GWTS/AST	-----	DTSC
23. Area 1 Road GWTS/AST	-----	DTSC
24. Bravo GWTS/AST	-----	DTSC
25. Canyon GWTS/AST	-----	DTSC
26. Interim GWTS near FSDF*	-----	DTSC
27. Interim GWTS near Bldg 59*	-----	DTSC
28. Interim GWTS near RMHF*	-----	DTSC
29. APTF	014	RWQCB
30. STP-1 – effluent	015	RWQCB
31. STP-2 – effluent	016	RWQCB
32. STP-3 – effluent	017	RWQCB

* Implemented in Interim Measures at the site. If the systems continue to operate they will be included in the revised Post Closure Permit.

Description of Storm Water Sampling

27. One objective of this Order is to protect the beneficial uses of receiving waters. To meet this objective, storm water runoff discharges from the SSFL are subject to requirements stipulated in this NPDES permit and the Discharger will be required to comply with all applicable provisions of the Storm Water Pollution Prevention Plan (Attachment A). This plan includes requirements to develop, implement, and when appropriate update a Storm Water Pollution Prevention Plan (SWPPP) along with Best Management Practices (BMPs) with the intent of preventing all pollutants from contacting storm water and with the intent of keeping all contaminants of concern from moving into receiving waters.

28. Past operations at SSFL have resulted not only in contamination of the groundwater with violatiles but also with various types of surface and near surface soil contamination. Previous investigations and sampling has confirmed the presence of elevated concentrations of mercury and perchlorate in soil, which has been present in storm water runoff in elevated concentrations. The presistent transport of these contaminants offsite in storm water requires that these contaminants have effluent limits in this Order.

29. Storm water from APTF flows toward Bell Creek and the Los Angeles River. Current operations at the facility include small engine testing using kerosene (RP-1), hydrogen, potentially alcohol, methanol, peroxide, and liquid oxygen (LOX). Nitrogen is also used for purge gas. After testing the staging areas are not routinely washed down to remove residual contaminants from the test operations. During normal operations testing may occur during storm events.

    It is likely that contaminants associated with the engine test material would be present in the storm water runoff from the area. Hence, this permit requires that the storm water runoff from the area be monitored. If the monitoring data indicates reasonable potential, the permit will be reopened and effluent limitations will be implemented. The Discharger has indicated that the standard operating procedures for the area in the future will include washdowns of the staging areas after engine tests. The water associated with the washdown will be collected and disposed of offsite. If testing operations are required during storm events, the Discharger will collect the storm water runoff from the staging area for offsite disposal. If washdowns do not occur after test operations or if testing occurs during storm events and the water is not collected for offsite disposal, the Discharger will be required to sample it as stipulated for other storm water monitoring locations.

30. Storm water runoff from the area that drains to discharge points 001 and 002 is estimated at 160 MGD (based on a 24-hour duration, 10-year return storm). This runoff is mixed with industrial waste collected in the ponds prior to discharge.

31. The estimated flow from the area that drains storm water only from the northwest slope and discharges it via discharge points 003, 004, 005, 006, and 007 are 0.004, 0.039, 0.006, 0.096, and 0.032 MGD respectively. The flow from these locations exits the site leading to Meier Canyon towards the Arroyo Simi (Figure 2). The Arroyo Simi is a tributary to Calleguas Creek, a water of the United States. The locations and the associated drainage areas are listed below for each of the seven storm water only discharge locations:

Discharge Outfall	Latitude (North)	Longitude (West)	Vicinity
003 (RMHF)	34° 14' 4.0"	118° 42' 38.4"	Radioactive Materials Handling Facility
004 (SRE)	34° 14' 9.1"	118° 42' 23.9"	Former Sodium Reactor Experiment
005 (SBP-1)	34° 13' 48.1"	118° 43' 3.9"	Former Sodium Burn Pit 1
006 (SBP 2)	34° 13' 50.7"	118° 42' 59.9"	Former Sodium Burn Pit 2
007 (B100)	34° 13' 50.2"	118° 42' 52.5"	Building 100
009(WS-13)	Not Available	Not Available	WS-13 Drainage Area
010(Bldg. 203)	Not Available	Not Available	Building 203

There is no flow from these locations except during heavy rainfall. For purposes of access and safety, these sampling stations have been established inside the SSFL northwest property boundary. The stations are located in close proximity to past and/or existing radiological facilities or other operations, as is noted in the vicinity column above.

Additional storm water flow exits the site via various drainage channels into Meir, Runkle and Woolsey Canyons. The maximum estimated storm water flow from the site excluding the flow via Outfalls 001 and 002 is 136 MGD.

32. Storm water runoff from the northwest slope of the facility is monitored at Discharge Outfalls 003, 004, 005, 006, and 007, which discharge towards the Arroyo Simi. The outfall locations near the Northwest slope are located such that they capture runoff from past and existing radiological facilities.

33. The WS-13 Drainage area begins near the entrance to the property and traverses several potential areas of concern. The WS-13 drainage area collects storm water runoff from the Area 1 and Area 2 Landfill, and the former LOX plant located on NASA owned property. In addition, WS-13 picks up storm water run on from Sage Ranch where agricultural operations took place and a gun shooting range was located. This location has only been sampled once in the past. Additional data would provide information regarding the potential transport of contaminants in these areas offsite by storm water runoff. The WS-13 Drainage area will become Discharge Outfall 009; this outfall drains to Arroyo Simi.

34. Building 203 was formerly used as an instrumentation laboratory where various types of instrumentation were repaired and calibrated. The instrumentation included but was not limited to, thermometers and manometers that contained mercury. Also historically, a photographic processing lab was present in Building 202. Currently Building 203 is used for laser research and Building 202 is inactive. Operations in Building 203 include polishing, cleaning (using solvents and other chemicals), assembly and testing of various components in both open warehouse and clean room environments. All wastes are currently containerized and transported off site for disposal.

Building 203 has been added as Solid Waste Management Unit (SWMU) 5.2 under the RCRA corrective action program due to mercury contamination. Mercury has also been detected downgradient of the building in the surface soils of the adjacent drainage. An interim measure has been planned to remove the surface soil and the associated contamination. Storm water sampling of the runoff will provide information regarding the contaminant concentration in the storm water runoff. The storm water runoff from Building 203 will be sampled at Discharge 010. Discharges from Building 203 drains to the Arroyo Simi and subsequently to Calleguas Creek.

35. The area commonly referred to as Happy Valley receives storm water runoff from the former solid propellant testing area. A major component of the propellant was perchlorate. The propellant testing area is inactive and buildings have been demolished. Since the propellant has been used in the area and reasonable potential exists for the constituent to cause or contribute to an exceedance, an effluent limit for perchlorate and a requirement to sample the runoff for all other constituents tested for at Discharge Outfalls 003 through 007, has been included in this Order. The Discharger with DTSC oversight implemented an interim measure (soil removal activity) for soils contaminated with elevated levels of perchlorate during Fall 2003. The project should be completed in early 2004. The new storm water monitoring location is Discharge Outfall 008. Storm water from Happy Valley flows to Dayton Canyon Creek which merges with Chatsworth Creek. Chatsworth Creek

which flows south to Bell Creek southwest of the intersection of Shoup Avenue and Sherman Way. Bell Creek subsequently flows east and merges with Calabasas Creek at the Los Angeles River near the intersection of Vanowen Street and Owensmouth Avenue.

Description of Groundwater Treatment, Sewage Treatment Plant and Water Reclamation System Sampling

36. The groundwater treatment systems are designed to treat VOC contaminated groundwater. The groundwater is treated and subsequently discharged to channels that transport it around the site for reuse. Perchlorate has been detected in some of the wells. Since the five active RCRA permitted treatment systems are not designed to treat perchlorate, the Discharger has in some instances terminated the treatment of the pumped groundwater from that locations where perchlorate has been detected.

    The groundwater treatment systems monitoring and discharge requirements are included in the Hazardous Waste Facility Post-Closure Permit for SSFL which is managed by DTSC. Consequently, all activities associated with the groundwater treatment systems and discharges associated therewith will continue to be managed by DTSC. DTSC is required by RCRA to ensure that the requirements implemented in its permits comply with all applicable and appropriate Regional Board requirements.

37. The various test stands are used to test fire rocket engines built onsite. The fire suppression and cooling water used during testing may contain residual fuels and solvents. This wastewater is directed via lined and unlined channels to the reclamation ponds, which are used to store wastewater collected from the various onsite operations along with any storm water runoff for reuse onsite.

    The Regional Board will have oversight of the discharges from the active engine test stands. This permit will include requirements for monitoring of the discharges. The data collected will be used to evaluate reasonable potential of the discharge to exceed applicable requirements and if warranted; effluent limits will be implemented for the discharges.

38. The sewage treatment plants will continue to be managed by the Regional Board. The sewage treatment plants collect only domestic waste generated onsite. There is no pretreatment program in place since the facility does not handle any industrial waste. To implement Clean Water Act section 405(d), on February 19, 1993, USEPA promulgated 40 CFR Part 503 to regulate the use and disposal of municipal sewage sludge. This Order implements the regulations and it is the responsibility of the Discharger to comply with said regulations, which are enforceable by USEPA.

    The two operational plants (STP-1 and STP-3) are activated sludge sewage treatment plants that provide secondary and tertiary treatment for the domestic sewage from the facility. The disinfected sewage effluents are subsequently directed to the reclaim water system reservoir. The two plants are currently being used as collection reservoirs only,

previously had effluent limits for $BOD_5$20°C, coliform, and turbidity on discharges from the facilities. Sewage sludge generated was hauled offsite to the one of the facilities operated by Los Angeles County Sanitation Districts. The monitoring program for the sewage treatment plants included requirements for the previously mentioned constituents as well as pH, oil and grease and suspended solids. This permit will include requirements to monitor for priority pollutants, perchlorate, N-nitrosodimethylamine, 1,4-dioxane, and 1,2,3-trichloropropane to provide the data required to evaluate reasonable potential. If reasonable potential exists, effluent limits will be implemented.

39. The water reclamation system consists of five ponds located throughout the developed portion of the site. The treated groundwater, engine test stand wastewater and collected storm water may travel around the site, for months prior to being discharged offsite. The natural water courses located onsite are waters of the United States and are subject to regulation under the National Pollutant Discharge Elimination System provisions of the Clean Water Act. Since many of these ponds and water courses that connect these ponds are unlined, contaminants in the water may be deposited on surface soils or they may percolate down to shallow groundwater. Subsequent discharges offsite via these waterways may also transport these contaminants offsite.

The ponds, which are used to store the wastewater for future use, are in all cases included in solid waste management unites (SWMUs) currently being investigated by DTSC. These areas are included in the ongoing RCRA characterization and cleanup at the site and are managed by DTSC. There are two special cases, Perimeter Pond and the R-2 Pond Spillway which includes runoff from both R-2A and R-2B Ponds. The ponds are SWMUs and cleanup and characterization will proceed with DTSC oversight. The effluent from Perimeter Pond and the R-2 Pond Spillway will have Regional Board oversight for the required monitoring since the discharges routinely occur as a result of storm events and the discharge is to waters of the United States. The ponds also collect wastewater from a number of areas involved in cleanup operations that may contribute constituent concentrations to the discharge.

40. On December 17, 2003, the Regional Board received the December *2003 Technical Memorandum Analysis of Groundwater Recharge, Santa Susana Field Laboratory, Ventura County, California*, prepared by Montgomery Watson Harza on behalf of the Boeing Company. This document was submitted to DTSC in order to present a qualitative and quantitative analysis of groundwater recharge at the Santa Susana Field Laboratory. Regional Board staff have also reviewed this document and find that a reasonable conclusion for the amount of rainfall that infiltrates soil using a water balance method is between 23% to 26%. Using a chloride mass balance method resulted in a range of 1% to 12% rainfall infiltration. As these calculations by different methodologies differ significantly and are inconclusive, Regional Board staff find that there is insufficient data to suggest that rainfall will not significantly recharge groundwater in the underlying surficial soils, weathered and fractured bedrock. In addition, there has been no site-specific soil attenuation factor/model submitted for Regional Board staff review. Inasmuch, those limits placed in this Order to protect groundwater recharge beneficial uses and beneficial uses of underlying groundwater apply at end-of-pipe.

Applicable Plans, Policies, and Regulations

41. On June 13, 1994, the Regional Board adopted a revised *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) as amended on January 27, 1997, by Regional Board Resolution No. 97-02. The Basin Plan (i) designates beneficial uses for surface and groundwaters, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state antidegradation policy (*Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Board Resolution No. 68-16, October 28, 1968), and (iii) describes implementation programs to protect all waters in the Region. In addition, the Basin Plan incorporates all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The Regional Board prepared the 1994 update of the Basin Plan to be consistent with all previously adopted State and Regional Board plans and policies. This Order implements the plans, policies and provisions of the Regional Board's Basin Plan.

42. The receiving water for Discharges from Outfall 008 enters Dayton Canyon Creek, flows via Chatsworth Creek to Bell Creek, southwest of the intersection of Sherman Way and Shoup Avenue, and subsequently to the Los Angeles River. The receiving water for Outfalls 001, and 002 is Bell Creek and subsequently to the Los Angeles River. The Basin Plan contains water quality objectives for, and lists the following beneficial uses for Dayton Canyon Creek, Bell Creek, and the Los Angeles River.

Dayton Canyon Creek – Hydrologic Unit 405.21

Existing:	wildlife habitat
Intermittent:	groundwater recharge, contact and non-contact water recreation; warm freshwater habitat.

Bell Creek – Hydrologic Unit 405.21

Existing:	wildlife habitat
Intermittent:	groundwater recharge, contact and non-contact water recreation; warm freshwater habitat.

The Los Angeles River upstream of Figueroa Street – Hydrologic Unit 405.21:

Existing:	groundwater recharge; contact and non-contact water recreation, warm freshwater habitat; wildlife habitat; and wetland habitat.
Potential:	industrial service supply.

Los Angeles River downstream of Figueroa Street –Hydrologic Unit 405.15

Existing:	groundwater recharge, contact and non-contact water recreation, and warm freshwater habitat.
Potential:	industrial service supply and wildlife habitat.

Los Angeles River downstream of Figueroa Street – Hydrologic Unit 405.12

Existing: groundwater recharge; contact and noncontact water recreation; warm freshwater habitat; marine habitat; wildlife habitat; and rare, threatened, or endangered species.
Potential: industrial service supply; industrial process supply; migration of aquatic organisms; spawning, reproduction, and/or early development; and shellfish harvesting.

Los Angeles River Estuary – Hydrologic Unit 405.12

Existing: industrial service supply; navigation; contact and non-contact water recreation; commercial and sport fishing; estuarine habitat; marine habitat; wildlife habitat; rare, threatened, or endangered species; migration of aquatic organisms; spawning, reproduction, and/or early development; and wetland habitat.
Potential: shellfish harvesting.

Dayton Canyon Creek, Bell Creek and all of the reaches of the Los Angeles River listed, except for the estuary, also have municipal and domestic supply (MUN) listed as a potential beneficial use with an asterisk in the Basin Plan. This is consistent with Regional Board Resolution 89-03; however the Regional Board has only conditionally designated the MUN beneficial uses and at this time cannot establish effluent limitations designed to protect the conditional designation.

43. The storm water runoff discharges from to the northwest side of SSFL (Outfalls 003 through 007) exit the site and flows down the Meier and Runkle Canyons toward the Arroyo Simi. The Arroyo Simi is tributary to the Calleguas Creek. The beneficial uses of the Arroyo Simi and other tributaries of the Calleguas Creek are:

Arroyo Simi – Hydrologic Unit 403.62

Existing: wildlife habitat, rare, threatened, or endangered species habitat,
Intermittent: industrial process supply, groundwater recharge, freshwater replenishment, contact and non-contact water recreation, warm freshwater habitat;

Arroyo Las Posas – Hydrologic Unit 403.62

Existing: groundwater recharge, freshwater replenishment, contact and non-contact water recreation, warm freshwater habitat, wildlife habitat,
Potential: industrial process supply, industrial service supply, agricultural supply, and cold freshwater habitat.

Calleguas Creek – Hydrologic Unit 403.12

Existing: industrial service supply, industrial process supply, agricultural supply, groundwater recharge, contact and non-contact water recreation, warm freshwater habitat, and wildlife habitat,

Calleguas Creek – Hydrologic Unit 403.11

Existing: agricultural supply, groundwater recharge, freshwater replenishment; contact and non-contact water recreation, warm freshwater habitat, cold freshwater habitat, wildlife habitat, rare, threatened or endangered species, and wetland habitat,

Calleguas Creek Estuary – Hydrologic Unit 403.11

Existing: noncontact water recreation, commercial and sport fishing, estuarine habitat, wildlife habitat, rare, threatened or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, and wetland habitat;
Potential: navigation and water contact recreation.

Mugu Lagoon – Hydrologic Unit 403.11

Existing: navigation, non-contact water recreation, commercial and sport fishing, estuarine habitat, marine habitat, preservation of biological habitats, wildlife habitat, rare, threatened or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, shellfish harvesting, and wetland habitat,
Potential: water contact recreation.

All of the reaches of Calleguas Creek, except the estuary, also include conditional municipal and domestic supply designations as an intermittent or potential beneficial use in the Basin Plan.

44. **Ammonia Basin Plan Amendment.** The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Board with the adoption of Resolution No. 2002-011, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (including enclosed bays, estuaries and wetlands) with Beneficial Use designations for protection of Aquatic Life.* The ammonia Basin Plan amendment was approved by the State Board, the Office of Administrative Law, and USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively. Although the revised ammonia water quality objectives may be less stringent than those contained in the 1994 Basin Plan, they are still protective of aquatic life and are consistent with USEPA's 1999 ammonia criteria update.

45. ***Title 22 of the California Code of Regulations***. The California Department of Health Services (DHS) established primary and secondary maximum contaminant levels (MCLs) for a number of chemical and radioactive contaminants. These MCLs can be found in Title 22, California Code of Regulations (Title 22). Chapter 3 of the Basin Plan incorporates portions of Title 22 by reference. In addition, narrative objectives require that ground waters shall not contain taste or odor-producing substances in concentrations that affect beneficial uses. The secondary MCLs in Title 22 are designed to ensure that water's taste and odor does not affect its suitability to drink. Title 22 MCLs have been incorporated into NPDES permits and Non-Chapter 15 WDRs to protect the municipal and domestic supply (MUN) and groundwater recharge (GWR), where the underlying groundwater is designated MUN, beneficial uses.

Groundwater Recharge. Sections of Bell Creek and Arroyo Simi, near the SSFL discharge points, are designated as GWR indicating that groundwater recharge is a beneficial use. Surface water from the Bell Creek enter the Los Angeles River Watershed. The headwaters of the Los Angeles River originate in the Santa Monica, Santa Susana, and San Gabriel Mountains. Four basins in the San Fernando Valley area contain substantial deep groundwater reserves and are recharged mainly through runoff and infiltration.

Surface water discharges from the north west edge of the SSFL are directed to Arroyo Simi a tributary located in the Calleguas Creek Watershed. Supplies of groundwater are critical to agricultural operations and industry (sand and gravel mining) in this watershed. Moreover, much of the population in the watershed relies upon groundwater for drinking. Since groundwater from these basins is used to provide drinking water to a large portion of the population, Title 22-based limits are needed to protect that drinking water supply. By limiting the contaminants in the SSFL discharges, the amount of pollutants entering the surface waters and groundwater basins are correspondingly reduced. Once groundwater basins are contaminated, it may take years to clean up, depending on the pollutant. Compared to surface water pollution, investigations and remediation of groundwater are often more difficult, costly, and extremely slow. For these reasons Title 22-based limits will remain in the NPDES permit where there is reasonable potential.

Action Level for Perchlorate. DHS also establishes Action Levels (ALs), or health-based advisory levels for chemicals in drinking water that lack MCLs. An AL is the concentration of a chemical in drinking water that is considered not to pose a significant health risk to people ingesting that water on a daily basis. ALs may be established by DHS for non-regulated chemical contaminants when one of the following occurs:

1. A chemical is found in an actual or proposed drinking water source, or
2. A chemical is in proximity to a drinking water source, and guidance is needed, should it reach the source.

An AL is calculated using standard risk assessment methods for non-cancer and cancer endpoints, and typical exposure assumptions, including a 2-liter per day ingestion rate, a 70-kilogram adult body weight, and a 70-year lifetime. For chemicals that are considered carcinogens, the AL is considered to pose "de minimus" risk, i.e., a theoretical lifetime risk of up to one excess case of cancer in a population of 1,000,000

people – the 10^{-6} risk level. (In that population, approximately 250,000 – 300,000 cases of cancer would be anticipated to occur naturally.) ALs may be revised from time to time to reflect new risk assessment information. Chemicals for which ALs are established may eventually be regulated by MCLs, depending on the extent of contamination, the levels observed, and the risk to human health. A number of the contaminants for which action levels were originally established now have MCLs.

In 1997, DHS established an 18 µg/L AL for perchlorate. DHS used the upper value of the 4 to 18 µg/L range that resulted from the "provisional reference does that USEPA prepared in support of its Superfund activities. A revised external review draft perchlorate reference dose corresponding to a drinking water concentration of 1 µg/L was released in 2002. DHS concluded that the AL needed to be revised downward. On January 18, 2002, DHS reduced the perchlorate AL to 4 µg/L. The revised AL coincided with the analytical detection limit for purposes of reporting and was at the lower end of the 4 to 18 µg/L range from the USEPA 1992-1995 assessment. The Public Health Goal (PHG) for perchlorate was developed by Office of Environmental Health Hazard Assessment based on a contemporary health risk assessment. This new information was provided to DHS and on March 11, 2004 the AL for perchlorate was revised to 6 µg/L, a value identical to the PHG that will be used by DHS to develop the MCL for perchlorate. The effluent limit for perchlorate (6 µg/L) included in this WDR has been updated to reflect the change implemented by DHS.

Perchlorate and its salts are used in, but not limited to, solid propellant for rockets, missiles, and fireworks. The defense and aerospace industries purchase more than 90 percent of all the perchlorate manufactured. Perchlorate has historically been used at SSFL and thus is considered a chemical of concern at the site. Monitoring data collected during the tenure of the current permit indicates that perchlorate is present in the storm water runoff in Happy Valley and it has been detected in some of the groundwater wells utilized in the cleanup operations ongoing with DTSC oversight.

Perchlorate can interfere with iodide uptake by the thyroid gland; this can result in a decrease in the production of thyroid hormones, which are needed for prenatal and postnatal growth and development, as well as for normal body metabolism. Neither, the CTR, NTR or the Basin Plan has requirements stipulated for perchlorate. Since there is no drinking waters standard, or maximum contaminant level (MCL), the DHS uses the AL as an advisory level. The Regional Board, exercising its best professional judgement, in the review of the "best available science" has in the past considered and used ALs when deemed appropriate to establish final effluent limitations in WDRs and NPDES permits adopted by this Board, to implement the Basin Plan narrative WQO, *"all waters shall be maintained free of toxic substance that produce detrimental physiological responses in human, plant, animal, or aquatic life,"* and to prevent degradation of valuable groundwater sources of drinking water.

46. Under title 40 Code of Federal Regulations (40 CFR) section 122.44(d), *Water Quality Standards and State Requirements*, "Limitations must control all pollutants or pollutant parameters (either conventional, non-conventional, or toxic pollutants), which the Director determines are or may be discharged at a level which will cause, have the

reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." Where numeric effluent limitations for a pollutant or pollutant parameter have not been established in the applicable state water quality control plan, 40 CFR section 122.44(d)(1)(vi) specifies that water quality-based effluent limitations (WQBELs) may be set based on United States Environmental Protection Agency (USEPA) criteria, and may be supplemented where necessary by other relevant information to attain and maintain narrative water quality criteria, and to fully protect designated beneficial uses.

47. Section 402(p) of the federal Clean Water Act (CWA), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. The Discharger in addition to meeting the effluent limits included in this permit for storm water discharges only will be required to develop and implement a SWPPP as stipulated in Finding 27. These requirements as they are met will protect and maintain existing beneficial uses of the receiving water.

48. Effluent limitation guidelines requiring the application of best practicable control technology currently available (BPT), best conventional pollutant control technology (BCT), and best available technology economically achievable (BAT), were promulgated by the USEPA for some pollutants in this discharge. Effluent limitations for pollutants not subject to the USEPA effluent limitation guidelines are based on one of the following: best professional judgment (BPJ) of BPT, BCT or BAT; current plant performance; or water quality based effluent limits (WQBELs). The WQBELs are based on the Basin Plan, other State plans and policies, or USEPA water quality criteria which are taken from the California Toxics Rule (CTR). These requirements, as they are met, will protect and maintain existing beneficial uses of the receiving water. The attached Fact Sheet for this Order, which has been reviewed and considered by the Regional Board, is considered part of this Order. The Fact Sheet includes specific bases for the effluent limitations, including the basis for determining reasonable potential for a pollutant to cause or contribute to an exceedance of water quality standards.

49. 40 CFR section 122.45(f)(1) requires that except under certain conditions, all permit limits, standards, or prohibitions be expressed in terms of mass units. 40 CFR section 122.45(f)(2) allows the permit writer, at its discretion, to express limits in additional units (e.g., concentration units). The regulations mandate that, where limits are expressed in more than one unit, the permittee must comply with both. Generally, mass-based effluent limits would ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limits. Concentration-based effluent limits, on the other hand, would discourage the reduction in treatment efficiency during low flow periods and would require proper operation of treatment units at all times. In the absence of concentration-based effluent limits, a permittee would be able to increase its effluent concentration (i.e., reduce its level of treatment) during low flow periods and still meet its mass-based effluent limits.

50. Effluent limitations established pursuant to sections 301 (Effluent Limitations), 302 (Water Quality-Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 304 (Information and Guidelines), and 402 (NPDES) of the CWA and amendments thereto, are applicable to the discharges herein.

51. The influent to the package type sewage treatment plants located at SSFL meet the requirements for the special consideration for less concentrated influent wastewaters. Section 133.103 of 40 CFR provides guidance on special considerations for secondary treated effluent. Paragraph (d) address less concentrated influent wastewater for separate sewers. The regulation states that:

> "The Regional Administrator or, if appropriate, State Director is authorized to substitute either a lower percent removal requirement or a mass loading limit for the percent removal requirements set forth in sections 133.102 (a) (3), 133.102 (a) (4) (iii), 133.102 (b) (3), 102.105 (a) (3), 133.105(b) (3) and 133.105(e) (1) (iii) provided that the permittee satisfactorily demonstrates that: (1) The treatment works is consistently meeting, or will consistently meet, its permit effluent concentration limits but its percent removal requirements cannot be due to less concentrated influent wastewater (2) to meet the percent removal requirements, the treatment works would have to achieve significantly more stringent limitations than would otherwise be required by the concentration-based standard, and (3) the less concentrated influent wastewater is not the result of excessive infiltration/inflow."

Consequently, this permit has substituted the mass loading limit for the percent removal requirement.

52. On May 18, 2000, the USEPA promulgated numeric criteria for priority pollutants for the State of California [known as the *California Toxics Rule* (CTR) and codified as 40 CFR section 131.38]. On March 2, 2000, State Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or* SIP). The SIP was effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through National Toxics Rule (NTR) and to the priority pollutant objectives established by the Regional Boards in their Basin Plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by the USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP was effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR.

53. The CTR and SIP require dischargers' submittal of data to the Regional Board to: (1) determine if WQBELs for priority pollutants are required; and (2) to calculate effluent limitations, if required. The policy further provides that the time schedule for providing the data shall be as short as practicable but not to exceed three years from the date of the SIP, which was May 22, 2000.

54. The CTR criteria for freshwater or human health for consumption of organisms, whichever is more stringent, were used to prescribe the effluent limitations in this Order to protect the beneficial uses of the Los Angeles River and the Calleguas Creek.

55. Under 40 CFR section 131.38(e)(6), the CTR authorizes the Regional Board to grant a compliance schedule for WQBELs based on CTR criteria for a period up to five years from the date of permit issuance, reissuance, or modification. The SIP provides a

compliance schedule for WQBELs (up to five years) and for WQBELs based upon Total Maximum Daily Loads (TMDL) and Waste Load Allocations development (up to 15 years). However, the USEPA has not yet approved the longer of the two compliance schedules nor depromulgated the five-year maximum in the CTR to allow for the 15 years in the SIP. Therefore, the more stringent provision, allowing a compliance schedule of five years, is the maximum duration authorized.

56. Technology-based effluent limits required a minimum level of treatment for industrial/municipal point sources based on currently available treatment technologies while allowing the discharger to use any available control techniques to meet the effluent limits. The 1972 CWA required treatment works treating domestic sewage (TWTDS) to meet performance requirements based on available wastewater treatment technology. The technology based-requirements for secondary treatment are specified in 40 CFR Part 133. These technology-based regulations apply to all (TWTDS) and identify the minimum level of effluent quality to be attained by secondary treatment in terms of five-day biochemical oxygen demand, total suspended solids, and pH.

57. State and Federal antibacksliding and antidegradation policies require Regional Board actions ensure that the waterbody will not be further degraded. Antibacksliding provisions are contained in Section 303(d)(4) and 402(o) of the CWA, and in 40 CFR section 122.44(l). Those provisions require a reissued permit to be as stringent as the previous permit with some exceptions where effluent limitations may be relaxed. For those limits carried forward, the Regional Board has determined that there is reasonable potential for the pollutant to cause or contribute to an exceedance of water quality standards in accordance with State Board Order No. WQ 2003-0009. Reasonable potential is determined using the procedures established in the SIP, informed by best professional judgment.

58. On October 28, 1968, the State Board adopted Resolution No. 68-16, Maintaining High Quality Water, which established an antidegradation policy for State and Regional Boards. Similarly, the CWA (section 304(d)(4)(B)) and USEPA regulations (40 CFR section 131.12) requires that all NPDES permitting actions be consistent with the federal antidegradation policy. Specifically, waters that are of a higher quality than needed to maintain designated beneficial shall be maintained at the higher water quality unless specific findings are made.

Watershed Management Approach and Total Maximum Daily Loads (TMDLs)

59. The Regional Board has implemented the Watershed Management Approach to address water quality issues in the region. Watershed management may include diverse issues as defined by stakeholders to identify comprehensive solutions to protect maintain, enhance, and restore water quality and beneficial uses. To achieve this goal, the Watershed Management Approach integrates the Regional Board's many diverse programs, particularly TMDLs, to better assess cumulative impacts of pollutants from all point and nonpoint sources. A TMDL, is a tool for implementing water quality standards and is based on the relationship between pollution sources and in-stream water quality conditions. The TMDL establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby provides the basis to establish water quality-

based controls. These controls should provide the pollution reduction necessary for a waterbody to meet water quality standards. This process facilitates the development of watershed-specific solutions that balance the environmental and economic impacts within the watershed. The TMDLs will establish waste load allocations (WLAs) and load allocations (LAs) for point and non-point sources, and will result in achieving water quality standards for the waterbody.

60. The Los Angeles River watershed is one of the largest in the Region. The headwaters of the Los Angeles River originate in the Santa Monica, Santa Susana, and San Gabriel Mountains. The river flows through industrial and commercial areas and is bordered by rail yards, freeways, and major commercial and government buildings. The Los Angeles River tidal prism/estuary begins in Long Beach at Willow Street and runs approximately three miles before joining with Queensway Bay located between the Port of Long Beach and the City of Long Beach.

The surface water discharges from Outfalls 001 and 002. Storm water only from Happy Valley, Discharge Serial 008 exits the site toward Dayton Canyon Creek, which flows into Chatsworth Creek. Chatsworth Creek flows southward to Bell Creek, near the intersection of Sherman Way and Shoup Avenue, and subsequently the Los Angeles River. The area where the facility is located is largely undeveloped. The majority of the Los Angeles River Watershed is considered impaired due to a variety of point and nonpoint sources. Bell Creek, which is the receiving water for the wastewater discharge from the SSFL, is on the 1998 303(d) list. High coliform count is the stressor listed Bell Creek. Downstream receiving waters are listed for high coliform count, volatiles (1,1-Dichloroethylene, tetrachloroethylene, and trichloroethylene), nutrients, oil, ammonia and others.

61. The TMDL for nutrients in the Los Angeles River is scheduled for consideration at the July 10, 2003 Board Hearing. The TMDLs will include WLAs for the 303(d)-listed pollutants. Upon completion of TMDL and approval by the State Board, USEPA promulgates and the Office of Administrative Law (OAL) approves a Basin Plan Amendment incorporating the TMDL. The Board subsequently adopts a WQBEL consistent with the corresponding WLA for dischargers discharging to the affected receiving water. If authorized, a time schedule may be included in a revised permit to require compliance with the final WQBEL. A TMDL for coliform in the Los Angeles River is scheduled for the near future.

62. Storm water runoff from Outfalls 003 through 007, 009 and 010 exiting the SSFL site does so near the northwest site boundary. The receiving water for the storm water runoff is the Arroyo Simi, a tributary of the Calleguas Creek. The Calleguas Creek Watershed extends from the Santa Monica Mountains and the Simi Hills in the south, to the Santa Susana Mountains, South Mountain, and Oak Ridge in the north. Land uses vary throughout the watershed. Urban developments are generally restricted to the city limits of Simi Valley, Moorpark, Thousand Oaks, and Camarillo. Agricultural activities are spread out along valleys and on the Oxnard Plain.

Storm water runoff exits the site and travels down Meier and Runkle Canyons towards the Arroyo Simi. Most of the land use around the facility is open area. Overall the

Calleguas Creek Watershed is considered an impaired watershed. It appears that the sources of many of these pollutants are agricultural activities. Approximately fifty percent of the watershed is still open space, although there is a severe lack of benthic and riparian habitat present. The runoff, when it is sufficient to reach the Arroyo Simi, enters it in Reach 1 – Hydrological Unit 403.62. The stressors listed in the 1998 State Board's California 303(d) list for this reach are ammonia, boron, chloride, sulfates and total dissolved solids. Elevated levels of chromium, nickel, selenium, silver and zinc were also reported in tissue samples.

63. Chloride TMDL and Chloride Limits. On March 22, 2002, the consent decree deadline for the establishment of a chloride TMDL, USEPA Region 9 established the Calleguas Creek Total Maximum Daily Load for chloride. The TMDL adopted by USEPA was based largely on the technical efforts produced by the Regional Board staff.

The Calleguas Creek Watershed Group in collaboration with USEPA Region 9 and the Regional Board is developing the *Calleguas Creek Watershed Salts TMDL Work Plan.* The work plan addresses chloride, TDS, sulfate and boron in the watershed. The Regional Board and USEPA may use the work product from the Calleguas Creek Watershed Group to establish a subsequent TMDL for chloride in the Calleguas Creek Watershed.

Discharges from SSFL enters the Calleguas Creek Watershed in Arroyo Simi Reach 7, which is included on the 303 (d) list as a chloride water quality limited sequent in the Calleguas Creek Watershed. There are no waste load allocations (WLAs) for point source discharges or load allocations (LAs) for nonpoint sources in effect under storm conditions in the TMDL. Since all discharges from the SSFL to the Arroyo Simi occur as a result of storm water runoff no chloride WLAs will be included in this Order for discharges from Outfalls 003 through 007, 009 and 010 to Arroyo Simi. However, based on existing data, SSFL does not appear to contribute chloride loading to the watershed at levels that would alter the assumptions of the TMDL or contribute to further impairment.

Nitrogen Compounds and Related Effects TMDL. On October 24, 2002, the Regional Board adopted Resolution No. 2002-017, Amendment to the *Basin Plan for the Los Angeles Region* to Include a TMDL for Nitrogen Compounds and Related Effects in Calleguas Creek (*Nitrogen Compounds and Related Effects* TMDL). The State Board approved the Nitrogen Compounds and Related Effects TMDL on March 19, 2003. The Office of Administrative Law approved the TMDL on June 5, 2003 and USEPA approved it on June 20, 2003.

The *Nitrogen Compounds and Related Effects* TMDL includes waste load allocations for ammonia (NH_3), nitrite as nitrogen (NO_2–N), nitrate as nitrogen (NO_3–N), and nitrate plus nitrite as nitrogen (NO_2–N + NO_3–N). The TMDL authorizes interim limits (expressed as interim waste allocations) for total nitrogen (NO_3-N + NO_2-N). The WLA applied to the publicly owned treatment works (POTW) in the watershed and the LAs are specified for agricultural discharges. Hence, this Order does not include the TMDL limits for ammonia, nitrate as nitrogen, nitrite as nitrogen, or nitrate plus nitrite as nitrogen for discharges of storm water only from the SSFL to Arroyo Simi and Calleguas Creek. However, based on

existing data, SSFL does not appear to contribute nitrogen loading to the watershed at levels that would alter the assumptions of the TMDL or contribute to further impairment.

64. To prevent further degradation of the water quality of Los Angeles River and the Calleguas Creek (Arroyo Simi), and to protect its beneficial uses, mixing zones and dilution credits are not considered in derivation of the effluent limitations in this Order.

This determination is based on:

- Many of the beneficial uses stipulated are intermittent for Dayton Canyon Creek, Bell Creek and the Arroyo Simi. The discharges from SSFL in many cases provide a significant portion of the headwaters for these waterbodies, specifically for Dayton Canyon Creek and Bell Creek. Since there is little assimilative capacity for Dayton Canyon Creek and Bell Creek, a dilution factor is not appropriate and the final WQBEL should be a numeric objective applied end-of-pipe. The assimilative capacity for Arroyo Simi, which is the receiving water for storm water discharges from the northern boundary of SSFL, has not been evaluated and consequently no dilution has been given for discharges to that receiving water.

- The discharge may contain the 303(d) listed pollutants that are bioaccumulative such as metals. These pollutants, when exceeding water quality criteria within the mixing zone, can potentially result in tissue contamination of an organism directly or indirectly through contamination of bed sediments with subsequent incorporation into the food chain. The SIP, section 1.4.2.2.B. states that the "Regional Board shall deny or significantly limit a mixing zone and dilution credit as necessary to protect beneficial uses..." It continues that "such situations may exist based upon the quality of the discharge... or the overall discharge environment (including ... potential for bioaccumulation)."

65. The Discharger may provide the information needed by the Regional Board to make a site-specific determination on allowing a mixing zone, including the calculations for deriving the appropriate receiving water and effluent flows, and/or the results of a mixing zone study. Upon receiving such data, the Regional Board will re-evaluate its determination for the need to incorporate dilution credits and will revise the effluent limitations as necessary.

Reasonable Potential Analysis

66. Discharges from the engine test stands, which routinely generate wastewater, had not previously been regulated independently. These discharges did not have specific monitoring requirements or effluent limits. This permit, in an effort to collect the data required to complete a reasonable potential analysis, includes monitoring requirements for discharges from the engine test stands and from the sewage treatment plants for priority pollutants.

67. 40 CFR section 122.44(d)(1)(i) and (ii) require that each toxic pollutant be analyzed with respect to its reasonable potential when determining whether a discharge (1) causes, (2) has the reasonable potential to cause, or (3) contributes to the exceedance of a receiving

water quality objective. This is done by conducting a reasonable potential analysis (RPA) for each pollutant. In performing the RPA, the permitting authority uses procedures that account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, and the sensitivity of the test species to toxicity testing (when evaluating whole effluent toxicity). Because of effluent variability, there is always some degree of uncertainty in determining an effluent's impact on the receiving water. The SIP addresses this issue by suggesting the use of a statistical approach.

68. Section 1.3 of the SIP requires that a limit be imposed for a toxic pollutant if (1) the maximum effluent concentration (MEC) is greater than the most stringent CTR criteria, (2) the background concentration is greater than the CTR criteria, or (3) other available information. These three criteria are routinely referred to as triggers. For the pollutants on the 303(d) list, which have been present in the effluent during past monitoring events, effluent limits derived using the CTR criteria will be imposed in the permit.

The first two triggers were evaluated using the California Permit Writers Training Tool (CAPWTT). While on contract with the State Board, Scientific Applications International Corporation (SAIC) developed this software to determine RPAs and, when reasonable potential exists, calculate the WQBELs, following procedures in SIP. The third trigger is evaluated by the permit writer utilizing all other information available to determine if a water quality-based effluent limitation is required to protect beneficial uses.

69. RPAs were performed for each of 126 priority pollutants for which effluent data were available. The basis for each RPA determination is identified in the attached Fact Sheet, which is part of this Order. The input data for the RPAs were provided in the Self-Monitoring Reports submitted by the Discharger. One RPA was performed for discharges from Outfalls 001 and 002, which are composed of treated wastewater, water from the groundwater treatment systems, excess reclaimed water, water from the engine test stands, and storm water. Four analytes had reasonable potential to exceed WQBELs: copper, lead, mercury, and TCDD. Three of these analytes (copper, lead, and mercury) had effluent limitations in the previous order (Order No. 98-051).

The Discharger also submitted data for the receiving water associated with discharges from Outfalls 001 and 002. This data was collected using elevated detection limits and hence several other constituents had reasonable potential. The constituents are 2,4,6-trichlorophenol, 2,4-dinitrotoluene, alpha-BHC, bis (2-ethylhexyl) phthalate, N-nitrosodimethlyamine and pentachlorophenol. Effluent limits for these constituents have also been included in this Order.

Since perchlorate has been detected above the Department of Health Services action level in storm water runoff from the facility and it has been detected in the influent to some of the groundwater treatment systems, SIP RPA Trigger 3 and BPJ have been used to establish reasonable potential for it to present in discharges from the site via Outfalls 001 and 002. Consequently and effluent limit for perchlorate has been include in this Order for these discharges. Further, since perchlorate is not a naturally occurring pollutant and its presence in the receiving waters is the result of operations at the facility, the effluent limitation was developed based on anti-degradation grounds (State

Board Res. No. 68-16 and 40 CFR § 131.12). The effluent limitation was therefore set at 6 µg/L, which would prevent the degradation of receiving waters and maintain and protect receiving water quality. Effluent limits for a number of volatiles, which were included in the current Order and are believed to be present in the groundwater contaminant plume, have also been included in this Order.

Discharges from Outfalls 003 through 007 are storm water runoff only. Daily maximum and monthly average limits for storm water were included in Order No. 98-051. This Order does not include monthly average limits for priority pollutants in storm water only discharges since storm events are infrequent and often occur less than once per month during the rainy season. This is consistent with permits adopted by the Regional Board for storm water discharges only.

A second statistical analysis using CAPWTT was completed for discharges of storm water only from locations 003, 004, 005, 006, and 007. This analysis yielded a positive RPA for five analytes: cadmium, copper, cyanide, mercury, and TCDD. Cyanide was detected only once during the period evaluated at a concentration of 5.8 micrograms/liter (µg/L). That detection triggered the reasonable potential since it exceeds that calculated average monthly effluent limit (AMEL). However, the discharges evaluated are storm water only discharges, which do not have monthly average limits. When the maximum effluent concentration (MEC) of 5.8 µg/L is compared to the maximum daily effluent limit (MDEL) the MEC is less than the MDEL. Consequently, this permit does not include an effluent limit for cyanide in the storm water only discharges. CTR-WQBELs for cadmium copper, mercury and TCDD have been included in this Order. The previous order included effluent limits for all of these analytes except TCDD. The statistical analysis did not indicate that antimony or thallium had reasonable potential. However, the previous permit included limits for these analytes from Title 22, which are more stringent than the CTR limits. The compliance history reveals that the effluent limit for antimony (6 µg/L) was exceeded at Outfalls 005 and 007 in 1999 and the limit for thallium (2 µg/L) was exceeded at Outfall 005 on March 8, 2000. Hence, limits for these constituents have also been included, since reasonable potential does exist for the applicable limit to be exceeded.

The effluent limits for the analytes with a positive statistical of best professional judgment RPA are the most stringent of the limit included in Order 98-051, and the applicable CTR criteria which include the freshwater aquatic life criteria, and the human health criteria for consumption of organisms only.

70. As set forth above, Section 1.3 of the State Board's State Implementation Plan (SIP) establishes a stepwise procedure for determining which toxic pollutants require water quality-based effluent limitations in conformance with 40 C.F.R. § 122.44(d). This stepwise procedure for toxic pollutants is called a reasonable potential analysis. The SIP's reasonable potential analysis applies to water quality standards for priority pollutants, whether promulgated by USEPA or established as water quality objectives by the Regional Board. Steps 1 through 6 establish an analytical procedure for requiring water quality-based limitations based solely on discharge and ambient receiving water data. Except as noted in Finding 71, reasonable potential for toxic pollutants regulated

by this Order was determined using the analytical procedure in Steps 1 through 6 of SIP section 1.3 as explained in Finding 69 and the Fact Sheet.

71. Step 7 of SIP Section 1.3 recognizes that in certain instances a rote, mathematical analysis of the data will not be sufficient to protect beneficial uses. Step 7 therefore reserves for the Regional Board the obligation to "review other available information to determine if a water quality-based effluent limitation is required, notwithstanding the above analysis in *Steps 1* through *6*, to protect beneficial uses." Among the factors the State Board identifies as relevant to the Step 7 analysis are: the facility type, discharge type, and potential toxic impact of the discharge. With respect to the Facility, the Regional Board finds sufficient, unusual circumstances to require a water quality-based effluent limitation for trichloroethylene (TCE). Data and testimony indicate that approximately 530,000 gallons of TCE were released to the soil and groundwater at the Facility. The tremendous volume of TCE released at the site warrants significant scrutiny. While recent monitoring data do not show TCE in surface water discharges, scouring from large storm events may release soils with adsorbed TCE. The large volumes of TCE in scoured soils may become chemically available in the surface water runoff and cause or contribute to an exceedance of the water quality standard. In addition, the existing monitoring data has been collected far downstream from on-site sources. The data may not reliably indicate the presence of TCE in waters of the United States because the turbid conditions may have volatilized the TCE before it reached existing monitoring points. Further, contamination is spotty and not completely characterized; pathways are not always predictable and are not fully characterized; and the site is in a hilly environment with uncertain pathways and seeps which could possibly lead to surfacing of water with contamination that cannot be predicted. Finally, TCE is a probable carcinogen that can cause skin rashes on contact, and when ingested has been associated with liver and kidney damage, impaired immune system function, and in large volumes unconsciousness, impaired heart function, or death. Considering the toxic nature of TCE and that past practices at the site released extraordinary volumes of TCE into the environment that can continue leach into surface water through the scouring from storm events, and further considering that the existing monitoring data may not be representative of direct discharges to waters of the United States since the data were collected downstream of the initial discharge, the Regional Board has determined that a water quality-based effluent limitation for TCE is necessary to protect beneficial uses.

72. This order includes eleven new compliance points. These compliance points mark the location of engine test operations, onsite sewage treatment plants, and three new storm water monitoring locations where the associated discharges enter waters of the United States and two discharges from ponds located near the boundary of the developed portion of the site. The associated operations and outfalls for the new compliance points are listed in Finding 26.

73. For pollutants or discharges that lacked effluent data, interim requirements, as described below, were assigned. For these pollutants, the Discharger must submit to this Regional Board effluent concentration data, so that complete reasonable potential analyses can be performed and the need for effluent limitations can be determined.

Pollutants that lacked sufficient data to do RPAs are subject to interim monitoring requirements.

74. Interim requirements were developed according to the following:

- Interim requirements in the form of monitoring were prescribed for constituents with no monitoring data or with "non-detectable" (ND) data, where all of the reported detection limits were greater than or equal to the CTR criterion. Monitoring is required for priority pollutants and emergent chemicals in discharges from the sewage treatment plants and the engine test stands.

- No interim monitoring requirements or limits were prescribed for constituents whose highest monitoring data points or lowest detection limits (in case of ND) were below their respective CTR criterion.

75. For some pollutants, including aldrin, alpha-BHC, chlordane, DDT, dieldrin, heptachlor, heptachlor epoxide, several PAHs, PCBs, TCDD equivalents, and toxaphene the applicable water quality objectives are below the levels that current analytical techniques can measure. Reasonable potential analyses have been completed on each of these constituents and two of them had reasonable potential: alpha-BHC and TCDD equivalents. The MEC detected for TCDD exceeded the CTR criterion and the detection limits for alpha-BHC in the receiving water and the effluent exceeded the criterion.

76. For 303(d) listed pollutants, the Regional Board plans to develop and adopt TMDLs, which will specify WLAs for point sources and LAs for non-point sources, as appropriate. Following the adoption of TMDLs by the Regional Board, NPDES permits will be issued with effluent limits for water quality based on applicable WLAs. In the absence of a TMDL, effluent limits for 303(d) listed pollutants for which RPA indicates a reasonable potential, will be established for (1) concentration based on the most stringent applicable CTR criterion and/or Basin Plan objective, and (2) mass emission based on the maximum discharge flow rate and concentration limitation.

77. As such, water quality objectives/criteria specified in the Basin Plan, the CTR, or the effluent limits from the existing permit were used to set the limits for pollutants that are believed to be present in the effluent and have reasonable potential of exceeding the water quality criteria. Other pollutants may only be monitored to gather data to be used in RPAs for future permit renewals and updates.

CEQA and Notifications

78. The Regional Board has notified the Discharger and interested agencies and persons of its intent to issue waste discharge requirements for this discharge and has provided them with an opportunity to submit their written views and recommendations.

79. The Regional Board, in a public hearing, heard and considered all comments pertaining to the discharge and to the tentative requirements.

80. This Order shall serve as a NPDES permit pursuant to Section 402 of the Federal Clean Water Act or amendments thereto, and shall take effect in accordance with federal law, provided the Regional Administrator, USEPA, has no objections.

81. Pursuant to California Water Code Section 13320, any aggrieved party may seek review of this Order by filing a petition to the State Board. A petition must be sent to the State Water Resources Control Board, Office of Chief Counsel, Attn: Elizabeth Miller Jennings, Senior Staff Counsel, 1001 I Street, 22nd Floor, Sacramento, CA 95814, within 30 days of adoption of this Order.

82. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) in accordance with the California Water Code, Section 13389.

IT IS HEREBY ORDERED that The Boeing Company (Santa Susana Field Laboratory), in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

I. Discharge Requirements

A. Discharge Prohibition

1. Wastes discharged shall be limited to treatment plant effluent, treated groundwater, excess reclaimed water, rocket engine test cooling water, fire suppression, quench water, cooling tower water, as described in Item 16 of this Order, and storm water runoff, as proposed.

2. Discharges of water, materials, radiologic wastes, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to the Arroyo Simi and tributaries to Calleguas Creek, to Dayton Canyon Creek, Bell Creek, and tributaries to the Los Angeles River, or waters of the United States, are prohibited.

B. Effluent Limitations

1. The pH of wastes discharged shall at all times be within the range 6.5 to 8.5.

2. The temperature of wastes discharged shall not exceed 86°F.

3. The discharge of an effluent from Outfalls 001, and 002 with constituents in excess of the following limits is prohibited:

Constituents	Units	Discharge Limitations Monthly Average	Daily Maximum
Total suspended solids[1]	mg/L lbs/day[2]	15 20,016	45 60,048
$BOD_5$20°C	mg/L lbs/day[2]	20 26,700	30 40,032
Oil and grease	mg/L lbs/day[2]	10 13,344	15 20,016
Settleable solids[1]	ml/L	0.1	0.3
Total residual chlorine	mg/L lbs/day[2]	---- ----	0.1 133
Total dissolved solids	mg/L lbs/day[2]	---- ----	950 1,270,000
Chloride	mg/L lbs/day[2]	---- ----	150 200,160
Sulfate	mg/L lbs/day[2]	---- ----	300 400,320
Barium[3]	mg/L lbs/day[2]	---- ----	1.0 1,330
Fluoride[3]	mg/L lbs/day[1]	---- ----	1.6 2135
Iron[3]	mg/L lbs/day[2]	---- ----	0.3 400
Detergents (as MBAS)	mg/L lbs/day[2]	---- ----	0.5 667
Nitrate + Nitrite-N	mg/L lbs/day[2]	---- ----	8.0 10,700
Manganese[3]	µg/L lbs/day[2]	---- ----	50 66.7
Cyanide[3]	µg/L lbs/day[2]	4.3 5.7	8.5 11.3
Antimony[3]	µg/L lbs/day[2]	---- ----	6.0 8.01
Arsenic[3,4]	µg/L lbs/day[2]	---- ----	50 66.7
Beryllium[3]	µg/L lbs/day[2]	---- ----	4.0 5.34

[1] The effluent limitations for total suspended solids and settleable solids are not applicable for discharges during storm events.
[2] The mass is calculated using the maximum permitted flow of 160 mgd for Outfalls 001 and 002. The flow used to calculate the mass for Outfalls 003 through 010 is 17.8 mgd. If the recorded flow is different the mass should be recalculated using the equation: Mass (lbs/day) = Flow (mgd) * 8.34 * concentration (mg/L).
[3] These discharge limits are expressed as total recoverable.
[4] Concentrations correspond to a total hardness of 100 mg/L. For other conditions where total hardness exceeds 100 mg/L, the limits can be calculated by following the instructions outlined in 40 CFR Part 131.

Constituents	Units	Discharge Monthly Average	Limitations Daily Maximum
Cadmium[3, 4]	µg/L lbs/day[2]	2.0 2.7	4.0 5.34
Chromium (VI)[5]	µg/L lbs/day[2]	8.1 10.8	16.3 21.8
Copper[3, 4]	µg/L lbs/day[2]	7.1 9.5	14.0 18.7
Lead[3, 4]	µg/L lbs/day[2]	2.6 3.5	5.2 6.94
Mercury[3]	µg/L lbs/day[2]	0.05 0.07	0.10 0.13
Nickel[3, 4]	µg/L lbs/day[2]	35 47	96 128
Selenium[3]	µg/L lbs/day[2]	4.1 5.5	8.2 10.9
Silver[3, 4]	µg/L lbs/day[2]	2.0 2.7	4.1 5.5
Thallium[3]	µg/L lbs/day[2]	---- ----	2.0 2.7
Zinc[3, 4]	µg/L lbs/day[2]	54 72	119 159
1,1-Dichloroethylene	µg/L lbs/day[2]	3.2 4.3	6.0 8.0
Trichloroethylene	µg/L lbs/day[2]	---- ----	5.0 6.7
Perchlorate	µg/L lbs/day[2]	---- ----	6.0 8.0
TCDD	µg/L lbs/day	1.4E-08 1.9E-08	2.8E-08 3.7E-08
2,4,6-Trichlorophenol	µg/L lbs/day	6.5 8.7	13.0 17
2,4-Dinitrotoluene	µg/L lbs/day	9.1 12	18.3 24
Alpha BHC	µg/L lbs/day	0.01 0.013	0.03 0.04
Bis(2-ethylhxyl)phthalate	µg/L lbs/day	---- ----	4.0 5.3
N-Nitrosodimethylamine	µg/L lbs/day	8.1 10.8	16.3 21.8
Pentachlorophenol	µg/L lbs/day	8.2 10.9	16.5 22

[5] 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 reported is within the hexavalent chromium limits.

Constituents	Units	Discharge Monthly Average	Limitations Daily Maximum
Radioactivity			
Gross Alpha	pCi/L	----	15
Gross Beta	pCi/L	----	50
Combined Radium-226 & Radium-228	pCi/L	----	5.0
Tritium	pCi/L	----	20,000
Strontium-90	pCi/L	----	8.0

4. The discharge of storm water runoff only from Discharge Nos. 003, through 007 with constituents in excess of the following limits is prohibited:

Constituents	Units	Discharge Monthly Average	Limitations Daily Maximum
Oil and grease	mg/L	----	15
	lbs/day[2]	----	2,227
Total dissolved solids	mg/L	----	850
	lbs/day[2]	----	126,184
Chloride	mg/L	----	150
	lbs/day[2]	----	22,268
Boron[3]	mg/L	----	1.0
	lbs/day[2]	----	148
Sulfate	mg/L	----	250
	lbs/day[2]	----	37,113
Fluoride	mg/L	----	1.6
	lbs/day[2]	----	238
Nitrate + Nitrite-N	mg/L	----	10
	lbs/day[2]	----	1,485
Perchlorate	µg/L	----	6.0
	lbs/day[2]	----	0.89
Antimony[3]	µg/L	----	6.0
	lbs/day[2]	----	0.89
Cadmium[3,4]	µg/L	----	4.0
	lbs/day[2]	----	0.59
Copper[3,4]	µg/L	----	14.0
	lbs/day[2]	----	2.08
Mercury[3]	µg/L	----	0.13
	lbs/day[2]	----	0.02
Thallium[3]	µg/L	----	2.0
	lbs/day[2]	----	0.3
TCDD	µg/L	----	2.8E-08
	lbs/day[2]	----	4.2E-09

Constituents	Units	Discharge Monthly Average	Limitations Daily Maximum
Radioactivity			
Gross Alpha	pCi/L	----	15
Gross Beta	pCi/L	----	50
Combined Radium-226 & Radium-228	pCi/L	---- ----	5
Tritium	pCi/L	----	20,000
Strontium-90	pCi/L	----	8

5. Effluent Limitations for storm water from Outfalls 008, 009 and 010 are:

Constituents	Units	Discharge Monthly Average	Limitations Daily Maximum
Oil and grease	mg/L	----	15
	lbs/day[2]	----	2,227
Total dissolved solids	mg/L	----	950[6]
	lbs/day[2]	----	141,029
Total dissolved solids	mg/L	----	850[7]
	lbs/day[2]	----	126,184
Chloride	mg/L	----	150
	lbs/day[2]	----	22,268
Boron[3,7]	mg/L	----	1.0
	lbs/day[2]	----	148
Sulfate	mg/L	----	300[6]
	lbs/day[2]	----	44,536
Sulfate	mg/L	----	250[7]
	lbs/day[2]	----	37,113
Fluoride	mg/L	----	1.6
	lbs/day[2]	----	238
Nitrate + Nitrite-N	mg/L	----	8.0[6]
	lbs/day[2]	----	1,188
Nitrate + Nitrite-N	mg/L	----	10[7]
	lbs/day[2]	----	1,485
Perchlorate	µg/L	----	6.0
	lbs/day[2]	----	0.89

[6] The limit applies to discharges from Outfall 008 only.
[7] The limit is applicable for discharges from Outfalls 009 and 010 which flows to Calleguas Creek. It is not applicable at Outfall 008 which dicharges to Bell Creek and subsequently the Los Angeles River. This total dissolved solids limit is for discharges from Outfall 009 and 010.

6. Effluent Limitations for Wastewater Treatment Plants from Outfalls 015 through 017 are.

Constituents	Units	Discharge Limitations[11]		
		30-Day Average	7-Day Average	Daily Maximum
Total suspended solids	mg/L	30	45	---
	lbs/day[2]	15	23	---
$BOD_5$20°C	mg/L	30	45	---
	lbs/day[2]	15	23	---
Oil and grease	mg/L	10	---	15
	lbs/day[2]	5	---	7.5
Settleable solids	ml/L	0.1	---	0.3
Total residual chlorine	mg/L	----	---	0.1
	lbs/day[2]	----	---	0.05
Total dissolved solids	mg/L	----	---	950
	lbs/day[2]	----	---	475
Chloride	mg/L	----	---	150
	lbs/day[2]	----	---	75
Sulfate	mg/L	----	----	300
	lbs/day[2]	----	----	150
Fluoride	mg/L	----	----	1.6
	lbs/day[2]	----	----	0.8
Barium[3]	mg/L	----	----	1.0
	lbs/day[2]	----	----	0.5
Detergents (as MBAS)	mg/L	----	----	0.5
	lbs/day[2]	----	----	0.3
Nitrate + Nitrite as Nitrogen	mg/L	----	----	8.0
	lbs/day[2]	----	----	4
Nitrite-N (as Nitrogen)	mg/L	---	----	1.0
	lbs/day[2]	---	----	0.5
Ammonia-N	mg/L	---[8]	---	---[9]

[8] The Discharger must comply with the updated ammonia water quality objectives in the Basin Plan, Table 3-3 (Attachment H) which resulted from Resolution No. 2002-011 adopted by the Regional Board on April 25, 2002. For compliance with Criteria Continuous Concentration (CCC) in the Attachment H, the pH and temperature samples collected in the receiving water downstream of the discharge and the ammonia nitrogen sample collected in the effluent, shall be taken and reported at the same time. Shall there be no receiving water present, the pH and temperature of the effluent at the end of pipe shall be determined and reported.

[9] The Discharger must comply with the updated ammonia water quality objectives in the Basin Plan, Table 3-1 (Attachment H) which resulted from Resolution No. 2002-011 adopted by the Regional Board on April 25, 2002. For compliance with Criteria Maximum Concentration (CMC) in the Attachment H, the pH and temperature samples collected in the receiving water downstream of the discharge and the ammonia nitrogen sample collected in the effluent, shall be taken and reported at the same time. Shall there be no receiving water present, the pH of the effluent at the end of pipe shall be determined and reported.

a. Radioactivity of the wastes discharged shall not exceed the limits specified in Title 22, Chapter 15, Article 5, Section 64443, of the California Code of Regulations, or subsequent revisions.

b. The wastes discharged to watercourses shall at all times be adequately disinfected. For the purpose of this requirements, the wastes shall be considered adequately disinfected if the median number of coliform organisms at some point in the treatment process does not exceed a most probable number (MPN) of 2.2 per 100 millileters, and the number of coliform organisms does not exceed an MPN of 23 per 100 milliliters in more than one sample within any 30-day period. The median value shall be determined from the bacteriological results of the last 30-day period for which analysis has been completed. Samples shall be collected at a time when wastewater flow and characteristics are most demanding on treatment facilities and disinfection processes.

c. The wastes discharged to watercourses shall have received treatment equivalent to that of filtered wastewater. Filtered wastewater means an oxidized and coagulated wastewater that has been passed through natural undisturbed soils or filter media, such as sand or diatomaceous earth, so that the turbidity of the filtered wastewater does not exceed any of the following: (a) a daily average of 2 Nephelometric turbidity units (NTUs); (b) 5 NTUs more than 5 percent of the time (72) minutes during a 24 hour period and (c) never exceeds 10 NTU.

Nothing herein shall be construed to prevent the use of any alternative treatment process or processes provided that they can be demonstrated to the satisfaction of the Executive Officer to achieve compliance with the effluent limitations and requirements.

"Oxidized wastewater" means wastewater in which the organic matter has been stabilized is nonputrescible, and contains dissolved oxygen. "Coagulated wastewater" means oxidized wastewater in which colloidal and finely divided suspended matter have been destabilized and agglomerated upstream of a filter by the addition of suitable floc-forming chemicals.

7. With the exception of Outfalls 001 and 002, in the event that an effluent limitation set forth above for a pollutant other than a radioactive material is exceeded and the Discharger presents within 30 days of the date of discovery documentation that (i) discharges from a solid waste management unit (unit) regulated by DTSC are causing or contributing to the violation, and (ii) the Discharger was in compliance with all applicable requirements of DTSC permits and corrective action requirements for the unit, and (iii) modifications to DTSC's permit or corrective action

requirements are necessary to consistently comply with this Order, then the Discharger, DTSC, and Regional Board will work cooperatively to develop a schedule that is as short as possible to take appropriate actions under the RCRA corrective action requirements or permits, as appropriate, to ensure compliance with this Order. This Order may be reopened and modified, in accordance with applicable laws and regulations, or a Time Schedule Order issued to incorporate appropriate interim limits while the appropriate actions are being taken under the RCRA corrective action requirements or permits.

C. Receiving Water Limitations

1. The discharge shall not cause any of the following conditions to exist in the receiving waters at any time:

   a. Floating, suspended or deposited macroscopic particulate matter or foam;

   b. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   c. Visible, floating, suspended or deposited oil or other products of petroleum origin;

   d. Bottom deposits or aquatic growth; or,

   e. Toxic or other deleterious substances to be present in concentrations or quantities which cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. No discharge shall cause a surface water temperature rise greater than 5°F above the natural temperature of the receiving waters at any time or place.

3. The discharge shall not cause the following limits to be exceeded in the receiving waters at any place within one foot of the water surface:

   a. The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units;

   b. Dissolved oxygen shall not be less than 5.0 mg/L anytime, and the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation;

   c. Dissolved sulfide shall not be greater than 0.1 mg/L;

4. Toxicity limitations for discharges from Outfalls 001 through 017:

a. Acute Toxicity Limitation and Requirements

1. The acute toxicity of the effluent shall be such that: (i) the average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and (ii) no single test producing less than 70 % survival.

2. If either of the above requirements (Section I.C.4.a.1) is not met, the Discharger shall conduct six additional tests over a six-week period. The discharger shall ensure that they receive results of a failing acute toxicity test within 24 hours of the close of the test and the additional tests shall begin within 3 business days of the receipt of the result. If the additional tests indicate compliance with acute toxicity limitation, the discharger may resume regular testing. However, if the results of any two of the six accelerated tests are less than 90% survival, then the Discharger shall begin a Toxicity Identification Evaluation (TIE). The TIE shall include all reasonable steps to identify the sources of toxicity. Once the sources are identified, the Discharger shall take all reasonable steps to reduce toxicity to meet objective.

3. If the initial test and any of the additional six acute toxicity bioassay test result in less than 70% survival, including the initial test, the Discharger shall immediately begin a TIE.

4. The Discharger shall conduct acute toxicity monitoring as specified in Monitoring and Reporting Program No. 6027.

b. Chronic Toxicity Limitation and Requirements:

1. This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed 1.0 TU_c in a critical life stage test.)

2. If the chronic toxicity of the effluent exceeds 1.0 TU_c, the Discharger shall immediately implement an accelerated chronic toxicity testing according to MRP No. 6027, Section IV.D. If the results of two of the six accelerated tests exceed 1.0 TU_c, the Discharger shall initiate a TIE and implement the Initial Investigation TRE Workplan. (see MRP No. 6027, Section IV.E.).

3. The Discharger shall conduct chronic toxicity monitoring as specified in MRP No. 6027.

4. The chronic toxicity of the effluent shall be expressed and reported in toxic units, where:

$$TU_c = \frac{100}{NOEC}$$

The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

5. Preparation of an Initial Investigation TRE Workplan

   i. The Discharger shall submit a detailed initial investigation Toxicity Reduction Evaluation (TRE) workplan to the Executive Officer of the Regional Board for approval within 90 days of the effective date of this permit. The Discharger shall use EPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance or current versions. At a minimum, the TRE workplan must contain the provisions in Attachment C. This workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at a minimum:

   ii. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency;

   iii. A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility; and,

   iv. If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor) (See MRP Section IV.E.3. for guidance manuals).

6. The discharge shall not cause a violation of any applicable water quality standard for receiving waters.

   If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments, thereto, the Regional Board will revise and modify this Order in accordance with such standards.

II. Requirements

A. Pollution Prevention and Best Management Practices Plans

The Discharger shall develop, within 90 days of the effective date of this Order, the following plans. If necessary, the plans shall be updated to address any changes in operation and/or management of the facility. Updated plans shall be submitted to the Regional Board within 30 days of revision.

1. A *Storm Water Pollution Prevention Plan* (SWPPP) that describes site-specific management practices for minimizing storm water runoff from being contaminated, and for preventing contaminated storm water runoff from being discharged directly to waters of the State. The SWPPP shall be developed in accordance with the requirements contained in Attachment A and submitted to the Regional Board within 90 days of the effective date of this Order.

2. A *Best Management Practices Plan* (BMPP). The purpose of the BMPP is to establish site-specific procedures that will prevent the discharge of pollutants in non-storm water discharges. The BMPP shall be site-specific and shall cover all areas of the facility.

B. Pursuant to the requirements of 40 CFR 122.42(a), the Discharger must notify the Board as soon as it knows, or has reason to believe (1) that it has begun or expected to begin, to use or manufacture a toxic pollutant not reported in the permit application, or (2) a discharge of toxic pollutant not limited by this Order has occurred, or will occur, in concentrations that exceed the specified limitations in 40 CFR 122.42(a).

C. Compliance Determination

1. Compliance with single constituent effluent limitation – If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (see Reporting Requirement II. C. of *M&RP)*, then the Discharger is out of compliance.

2. Compliance with monthly average limitations - In determining compliance with monthly average limitations, the following provisions shall apply to all constituents:

   a. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the monthly average limit for that constituent, the Discharger has demonstrated compliance with the monthly average limit for that month.

   b. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the monthly average limit for any

constituent, the Discharger shall collect four additional samples as early as flow is available during the month. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later.

When all sample results are greater than or equal to the reported Minimum Level (see Reporting Requirement II. C. of M&RP), the numerical average of the analytical results of these five samples will be used for compliance determination.

When one or more sample results are reported as "Not-Detected (ND)" or "Detected, but Not Quantified (DNQ)" (see Reporting Requirement II. C. of *M&RP*), the median value of these four samples shall be used for compliance determination. If one or both of the middle values is ND or DNQ, the median shall be the lower of the two middle values.

c. In the event of noncompliance with a monthly average effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the monthly average effluent limitation has been demonstrated.

d. If only one sample was obtained for the month or more than a monthly period and the result exceed the monthly average, then the Discharger is in violation of the monthly average limit.

3. Compliance with effluent limitations expressed as a sum of several constituents – If the sum of the individual pollutant concentrations is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, consider constituents reported as ND or DNQ to have concentrations equal to zero, provided that the applicable ML is used.

4. Compliance with effluent limitations expressed as a median – in determining compliance with a median limitation, the analytical results in a set of data will be arranged in order of magnitude (either increasing or decreasing order); and

a. If the number of measurements (n) is odd, then the median will be calculated as = $X_{(n+1)/2}$, or

b. If the number of measurements (n) is even, then the median will be calculated as = $[X_{n/2} + X_{(n/2)+1}]$, i.e. the midpoint between the n/2 and n/2+1 data points.

5. Compliance with the pH limitation – If the receiving water pH downstream of the discharge, exceeds 8.5 pH units as a result of:

   a. high pH in the storm water, or
   b. elevated pH in the receiving water upstream of the discharge,

   then the exceedance shall not be considered a violation.

6. Compliance with the temperature limitation – If the receiving water temperature downstream of the discharge, exceeds 86°F as a result of:

   a. high temperature in the ambient air, or
   b. elevated temperature in the receiving water upstream of the discharge,

   then the exceedance shall not be considered a violation.

D. In calculating mass emission rates from the monthly average concentrations, use one half of the method detection limit for "Not Detected" (ND) and the estimated concentration for "Detected, but Not Quantified" (DNQ) for the calculation of the monthly average concentration. To be consistent with section II.E.3., if all pollutants belonging to the same group are reported as ND or DNQ, the sum of the individual pollutant concentrations should be considered as zero for the calculation of the monthly average concentration.

E. The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States is prohibited unless specifically authorized elsewhere in this permit. This requirement is not applicable to products used for lawn and agricultural purposes. Discharge of chlorine for disinfection in plant potable and service water systems and in sewage treatment is authorized.

F. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream which ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.

G. There shall be no discharge of PCB compounds, such as those once commonly used for transformer fluid.

H. The Discharger shall notify the Executive Officer in writing no later than six months prior to planned discharge of any chemical, other than chlorine or other product previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

   a. Name and general composition of the chemical,
   b. Frequency of use,
   c. Quantities to be used,

d. Proposed discharge concentrations, and
e. USEPA registration number, if applicable.

No discharge of such chemical shall be made prior to the Executive Officer's approval.

I. The Regional Board and USEPA shall be notified immediately by telephone, of the presence of adverse conditions in the receiving waters or on beaches and shores as a result of wastes discharged; written confirmation shall follow as soon as possible but not later than five working days after occurrence.

III. Provisions

A. This Order includes the attached *Standard Provisions and General Monitoring and Reporting Requirements* (Standard Provisions, Attachment N). If there is any conflict between provisions stated hereinbefore and the attached Standard Provisions, those provisions attached herein prevail. Boeing shall report to the Regional Board any monitoring data that exceeds the detection limit for monitored constituents without effluent limitations. The report shall be reported, via facsimile, within 24 hours of the Discharger receiving the data from the lab. Regional Board staff will bring a reopener to the Regional Board within 90 days of determining that reasonable potential exists to cause or to contribute to an exceedance of water quality standards.

B. This Order includes the attached Monitoring and Reporting Program (Attachment T). If there is any conflict between provisions stated in the Monitoring and Reporting Program and the Standard Provisions, those provisions stated in the Monitoring and Reporting Program prevail.

C. This Order may be modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR sections 122.44, 122.62, 122.63, 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to: failure to comply with any condition of this order and permit, endangerment to human health or the environment resulting from the permitted activity; or acquisition of newly obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

D. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management program developed to comply with NPDES permits issued by the Regional Board to local agencies.

E. Discharge of wastes to any point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.

F. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to Sections 301, 302, 303(d), 304, 306, 307, 316, and 423 of the Federal Clean Water Act and amendments thereto.

IV. Reopeners

A. This Order may be reopened and modified, in accordance with SIP Section 2.2.2.A, to incorporate new limits based on future reasonable potential analysis to be conducted, upon completion of the collection of additional data by the discharger. Regional Board staff will conduct yearly reviews of the data to determine if reasonable potential exists.

B. This Order may be reopened and modified, in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include requirements for the implementation of the watershed management approach.

C. This Order may be reopened and modified, in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include new minimum levels (MLs).

D. This Order may be reopened and modified, to revise effluent limitations as a result of future Basin Plan Amendments, such as an update of an objective or the adoption of a TMDL for Los Angeles River or the Calleguas Creek.

E. This Order may be reopened upon the submission by the discharger, of adequate information, as determined by the Regional Board, to provide for dilution credits or a mixing zone, as may be appropriate.

F. This Order may be reopened and modified, to revise the toxicity language once that language becomes standardized.

G. In accordance with Provision I.B.7, this Order may be reopened and modified to incorporate interim limits, to the extent authorized by law, while DTSC revises and reissues updated RCRA corrective action requirements or permits, as appropriate, to ensure compliance with this Order.

H. This Order may also be reopened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR sections 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this order and permit, endangerment to human health or the environment resulting from the permitted activity.

V. Expiration Date

This Order expires on June 10, 2009.

The Discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the expiration date as application for issuance of new waste discharge requirements.

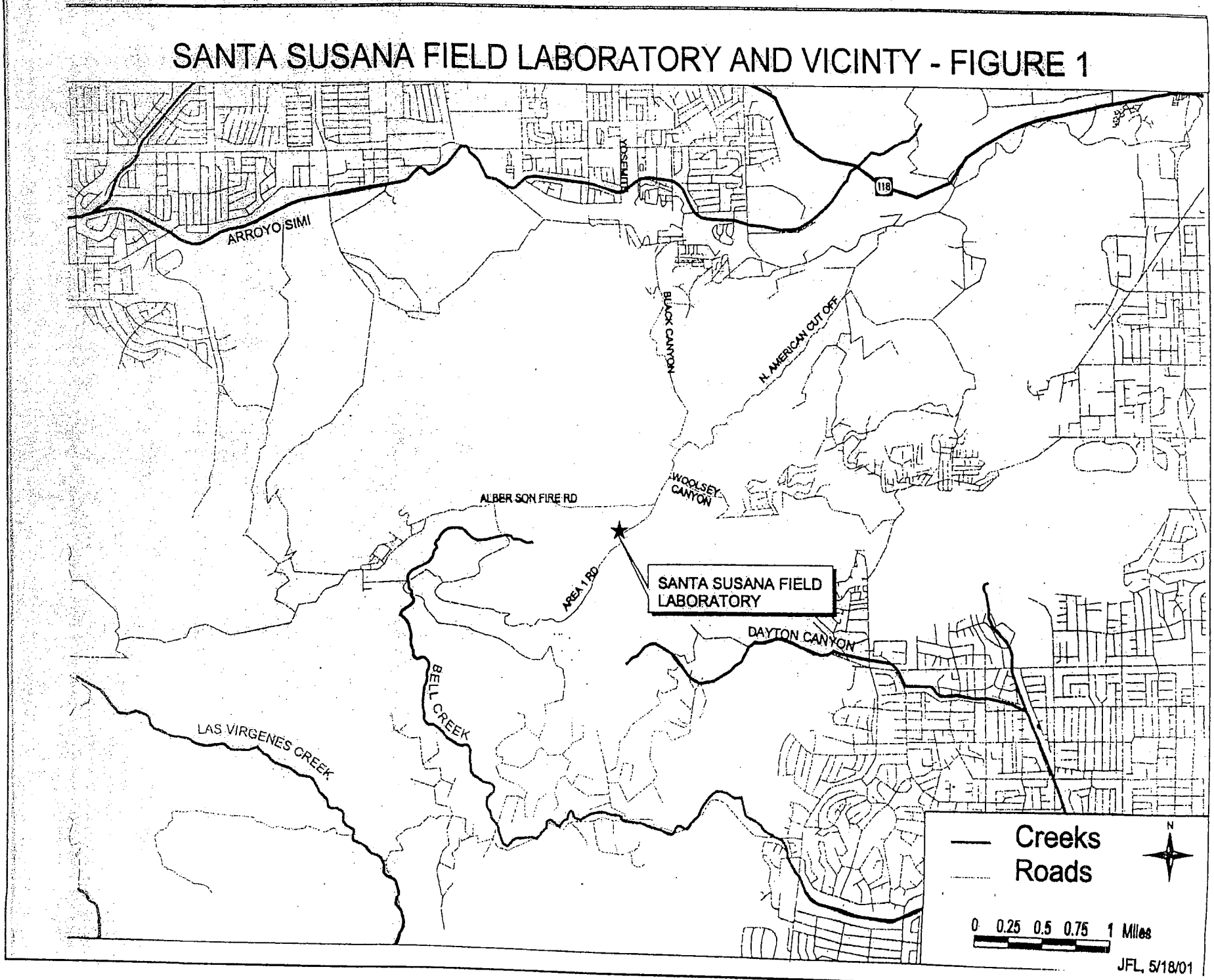
VI. Rescission

Order No. 98-051, adopted by this Board on June 29, 1998, is hereby rescinded, except for enforcement purposes.

I, Jonathan Bishop, Interim Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region on July 1, 2004.

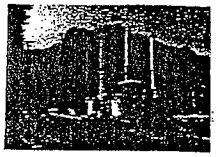
Jonathan Bishop
Interim Executive Officer

SANTA SUSANA FIELD LABORATORY AND VICINTY - FIGURE 1



APTF Test Stand

Typical Air Stripper Groundwater Treatment System (Bravo)



Alfa Test Stand

Typical UltraViolet Peroxide System (RD-9)

Bravo Test Stand

R-2A Pond

DESCRIPTIONS OF PROPOSED DISCHARGE OUTFAL

NPDES OUTFALL NO.	DESCRIPTION
001	Wastewater and Storm Water; South Slope
002	Wastewater and Storm Water; South Slope
003	Storm Water; Radioactive Material Handling Facility (RMHF)
004	Storm Water; Sodium Reactor Experiment Area
005	Storm Water; Sodium Burn Pit 1
006	Storm Water; Sodium Burn Pit 2
007	Storm Water; Building 100
008	Storm Water; Happy Valley
009	Storm Water; WS-13 Drainage
010	Storm Water; Building 203
011	Wastewater and Storm Water; Perimeter Pond
012	Wastewater; Alpha Test Stand
013	Wastewater; Bravo Test Stand
014	Wastewater; APTF(Advanced Propulsion Test Facility)
015	Wastewater; STP-1 (Sewage Treatment Plant-1)
016	Wastewater; STP-2 (Sewage Treatment Plant-2)
017	Wastewater; STP-3 (Sewage Treatment Plant-2)
018	Wastewater and Storm Water; R-1 Spillway
not applicable	Wastewater and Storm Water;R-1 Pond
not applicable	Wastewater and Storm Water; R-2 Ponds (R-2A and R-2B)
not applicable	Wastewater and Storm Water; Silvernale Pond
not applicable	Treated Groundwater; WS-5 Groundwater Treatment System (GWTS) [Ultraviolet/Peroxidation]
not applicable	Treated Groundwater; RD-9 GWTS [Ultraviolet/Peroxidation] (Stand By)
not applicable	Treated Groundwater; Alpha GWTS [Air Stripping Tower]
not applicable	Treated Groundwater; Delta GWTS [Air Stripping Tower]
not applicable	Treated Groundwater; STLF-IV GWTS [Air Stripping Tower]
not applicable	Treated Groundwater; Area 1 Rd GWTS [Air Stripping Tower] (Stand By)
not applicable	Treated Groundwater; Bravo GWTS [Air Stripping Tower]
not applicable	Treated Groundwater; Canyon GWTS [Air Stripping Tower] (Stand By)
not applicable	Treated Groundwater; Interim GWTS near FSDF
not applicable	Treated Groundwater; Interim GWTS near Bldg 59
not applicable	Treated Groundwater; Interim GWTS near RMHF

Legend

- NPDES Outfalls (RWQCB Prima
- DTSC Primary Oversight Author

0 650 FEET

MAP COORDINATES IN STATE PLANE, NAD 27, ZONE V

NPDES Permit Related Features
Santa Susana Field Laboratory

DATE: 01/15/04
FILE: r:\rock\plots\arcmap\groundwater_treatment_systems_36x48.mxd

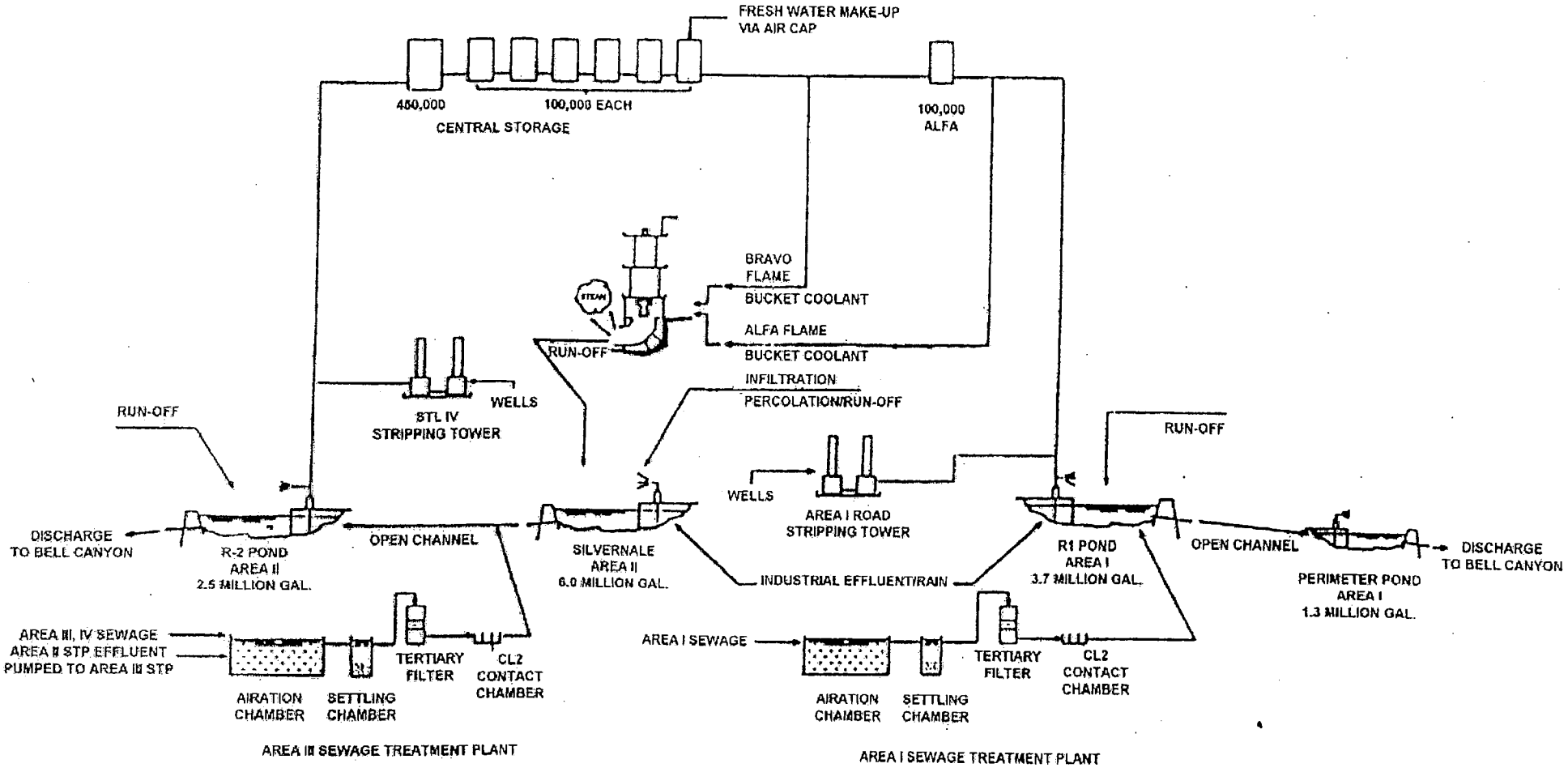
MWH

FIGURE 2

ATTACHMENT 2-A
NPDES permit
application form2-C
LINE DRAWING
5-9-97

FIGURE 3

SSFL RECLAIM WATER SYSTEM



ATTACHMENT "A"

SECTION A: STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. *Implementation Schedule*

A storm water pollution prevention plan (SWPPP) shall be developed and implemented for each facility covered by this General Permit in accordance with the following schedule.

a. Facility operators beginning industrial activities before October 1, 1992 shall develop and implement the SWPPP no later than October 1, 1992. Facility operators beginning industrial activities after October 1, 1992 shall develop and implement the SWPPP when industrial activities begin.

b. Existing facility operators that submitted a Notice of Intent (NOI), pursuant to State Water Resources Control Board (State Water Board) Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing SWPPP and shall implement any necessary revisions to their SWPPP in a timely manner, but in no case later than August 1, 1997.

2. *Objectives*

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, overhead coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

3. *Planning and Organization*

a. *Pollution Prevention Team*

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Section B of this General Permit. The SWPPP shall clearly identify the General Permit related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

b. *Review Other Requirements and Existing Facility Plans*

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this General Permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this General Permit. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

4. *Site Map*

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

TABLE A

FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS

PLANNING AND ORGANIZATION

- Form Pollution Prevention Team
- Review other plans

↓

ASSESSMENT PHASE

- Develop a site map
- Identify potential pollutant sources
- Inventory of materials and chemicals
- List significant spills and leaks
- Identify non-storm water discharges
- Assess pollutant Risks

↓

BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE

- Non-structural BMPs
- Structural BMPs
- Select activity and site-specific BMPs

↓

IMPLEMENTATION PHASE

- Train employees
- Implement BMPs
- Conduct recordkeeping and reporting

↓

EVALUATION / MONITORING

- Conduct annual site evaluation
- Review monitoring information
- Evaluate BMPs
- Review and revise SWPPP

The following information shall be included on the site map:

a. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.

b. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

c. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.

d. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in Section A.6.a.iv. below have occurred.

e. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

5. *List of Significant Materials*

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

6. *Description of Potential Pollutant Sources*

a. The SWPPP shall include a narrative description of the facility's industrial activities, as identified in Section A.4.e above, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

i. Industrial Processes

Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

ii. Material Handling and Storage Areas

Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

iii. Dust and Particulate Generating Activities

Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

iv. Significant Spills and Leaks

Describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 CFR, Part 302)

that have been discharged to storm water as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 Code of Federal Regulations [CFR], Parts 110, 117, and 302).

The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this General Permit.

v. Non-Storm Water Discharges

Facility operators shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

All non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area.

Non-storm water discharges that contain significant quantities of pollutants or that do not meet the conditions provided in Special Conditions D. are prohibited by this General Permit (Examples of prohibited non-storm water discharges are contact and non-contact cooling water, boiler blowdown, rinse water, wash water, etc.). Non-storm water discharges that meet the conditions provided in Special Condition D. are authorized by this General Permit. The SWPPP must include BMPs to prevent or reduce contact of non-storm water discharges with significant materials or equipment.

vi. Soil Erosion

Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

b. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and

potential pollutants. This information should be summarized similar to Table B. The last column of Table B, "Control Practices", should be completed in accordance with Section A.8. below.

7. *Assessment of Potential Pollutant Sources*

a. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in A.6. above to determine:

i. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and

ii. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.

b. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in Section 8 below.

8. *Storm Water Best Management Practices*

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (Sections A.6. and 7. above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

TABLE B

EXAMPLE

ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES SUMMARY

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery	fuel oil	- Use spill and overflow protection - Minimize run-on of storm water into the fueling area - Cover fueling area
		Spills caused by topping off fuel tanks	fuel oil	- Use dry cleanup methods rather than hosing down area - Implement proper spill prevention control program
		Hosing or washing down fuel area	fuel oil	- Implement adequate preventative maintenance program to prevent tank and line leaks
		Leaking storage tanks	fuel oil	- Inspect fueling areas regularly to detect problems before they occur
		Rainfall running off fueling area, and rainfall running onto and off fueling area	fuel oil	- Train employees on proper fueling, cleanup, and spill response techniques.

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

Facility operators shall consider the following BMPs for implementation at the facility:

a. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs (see Section A.8.b. below). Below is a list of non-structural BMPs that should be considered:

i. Good Housekeeping

Good housekeeping generally consist of practical procedures to maintain a clean and orderly facility.

ii. Preventive Maintenance

Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

iii. Spill Response

This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

iv. Material Handling and Storage

This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

v. Employee Training

This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

vi. Waste Handling/Recycling

This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

vii. Recordkeeping and Internal Reporting

This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

viii. Erosion Control and Site Stabilization

This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

ix. Inspections

This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.

x. Quality Assurance

This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

b. Structural BMPs

Where non-structural BMPs as identified in Section A.8.a. above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that should be considered:

i. Overhead Coverage

This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

ii. Retention Ponds

This includes basins, ponds, surface impoundments, bermed areas, etc., that do not allow storm water to discharge from the facility.

iii. Control Devices

This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

iv. Secondary Containment Structures

This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

v. Treatment

This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc., that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

9. Annual Comprehensive Site Compliance Evaluation

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

a. A review of all visual observation records, inspection records, and sampling and analysis results.

b. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.

c. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.

d. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in Section A.10.e, for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this General Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this General Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions 9. and 10. of Section C. of this General Permit.

10. *SWPPP General Requirements*

a. The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.

b. The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this Section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.

c. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

d. Other than as provided in Provisions B.11, B.12, and E.2 of the General Permit, the SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this General Permit.

e. When any part of the SWPPP is infeasible to implement by the deadlines specified in Provision E.2 or Sections A.1, A.9, A.10.c, and A.10.d of this General Permit due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

f. The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under Section 308(b) of the Clean Water Act.

Attachment C

GENERIC TOXICITY REDUCTION EVALUATION WORKPLAN (TRE)
INDUSTRIAL

1. Information and Data Acquisition
   - a. Regulatory information
     - i. NPDES permit limits
     - ii. Trigger
   - b. Facility monitoring data
     - i. NPDES monitoring data
     - ii. In-house monitoring data
     - iii. State agency monitoring data
   - c. Plant and Process Description
     - i. Process and treatment plant description
       - (1) numbers and types of streams
       - (2) their size
       - (3) scheduled changes or events in process stream operation
       - (4) types and configurations of equipment
       - (5) flow equalization facilities
       - (6) records of treatment plant upsets
     - ii. Physical/chemical monitoring data
       - (1) chemical analyses of process streams
       - (2) physical/chemical analyses of treatment streams

2. Housekeeping
   - a. Initiation of housekeeping study
     - i. Identify areas which may contribute to toxicity
     - ii. Reduce these contributions through best management practices (BMPs), administrative, and procedural controls
   - b. Evaluation of housekeeping practices
     - i. Review of plant policies
     - ii. "Walk-through" inspection
   - c. Identification of potential problem areas
     - i. Probability of release of toxic material
     - ii. Type and frequency of release which may occur
     - iii. Quantity of toxic substances involved
     - iv. Toxicity of substances released
     - v. Potential downstream impact of the substances released
     - vi. Effect of release on final effluent
   - d. Identification of corrective measures
     - i. Area cleanup
     - ii. Process or operational changes
     - iii. Material loss collection and recovery
     - iv. Chemical and biological testing of contained waters prior to release from diked storage areas
     - v. Increased storage capacity for contained waters
     - vi. Equipment modifications or changes
   - e. Selection of corrective measures
   - f. Implementation of corrective measures

3. Treatment Plant Optimization
   - a. Evaluation of influent wastestreams
     - i. Raw chemicals or materials used in the process
     - ii. Byproducts or reaction products produced during the process
     - iii. Reaction vessels, valves, piping systems, overflow points, and other mechanical aspects of the system
     - iv. Wastestreams produced, volumes, and routing paths

v. Non-point sources

b. Description and evaluation of the treatment system
   i. Design basis for each constituent, including variability in flow conditions and concentrations
   ii. Treatment sequence
   iii. Performance projections by constituents
   iv. Operational flexibility of each process
   v. Treatment objectives and projected effluent standards

c. Analysis of treatment system operation
   i. Flow loading
   ii. Mass loading
   iii. Frequency and impact of shock loadings
      (1) normal cleaning and maintenance
      (2) spills and upsets
   iv. Changes in operating procedures

4. Chemical optimization

a. Information gathering
   i. Examination of wastestreams produced by specific production processes
   ii. Chemicals and raw materials and their contaminants and by-products used in the process
   iii. Chemicals used in treatment
   iv. Chemicals and material use rates
   v. Percentage of chemical in final product
   vi. Chemical reuse and waste recycling activities

b. Process chemical review
   i. List all chemicals used
   ii. List all quantities
   iii. Determine pounds per product
   iv. Determine pounds per gallon of wastewater discharged

c. MSDS information review
   i. Obtain MSDS for all process chemicals discharged
   ii. Highlight MSDS sections on aquatic toxicity
   iii. Examine Hazardous Ingredient section and note "hazardous substances" listed
   iv. Categorize all chemicals by hazard and irritation potential and use standard references to obtain aquatic toxicity information, if possible

d. Chemical composition screen of incoming raw materials

e. Outcome of chemical optimization phase
   i. List of all chemicals used in processing and manufacturing the product
   ii. MSDS and literature reviews will be on file when needed
   iii. List of all chemicals and raw material purchased on a monthly basis and a record of production volumes during the same time period

REVISED
ATTACHMENT H

Table 3-1. One-hour Average Objective for Ammonia-N for Freshwaters (mg N/L)

pH	Waters Designated COLD and/or MIGR	Waters Not Designated COLD and/or MIGR
6.5	32.6	48.8
6.6	31.3	46.8
6.7	29.8	44.6
6.8	28.1	42.0
6.9	26.2	39.1
7.0	24.1	36.1
7.1	22.0	32.8
7.2	19.7	29.5
7.3	17.5	26.2
7.4	15.4	23.0
7.5	13.3	19.9
7.6	11.4	17.0
7.7	9.65	14.4
7.8	8.11	12.1
7.9	6.77	10.1
8.0	5.62	8.40
8.1	4.64	6.95
8.2	3.83	5.72
8.3	3.15	4.71
8.4	2.59	3.88
8.5	2.14	3.20
8.6	1.77	2.65
8.7	1.47	2.20
8.8	1.23	1.84
8.9	1.04	1.56
9.0	0.885	1.32

Reference: U.S. EPA 1999 Update of Ambient Water Quality Criteria for Ammonia[1]

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[1] *For freshwaters, the one-hour average concentration (Criteria Maximum Concentration or CMC) of total ammonia as nitrogen (in mg N/L) shall not exceed the values described by the following equations.*

For waters designated COLD and/or MIGR:

$$\text{CMC or One-hour Average Concentration} = \frac{0.275}{1+10^{7.204-pH}} + \frac{39.0}{1+10^{pH-7.204}}$$

Or for waters not designated COLD and/or MIGR:

$$\text{CMC or One-hour Average Concentration} = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$$

Table 3-2. 30-day Average Objective for Ammonia-N for Freshwaters Designated SPWN (mg N/L)

Temperature, °C

pH	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
6.5	6.67	6.46	6.06	5.68	5.33	4.99	4.68	4.39	4.12	3.86	3.62	3.39	3.18	2.98	2.80	2.62	2.46
6.6	6.57	6.36	5.97	5.59	5.25	4.92	4.61	4.32	4.05	3.80	3.56	3.34	3.13	2.94	2.75	2.58	2.42
6.7	6.44	6.25	5.86	5.49	5.15	4.83	4.52	4.24	3.98	3.73	3.50	3.28	3.07	2.88	2.70	2.53	2.37
6.8	6.29	6.10	5.72	5.36	5.03	4.72	4.42	4.14	3.89	3.64	3.42	3.20	3.00	2.82	2.64	2.47	2.32
6.9	6.12	5.93	5.56	5.21	4.89	4.58	4.30	4.03	3.78	3.54	3.32	3.11	2.92	2.74	2.57	2.41	2.25
7.0	5.91	5.73	5.37	5.04	4.72	4.43	4.15	3.89	3.65	3.42	3.21	3.01	2.82	2.64	2.48	2.32	2.18
7.1	5.67	5.49	5.15	4.83	4.53	4.25	3.98	3.73	3.50	3.28	3.08	2.88	2.70	2.53	2.38	2.23	2.09
7.2	5.39	5.22	4.90	4.59	4.31	4.04	3.78	3.55	3.33	3.12	2.92	2.74	2.57	2.41	2.26	2.12	1.99
7.3	5.08	4.92	4.61	4.33	4.06	3.80	3.57	3.34	3.13	2.94	2.76	2.58	2.42	2.27	2.13	2.00	1.87
7.4	4.73	4.59	4.30	4.03	3.78	3.55	3.32	3.12	2.92	2.74	2.57	2.41	2.26	2.12	1.98	1.86	1.74
7.5	4.36	4.23	3.97	3.72	3.49	3.27	3.06	2.87	2.69	2.53	2.37	2.22	2.08	1.95	1.83	1.72	1.61
7.6	3.98	3.85	3.61	3.39	3.18	2.98	2.79	2.62	2.45	2.30	2.16	2.02	1.90	1.78	1.67	1.56	1.47
7.7	3.58	3.47	3.25	3.05	2.86	2.68	2.51	2.36	2.21	2.07	1.94	1.82	1.71	1.60	1.50	1.41	1.32
7.8	3.18	3.09	2.89	2.71	2.54	2.38	2.23	2.10	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25	1.17
7.9	2.80	2.71	2.54	2.38	2.24	2.10	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25	1.17	1.10	1.03
8.0	2.43	2.36	2.21	2.07	1.94	1.82	1.71	1.60	1.50	1.41	1.32	1.24	1.16	1.09	1.02	0.957	0.897
8.1	2.10	2.03	1.91	1.79	1.68	1.57	1.47	1.38	1.29	1.21	1.14	1.07	1.00	0.938	0.879	0.824	0.773
8.2	1.79	1.74	1.63	1.53	1.43	1.34	1.26	1.18	1.11	1.04	0.973	0.912	0.855	0.802	0.752	0.705	0.661
8.3	1.52	1.48	1.39	1.30	1.22	1.14	1.07	1.00	0.941	0.882	0.827	0.775	0.727	0.682	0.639	0.599	0.562
8.4	1.29	1.25	1.17	1.10	1.03	0.966	0.906	0.849	0.796	0.747	0.700	0.656	0.615	0.577	0.541	0.507	0.475
8.5	1.09	1.06	0.990	0.928	0.870	0.816	0.765	0.717	0.672	0.630	0.591	0.554	0.520	0.487	0.457	0.428	0.401
8.6	0.920	0.892	0.836	0.784	0.735	0.689	0.646	0.606	0.568	0.532	0.499	0.468	0.439	0.411	0.386	0.362	0.339
8.7	0.778	0.754	0.707	0.663	0.622	0.583	0.547	0.512	0.480	0.450	0.422	0.396	0.371	0.348	0.326	0.306	0.287
8.8	0.661	0.641	0.601	0.563	0.528	0.495	0.464	0.435	0.408	0.383	0.359	0.336	0.315	0.296	0.277	0.260	0.244
8.9	0.565	0.548	0.513	0.481	0.451	0.423	0.397	0.372	0.349	0.327	0.306	0.287	0.269	0.253	0.237	0.222	0.208
9.0	0.486	0.471	0.442	0.414	0.389	0.364	0.342	0.320	0.300	0.281	0.264	0.247	0.232	0.217	0.204	0.191	0.179

* At temperatures below 14 °C, the objective is the same as that shown for 14 °C.

Reference: U.S. EPA 1999 Update of Ambient Water Quality Criteria for Ammonia[2]

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[2] *For freshwaters 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.*

$$\text{CCC or 30-day Average Concentration} = \left(\frac{0.0577}{1+10^{7.688-pH}} + \frac{2.487}{1+10^{pH-7.688}}\right) * MIN\left(2.85, 1.45*10^{0.028*(25-T)}\right)$$

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.

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

	Temperature, °C								
pH	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 Ammonia[3]

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[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.*

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

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.

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

(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.

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;

(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 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.

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.

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.

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:

(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 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".

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.

(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.

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 other wise 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:

INFORMATION TECHNOLOGY
CALIFORNIA REGIONAL WATER QUALITY
CONTROL BOARD - LOS ANGELES REGION
320 W. 4TH STREET, SUITE 200
LOS ANGELES, CA 90013

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.

(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, 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 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. "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.

2. "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

   (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.

3. "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.

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

$$\text{Daily discharge rate} = \frac{8.34}{N} \sum_{1}^{N} (Q_i)(C_i)$$

in which N is the number of samples analyzed in any calendar day, Q_i and C_i are the 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.

5. "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."

6. "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.

7. "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.

8. "Hazardous substance" means any substance designated under 40 CFR 116 pursuant to Section 311 of the Clean Water Act.

9. "Heavy metals" are for purposes of this Order, arsenic, cadmium, chromium, copper, lead, mercury, silver, nickel, and zinc.

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

11. "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.

12. "Priority pollutants" are those constituents referred to in 40 CFR 401.15 and listed in the EPA NPDES Application Form 2C, pp. V-3 through V-9.

13. "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.

14. "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.

15. "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.

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

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 November 15, 2004.

Reporting Period	Report Due
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 on a 3 ½ " computer diskette. 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.

August 29, 2003
Revised: December 19, 2003
Revised: January 14, 2004
Revised: February 27, 2004
Revised: March 25, 2004
Revised: June 22, 2004
Revised: July 1, 2004

D. The Discharger shall inform the Regional Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.

E. Any mitigation/remedial activity including any pre-discharge treatment conducted at the site must be reported in the quarterly monitoring report.

F. 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 May 14, 1999); 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 Health Services 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), March 2, 2000.

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.

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. Influent Monitoring Program

A. Influent monitoring for the sewage treatment plants is required during treatment operations:

a. To determine the BOD_5 20°C and suspended solids removal rates;
b. To assess treatment plant performance;
c. As a requirement of the Pollution Minimization Program.

1. Sampling stations shall be established at each point of inflow to the sewage treatment plant and shall be located upstream of any in-plant return flows and/or where representative samples of the influent can be obtained. The date and time of sampling shall be reported with the analytical results.

2. Samples for influent $BOD_5 20°C$ and suspended solids analysis shall be obtained on the same day that the effluent $BOD_5 20°C$ and suspended solids samples are obtained to demonstrate percent removal. Similarly, sampling for other constituents shall also be coordinated with effluent sampling.

3. The following shall constitute the influent monitoring program:

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Flow	mgd	recorder	continuous
pH	pH units	grab	semiannually
Suspended solids	mg/L	24-hour composite	semiannually
BOD_5 20°C	mg/L	24-hour composite	semiannually
EPA priority pollutants excluding asbestos[11]	µg/L	24-hour composite/ grab for VOCs and Chromium VI	semiannually

IV. Effluent Monitoring Program

A. The following shall constitute the effluent monitoring program for the final effluent at Discharge Nos. 001, 002, 011 and 018.

Constituent	Units	Type of Sample	Minimum Frequency of Analysis[1]
Total waste flow	gal/day	----	once per discharge event
Temperature	°F	grab	once per discharge event
pH	pH Units	grab	once per discharge event
Conductivity at 25°C	µmhos/cm	grab	once per discharge event
Total suspended solids	mg/L	grab	once per discharge event
Settleable solids	ml/L	grab	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. 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. During dry weather flow, whenever Outfalls 001, 002, 011 or 018 is discharging, minimum sampling frequency during operations generating discharges shall be once per month. 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.

Constituent	Units	Type of Sample	Minimum Frequency of Analysis[1]
$BOD_5(20^{\circ}C)$	mg/L	grab	once per discharge event
Oil and grease	mg/L	grab	once per discharge event
Ammonia-N	mg/L	grab	once per discharge event
Turbidity	NTU	grab	once per discharge event
Total residual chlorine	mg/L	grab	annually
Total organic carbon	mg/L	grab	annually
Total dissolved solids	mg/L	grab	once per discharge event
Chloride	mg/L	grab	once per discharge event
Sulfate	mg/L	grab	once per discharge event
Detergents (as MBAS)	mg/L	grab	once per discharge event
Nitrate + Nitrate-N	mg/L	grab	once per discharge event
Cyanide[2]	µg/L	grab	once per discharge event
Copper[2]	µg/L	grab	once per discharge event
Lead[2]	µg/L	grab	once per discharge event
Mercury[2]	µg/L	grab	once per discharge event
1,1-Dichloroethylene	µg/L	grab	once per discharge event
Perchlorate	µg/L	grab	once per discharge event
2,4,6-Trichlorophenol	µg/L	grab	once per discharge event
2,4-Dinitrotoluene	µg/L	grab	once per discharge event
Alpha-BHC	µg/L	grab	once per discharge event
Bis(2-ethylhexyl)phthalate	µg/L	grab	once per discharge event
N-Nitrosodimethylamine	µg/L	grab	once per discharge event
Pentachlorophenol	µg/L	grab	once per discharge event
Trichloroethylene	µg/L	grab	once per discharge event
TCDD♦	µg/L	grab	once per discharge event
Volatile organic compounds	µg/L	grab	once per discharge event♦♦
Boron	mg/L	grab	annually[6]
Fluoride	mg/L	grab	annually[6]
Barium	mg/L	grab	annually[6]
Iron	mg/L	grab	annually[6]
Manganese[2]	µg/L	grab	annually[6]
Antimony[2]	µg/L	grab	annually[6]
Arsenic[2]	µg/L	grab	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.

Constituent	Units	Type of Sample	Minimum Frequency of Analysis[1]
Beryllium[2]	µg/L	grab	annually[6]
Cadmium[2]	µg/L	grab	annually[6]
Chromium (VI)[2,3]	µg/L	grab	annually[6]
Nickel[2]	µg/L	grab	annually[6]
Selenium[2]	µg/L	grab	annually[6]
Silver[2]	µg/L	grab	annually[6]
Thallium[2]	µg/L	grab	annually[6]
Zinc[2]	µg/L	grab	annually[6]
Cobalt	µg/L	grab	annually
Vanadium	µg/L	grab	annually
Radioactivity- Gross Alpha Gross Beta[4]	 pCi/L pCi/L	 grab grab	 annually[6] annually[6]
Combined Radium 226 & Radium 228[5]	pCi/L	grab	annually[6]
Tritium[4]	pCi/L	grab	annually[6]
Strontium-90[4]	pCi/L	grab	annually[6]
PCBs	µg/L	grab	annually
TPH[10]	µg/L	grab	annually
Monomethylhydrazine	µg/L	grab	annually
cis-1,2-Dichloroethene	µg/L	grab	annually
1,4-Dioxane	µg/L	grab	annually
1,1,2-Trichloro-1,2,2-Trifluoroethane	µg/L	grab	quarterly
1,2-Dichloro-1,1,2-triflouroethane	µg/L	grab	annually
Cyclohexane	µg/L	grab	annually
Remaining USEPA priority pollutants excluding asbestos[11]	µg/L	grab	annually[6]

[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.

[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, and method 905.0 for strontium-90.

[5] Analysis for combined Radium-226 & 228 shall be conducted only if gross alpha results for the same sample exceed 15 pCi/L or beta greater than 50 pCi/L. It the Radium-226 & 228 exceeds the stipulated criteria analyze for Tritium and Strontium-90. If the analyses of these constituents demonstrates exceedances the monitoring frequency is increased to once per discharge until four consecutive analysis demonstrates compliance with the effluent limitations.

[6] If the 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 Analysis[1]
Acute toxicity	% survival	grab	annually
Chronic toxicity	TU_c	grab	annually

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

Constituent	Units	Type of Sample	Minimum Frequency of Analysis[1]
Rainfall	inches	continuous	continuous
pH	pH Units	grab	once per discharge event
Oil and grease	mg/L	grab	once per discharge event
Total dissolved solids	mg/L	grab	once per discharge event
Chloride	mg/L	grab	once per discharge event
Sulfate	mg/L	grab	once per discharge event
Nitrate + Nitrate-N	mg/L	grab	once per discharge event
Total suspended solids	mg/L	grab	annually
Boron[2]	mg/L	grab	annually[6]
Antimony[2]	µg/L	grab	once per discharge event
Cadmium[2]	µg/L	grab	once per discharge event
Copper[2]	µg/L	grab	once per discharge event
Lead[2]	µg/L	grab	once per discharge event
Mercury[2]	µg/L	grab	once per discharge event
Vanadium[2]	µg/L	grab	annually
Aluminum[2]	µg/L	grab	annually
TCDD[9]	µg/L	grab	once per discharge event
Perchlorate	µg/L	grab	once per discharge event[7]
Remaining USEPA priority pollutants excluding asbestos[11]	µg/L	grab	annually[6]
Radioactivity[5] Gross Alpha Gross Beta	 pCi/L pCi/L	 grab grab	 annually[6] annually[6]
Combined Radium 226 & Radium 228[4]	pCi/L	grab	annually[6]
Tritium[4]	pCi/L	grab	annually[6]
Strontium-90[4]	pCi/L	grab	annually[6]
Acute toxicity	% survival	grab	annually

[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.

C. The following shall constitute the effluent monitoring program from Outfalls 012 through 014 during engine test operations.

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Flow	Mgd	recorder[8]	once per discharge event
pH	pH units	grab	once per discharge event
Temperature	°F	grab	once per discharge event
Suspended solids	mg/L	grab	once per discharge event
BOD_5 20°C	mg/L	grab	once per discharge event
Settleable solids	mg/L	grab	once per discharge event
Oil and grease	mg/L	grab	once per discharge event
Ammonia-N	mg/L	grab	once per discharge event
Turbidity	NTU	grab	once per discharge event
Total dissolved solids	mg/L	grab	once per discharge event
Total petroleum hydrocarbons[10]	µg/L	grab	once per discharge event
Perchlorate	µg/L	grab	once per discharge event
N-Nitrosodimethylamine	µg/L	grab	once per discharge event
1,4-Dioxane	µg/L	grab	once per discharge event
1,2,3-Trichloropropane	µg/L	grab	once per discharge event
Ethylene dibromide	µg/L	grab	once per discharge event
Methyl tertiary butyl ether (MTBE)	µg/L	grab	once per discharge event
Naphthalene	µg/L	grab	once per discharge event
Di-isopropyl Ether (DIPE)	µg/L	grab	once per discharge event
Tertiary Butyl Alcohol (TBA)	µg/L	grab	once per discharge event
Monomethyl hydrazine**	µg/L	grab	once per discharge event
Remaining USEPA priority pollutants excluding asbestos[11]	µg/L	grab	annually

[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.
[10] Total petroleum hydrocarbons includes all fuels, gasoline, diesel and jet fuel. Analysis should be completed using EPA 418.1 and EPA 8015 (modified) methods.
[11] Analysis shall include xylenes and trichlorofluoromethane.
** This analysis is completed only for discharges from APTF.

D. The following shall constitute the effluent monitoring program from Outfalls 015 through 017. The following program is implemented only when the treatment plants are discharging effluent.

Constituent	Units	Type of Sample	Minimum Frequency of Analysis
Flow	mgd	recorder	continuous
Turbidity	NTU	recorder	continuous
Total residual chlorine	mg/L	recorder	continuous
pH	pH units	grab	weekly
Temperature	°F	grab	weekly
Suspended solids	mg/L	24-hour composite	weekly
BOD_5 20°C	mg/L	24-hour composite	weekly
Settleable solids	mg/L	grab	weekly
Oil and grease	mg/L	grab	monthly
Dissolved oxygen	mg/L	grab	monthly
Ammonia-N	mg/L	24-hour composite	monthly
Nitrate + Nitrite as N (Nitrogen)	mg/L	24-hour composite	monthly
Nitrate as N (Nitrogen)	mg/L	24-hour composite	monthly
Nitrite as N (Nitrogen)	mg/L	24-hour composite	monthly
Total dissolved solids	mg/L	24-hour composite	monthly
Chloride	mg/L	24-hour composite	monthly
Sulfate	mg/L	24-hour composite	monthly
Boron	mg/L	24-hour composite	monthly
Fluoride	mg/L	24-hour composite	monthly
Barium	mg/L	24-hour composite	monthly
Detergents (as MBAS)	mg/L	grab	weekly
Perchlorate	µg/L	grab	semiannually[10]
N-Nitrosodimethylamine	µg/L	grab	semiannually[10]
1,4-Dioxane	µg/L	grab	semiannually[10]
1,2,3-Trichloropropane	µg/L	grab	semiannually[10]
Acute toxicity	%survival	grab	quarterly
Chronic toxicity	TU_c	24-hour composite	quarterly
Total coliform	MPN/100mL	grab	daily
Fecal coliform	MPN/100mL	grab	daily
Remaining USEPA priority pollutants excluding asbestos[11]	µg/L	24-hour composite/ grab for VOCs and Cr-VI	semiannually

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 that 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. R4-2004-0111, Section I.C.4.a.1. and 1.C.4.b.1), then the Discharger shall immediately implement accelerated testing, as specified at Section I.C.4.a.2 and 1.C.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. R4-2004-0111 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 (±standard deviation) after 96 hours in 100% effluent (if applicable);

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

14. IC_{25} 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

The receiving water monitoring program shall consist of 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.

Ordered by: _____ Date: July 1, 2004
Jonathan Bishop
Interim Executive Officer

/CDO

SWRCB Minimum Levels in ppb (µg/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.

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	

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

State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
320 West 4th Street, Suite 200, Los Angeles

FACT SHEET
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
FOR
THE BOEING COMPANY
(Santa Susana Field Laboratory)

NPDES PERMIT NO.: CA0001309
Public Notice No.: 02-013

FACILITY MAILING ADDRESS
The Boeing Company
6633 Canoga Avenue
P.O. Box 7922
Canoga Park, CA 91309

FACILITY LOCATION
The Boeing Company
Santa Susana Field Laboratory
Top of Woolsey Canyon
Simi Hills, CA 91311
Contact: William McIlvaine
(818) 586-9228

I. Public Participation

The California Regional Water Quality Control Board, Los Angeles Region, (Regional Board) will consider, during its May 6, 2004 meeting, the reissuance of waste discharge requirements (WDRs), which serve as a National Pollutant Discharge Elimination System (NPDES) permit to the Boeing Company for the Santa Susana Field Laboratory. As an initial step in the WDR process, the Regional Board staff has developed tentative WDRs. The Regional Board encourages public participation in the WDR adoption process.

A. Written Comments

Interested persons are invited to submit written comments concerning the tentative WDRs. Comments should be submitted either in person, or by mail to:

California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

August 28, 2003
Revised: December 19, 2003
Revised: January 14, 2004
Revised: February 27, 2004
Revised: March 25, 2004
Revised: June 22, 2004
Revised: July 1, 2004

Written comments regarding the tentative Order must be received at the Regional Board office by 5:00 p.m. on March 29, 2004, in order to be evaluated by staff and included in the Board's agenda folder.

B. Public Hearing

The proposed WDRs will be considered by the Regional Board at a public hearing. The hearing is scheduled as follows:

Date:	July 1, 2004
Time:	9:00 A.M.
Location:	City of Simi Valley Council Chambers, 2929 Tapo Canyon Road Simi Valley, California

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

C. Waste Discharge Requirements Appeals

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

State Water Resources Control Board, Office of the Chief Counsel
Attn: Elizabeth Miller Jennings, Senior Staff Counsel
1001 I Street, 22nd Floor
Sacramento, CA 95812

D. Additional Information and Copies

The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special conditions, comments received, and other information are on file and may be inspected at 320 West 4th Street, Suite 200, Los Angeles, CA 90013, at any time between 8:30 AM and 4:45 PM, Monday through Friday. Copying of documents may be arranged through the Los Angeles Regional Board by calling (213) 576-6600.

E. Register Of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Board, reference this facility, and provide a name, address, and phone number.

II. Introduction

The Boeing Company (hereinafter Boeing or Discharger) discharges waste from its Santa Susana Field Laboratory under waste discharge requirements, which serve as an NPDES permit, contained in Order No. 98-051 adopted by this Regional Board on June 29, 1998 (NPDES Permit No. CA0001309).

Boeing has filed a report of waste discharge (ROWD) and has applied for renewal of its WDRs and NPDES permit for discharge of wastes to surface waters.

III. Facility and Waste Discharge Description

The Santa Susana Field Laboratory (SSFL) is located at the top of Woolsey Canyon, in the Simi Hills, CA (Figure 1). The developed portion of the site comprises approximately 1,500 acres. There is 1,200-acres of undeveloped property located to the south. Recently, an additional 150-acre undeveloped land has been purchased to the north of the site. SSFL is owned by both Boeing and the National Aeronautical Space Agency (NASA). The United States Department of Energy (DOE) also owns several buildings located in Area IV, with the land being under the ownership of Boeing.

Boeing operations at SSFL since 1950 include research, development, assembly, disassembly, and testing of rocket engines, and chemical lasers. DOE conducted past operations in research and development of energy related programs, and seismic testing experiments. Current DOE activities onsite are solely related to facility closure, environmental remediation, and restoration.

SSFL is permitted to discharge excess water from its groundwater treatment system, industrial activities, onsite wastewater reclamation system, and rainfall runoff that has the potential to contain pollutants from the facilities. Approximately 60% of the discharge exits the property via two southerly discharge points (Discharge Outfalls 001 and 002) to Bell Creek, a tributary to the Los Angeles River, a water of the United States, with its confluence located near the intersection of Bassett Street and Owensmouth Avenue in Canoga Park, above the estuary (see Figure 1).

Past operations at the SSFL that may potentially contribute contaminants to discharges from the site include:

- Nuclear Operations, decontamination and decomissioning
- Monomethyl Hydrazine Usage,
- CTL-3 Chemical Laser Testing, and
- Energy Technology Engineering Center (ETEC) Cogeneration Operations.
- Rocket Engine and Component Testing

Nuclear Operations, decontamination and decommissioning: There are currently no programs at the SSFL, which employ special nuclear materials. Current decommissioning activities have reduced the inventory of radioactive waste at the SSFL to approximately 5 curies. Essentially all of this material is stored in shielded vaults located at the Radioactive

Materials Handling Facility (RMHF). SSFL continues to utilize radioisotopes in the form of calibration sources which are necessary to calibrate radiation detectors and counting equipment. Periodic radiological monitoring of surface waters is conducted under the existing NPDES permit. Three radiological facilities located in Area IV of the SSFL remain to be decomissioned. Storm water run-off from Area IV of the SSFL is monitored for radioactivity. The Department of Energy (DOE) is responsible for the cost of decontamination and decommissioning, the California Department of Health Services (Radiological Health Branch) has radiological oversight responsibilities at Area IV of the SSFL.

Monomethyl Hydrazine Usage: Monomethyl hydrazine (MMH), a propellant, has been used for research, development, and testing of rocket engines at the SSFL since 1955. The MMH, which is generated from testing operations is captured and treated by an ozonation unit under a variance, granted by the Department of Toxic Substances Control (DTSC)-. As a result, MMH is not released to the ponds from this area. MMH may be used at the System Test Lab 4 (STL-4) and may be stored at the Storable Propellant Area (SPA). MMH will not be used at Advanced Propulsion Test Facility (APTF).

CTL-3 Chemical Laser Testing: CTL-3 Chemical Laser Testing is shutdown and is not expected to be reactivated. There is no discharge currently from the area.

Energy Technology Engineering Center (ETEC) Cogeneration Operations: The facility has been decommissioned and was demolished in July 2003.

Rocket Engine and Component Testing: An engine test consists of a cycle of one to three engine runs lasting one to three minutes each. A test cycle may take one to two weeks to complete. Each engine run results in the use of 50,000 to 200,000 gallons of deluge/cooling water that may come in contact with fuels such as LOX or kerosene and associated combustion products. The frequency of testing varies depending on production requirements but currently one test cycle is completed every one to two months.

Current and Future Operations: Since the SSFL is a test facility, it is difficult to anticipate future test projects and possible wastewater generation. Following are descriptions of expected operations:

1. Treatment Under Tiered Permitting Rules. Boeing may explore the feasibility of treating certain waste streams by either a mobile or fixed hazardous waste treatment unit operating under DTSC Permit-by-Rule requirements. Treated effluent would then be released into the ponds.

2. Unspecified waste streams generated during remediation, cleaning, assembly, testing and support operations at the facility.

Groundwater Remediation: During the early 1950s to the mid-1970s, volatile organic compounds were utilized for the cleaning of hardware and rocket engine thrust chambers, and for the cleaning of other equipment. These solvents migrated into the subsurface, contaminating groundwater primarily with trichloroethylene (TCE) and 1,2-dichloroethylene (1,2-DCE).

As a result, there is now an extensive groundwater remediation/investigation program in progress at the SSFL, which includes pumping, treating and storing groundwater at the facility. Currently, this system is composed of eight treatment systems, five being active and three being inactive, which have the capability of producing up to 578 million gallons per year of groundwater treated to remove the volatile organic compounds. The treatment system is not designed to treat other pollutants such as perchlorate or metals. The chemical treatments used in groundwater treatment operations consist of ultraviolet light and hydrogen peroxide oxidation, carbon adsorption, and the physical treatment consists of air stripping towers. These treatment systems are regulated under Resource Conservation and Recovery Act (RCRA) part A and part B hazardous waste permits by DTSC, and various air quality control permits issued by Ventura County. Future plans to add new wells may increase the volume into the system by 25%. Pumping rates in the future may increase or decrease depending upon the outcome of the groundwater remediation program. In addition, there will also be intermittent pilot projects where test wells will be drilled and groundwater treated to determine optimum locations for future wells. Effluent from the groundwater remediation operations is discharged to the water reclamation system onsite via naturally occurring streambeds and in some cases man made watercourses present onsite.

Sewage Treatment Plants: Two package-type activated sludge sewage treatment plants (STP1 and STP3) provide secondary and tertiary treatment for the sewage. Disinfected sewage effluents from the activated sludge facilities are directed to the reclaimed water system reservoirs. Water from the reservoirs is reused for industrial purposes. A third activated sludge sewage treatment plant (STP2) is available, but is currently used only as a pump station to STP-3 and as temporary storage of excess sewage.

Operations terminated at STP3 in October 2001 and at STP1 in December 2001. Recently, domestic sewage that had previously been treated at STP1 and STP3 has been diverted offsite. The STP1 and STP3 basins are used as collection points. Every few days, vacuum trucks transport the accumulated waste offsite for treatment. The Discharger has requested that the permit continue to cover potential discharges from these plants, as it may be necessary to bring them back on line in the future.

Water Reclamation System and Discharges: When in operation, effluent discharges from STP1 and STP3, the two sewage treatment plants, subsequently enter the water reclamation system onsite. The SSFL utilizes a system of natural, unlined and man-made ponds and channels to collect and reuse water as a cooling media and fire suppression system for rocket engine and component hot fire testing. Water supplied to the system comes from any one or a combination of the following sources: storm water, treated groundwater, tertiary treated sanitary sewage, recycled test cooling water, or domestic water purchased from an established purveyor. The water is stored in a series of 100,000-gallon steel tanks located in Area 2 called Skyline. The water is transferred by gravity to either the Alfa or Bravo test facilities for use as cooling and fire protection water during test operations. Excess water from these operations is returned to the ponds through open, unlined channels. Reclaimed water from Perimeter and R-1 ponds may be pumped back to the Skyline tanks where it is mixed with purchased water then used as engine test cooling water. The water is then pumped back to the storage tanks at Skyline for reuse. If the demand for water exceeds the reclaimed water supply, domestic water is used to make up the difference. The reclaimed water system is separated from the domestic water supply by air gaps and backflow prevention devices.

The water reclamation system consists of five ponds (see Figure 2).

R-1 Pond	capacity 3.7 million gallons
Perimeter Pond	capacity 1.3 million gallons
Silvernale Pond	capacity 6.0 million gallons
R2-B Pond	capacity 200,000 gallons
R2-A Pond	capacity 2.5 million gallons

Also shown on Figure 2 in Area 1 is the Coca Pond. This pond was previously used as a retention basin to collect water from the space shuttle main engine testing area. When Coca Pond is filled to capacity, it discharges to the R-2 Pond. The pond is currently used to collect water that may leak from the fire suppression system located in the former test area. If sufficient leaks occur, the pond discharges to R-2.

Area I utilizes the R-1 Pond as a reservoir for the reclaimed water system. Water retained in the R-1 Pond is primarily comprised of effluent from groundwater treatment systems. Other sources include effluent from Sewage Treatment Plant 1 and seasonal rain events. If the supply of reclaimed water exceeds requirements, the R-1 Pond will overflow into Perimeter Pond; excess water from Perimeter Pond will then flow south to Bell Creek through Outfall 001. Discharges through Outfall 001 are rare and will usually only occur after extensive rainfall over an extended period. Reclaimed water is pumped from the R-1 Pond to the reclaimed water storage tanks located at Skyline, as needed.

Areas II, III, and IV share a common system for reclaimed water collection and distribution, which will be referred to as Area IV. Area IV uses Silvernale Pond and R-2A Pond as reservoirs for the reclaimed water system. As in Area I, the primary source of water stored in the ponds comes from groundwater treatment operations. Other sources include effluent from Sewage Treatment Plant 3, cooling water runoff from test operations and seasonal rain events. If the supply of reclaimed water exceeds requirements, the water will be discharged to the south through R-2A Pond, and then to Bell Creek through Outfall 002.
The SSFL is underlain by alluvium, weathered bedrock and unweathered bedrock. The alluvium occurs in narrow drainages and alluvial valleys and is underlain by the Chatsworth Formation. The Chatsworth Formation consists of fractured sandstone with interbeds of siltstone and claystone, which can transmit water as well as contaminants.

The groundwater system at the SSFL is divided into two aquifers; the shallow and the deep. The alluvium and weathered bedrock comprise the shallow aquifer, and the unweathered and fractured Chatsworth Formation comprise the deep aquifer.

The groundwater in the shallow aquifer generally reflects surface topography. In April 2002, groundwater depths in the shallow aquifer ranged from approximately 6 feet to 40 feet below grade. Wells in the deeper aquifer, contained groundwater between approximately 23 feet to approximately 520 feet below grade.

In dry weather, ongoing activities were normally sufficient to use the water generated from onsite groundwater treatment systems. However, in recent years this water balance has changed. Water now being added into the system from the Calleguas Water District, plus the reduction of testing activities, has caused releases from R-2A Pond (located upstream from Outfall 002) to become intermittent. During hot weather, the water released may either

evaporate or percolate into the ground before reaching Discharge Outfall 002. Thus, no offsite discharge of water occurs.

The discharges from Outfalls 001 and 002 were characterized in the permit application are as follows:

Constituents	Units	30-Day Average[1]	Daily Maximum
Flow	MGD	1.5	20
Temperature			
Winter (Oct. – April)	°F	57	59.2
Summer (May – September)	°F	71	76.2
pH	pH Units	7.9	8.41
BOD_5 20°C	mg/L	6	15
Total suspended solids	mg/L	15	62
Total organic carbon	µg/L	7.4	18
Total residual chlorine	mg/L	ND	ND
Fluoride	mg/L	0.4	0.7
Nitrate	mg/L	0.42	1.1
Oil and grease	mg/L	ND	ND
Radioactivity			
Total Alpha	pCi/L	----	8.9+/-5
Total Beta	pCI/L	----	20+/-9.1
Total Radium	pCi/L	----	3.54+/-1
Sulfate as SO_4	mg/L	120	173
Surfactants	mg/L	0.1	0.1
Barium	mg/L	17	90
Boron	mg/L	0.11	0.36
Iron	mg/L	0.09	0.22
Manganese	mg/L	51.6	170
Antimony	mg/L	2.8	5.7
Arsenic	mg/L	6.5	11
Beryllium	mg/L	ND	ND
Cadmium	mg/L	ND	ND
Chromium, Total	mg/L	7.7	10
Copper, Total	mg/L	5.2	15
Lead, Total	mg/L	1.6	3.5
Mercury, Total	mg/L	ND	ND
Nickel	mg/L	2	2
Selenium[2]	mg/L	2.1	2.1
Silver[2]	mg/L	1.2	1.4
Zinc	mg/L	28	80

Other priority pollutants were reported as not detected or not believed to present in the discharge in the application.

[1] The maximum of the value presented for Discharge No. 001 or Discharge No. 002.
[2] This analyte was reported ND at Discharge No. 001. The values reported were for Discharge No. 002.

Discharges from the groundwater treatment systems, the engine test stands and the water reclamation ponds located onsite in most cases enter naturally occurring drainage channels. Some of these channels are unlined, but portions of many of them have been lined or the flow is transported using piping to a natural drainage channel. Since the wastewater enters natural water transport channels onsite, these channels are considered waters of the United States and are thus subject to the Clean Water Act. These onsite natural drainage channels are tributaries to Bell Creek, hence limits for discharges to them must protect the beneficial uses for discharges to Bell Creek and the downstream reaches of the Los Angeles River. Similarly, because certain natural drainage channels are unlined and groundwater recharge is a designated beneficial use in Bell Creek and its tributaries, limits for discharges to the channels must protect the underlying beneficial uses of the groundwater.

Many of the areas discharging wastewater to the drainage areas and streambeds are associated with RCRA activities that are being directed by DTSC. The RCRA activities at the site include Post Closure Permits and investigation and corrective action oversight of contaminated areas. The Post Closure Permits cover the operation of the groundwater treatments systems. The investigation and corrective action oversight includes the site characterization and delineation of areas of contamination as well as subsequent cleanup operations at areas of concern onsite.

The 1995 Final SB 1082 Framework which was issued on December 14, 1995 documents the framework for implementing Health and Safety Code Section 25204.6(b) dealing with jurisdictional overlap between the DTSC and the Regional Water Quality Control Boards (RWQCBs). SB 1082 requires that "sole jurisdiction over the supervision of that action [meaning oversight of those corrective action activities] is vested in either the department or the State Water Resources Control Board and the California Regional Water Quality Control Boards." Since many of the identified wastewater sources are currently involved in the RCRA corrective action or the Post Closure Permits with DTSC as the oversight agency, consistent with RCRA, DTSC will ensure that the discharges from these operations through the RCRA permitting process meet the substantive Clean Water Act requirements. Regional Board staff will provide appropriate comments during the revision of RCRA permit to ensure the Clean Water Act, Porter-Cologne Act, and the Basin Plan requirements are met. However, at all time, the final downstream Outfalls 001 and 002 will be regulated by the accompanying NPDES permit and will implement relevant water quality standards.

There are several other operations that are ongoing which are not included in the RCRA corrective action that discharge wastewater to the onsite drainageways and streambeds. This NPDES permit will cover these activities.

The operation evaluated at SSFL and the agency (Regional Board or DTSC) with primary oversight authority and the NPDES outfall number associated with the operation if the Regional Board has oversight are listed below.

	Operation	NPDES Outfall No.	Agency
1.	Wastewater and Storm water runoff	001	RWQCB
2.	Wastewater and storm water runoff	002	RWQCB
3.	Storm water Radioactive Material Handling Facility	003	RWQCB
4.	Storm water Sodium Reactor Exp.	004	RWQCB
5.	Storm water Sodium Burn Pit 1	005	RWQCB
6.	Storm water Sodium Burn Pit 2	006	RWQCB
7.	Storm water Building 100	007	RWQCB
8.	Storm water Happy Valley	008	RWQCB
9.	Storm water WS-13 Drainage	009	RWQCB
10.	Storm water Building 203	010	RWQCB
11.	R-1 Pond	-----	DTSC
12.	Perimeter Pond	011	RWQCB
13.	R-2 Ponds (R-2A and R-2B)	-----	DTSC
14.	R-2 Spillway	018	RWQCB
15.	Silvernale Pond	-----	DTSC
16.	Alfa Test Stand	012	RWQCB
17.	Bravo Test Stand	013	RWQCB
18.	WS-5 Groundwater Treatment System (GWTS)	-----	DTSC
19.	RD-9 GWTS	-----	DTSC
20.	Alfa GWTS	-----	DTSC
21.	Delta GWTS	-----	DTSC
22.	STLV-IV GWTS	-----	DTSC
23.	Interim GWTS near FSDF	-----	DTSC
24.	Interim GWTS near Bldg 59	-----	DTSC
25.	Interim GWTS near RMHF	-----	DTSC
26.	APTF	014	RWQCB
27.	STP-1 – effluent	015	RWQCB
28.	STP-2 – effluent	016	RWQCB
29.	STP-3 – effluent	017	RWQCB

Storm Water Discharges

In 1989, EPA conducted an investigation and submitted a report on SSFL environmental issues. The report specified under the recommended and planned actions that the Regional Board was to use the Clean Water Act to ensure run-off from the northwest side of Area IV was not contaminated. In response to the request, Rocketdyne developed a surface water monitoring program for the northwest slope area that was subsequently approved by EPA and implemented.

The topography of the SSFL is such that approximately 60% of rainfall runoff is routed to one of the two southerly-located retention ponds and is discharged from the site via Discharge Outfalls 001 or 002. Storm water runoff from the northwest slope of the facility is monitored at Discharge Outfalls 003, 004, 005, 006, and 007 which discharge towards the

Arroyo Simi. The outfall locations near the Northwest slope are located such that they capture runoff from past and existing radiological facilities.

Discharge Outfall	Latitude (North)	Longitude (West)	Vicinity
003 (RMHF)	34° 14' 4.0"	118° 42' 38.4"	Radioactive Materials Handling Facility
004 (SRE)	34° 14' 9.1"	118° 42' 23.9"	Sodium Reactor Experiment
005 (SBP-1)	34° 13' 48.1"	118° 43' 3.9"	Sodium Burn Pit 1
006 (SBP 2)	34° 13' 50.7"	118° 42' 59.9"	Sodium Burn Pit 2
007 (B100)	34° 13' 50.2"	118° 42' 52.5"	Building 100

The samples collected are analyzed for radioactivity and for a number of other priority pollutants that may be present.

There is one more storm water monitoring location Discharge Outfall 008 (formerly referred to as Happy Valley and Happy Valley 1). This outfall captures runoff from an area that has previously been used for operations that involved perchlorate and monitoring events have yielded detections of perchlorate in the storm water runoff. Storm water from Happy Valley flows to Dayton Canyon Creek. The flow from Dayton Canyon Creek joins Chatsworth Creek , which flows south to Bell Creek southwest of the intersection of Shoup Avenue and Sherman Way. Bell Creek flows east to the Los Angeles River. This permit implements effluent limits for conventional pollutants and perchlorate at Outfall 008. Monitoring for the emergent chemicals and EPA priority pollutants except asbestos is also required.

A second Happy Valley sample location (referred to as Happy Valley 2) has been monitored during the past year. The samples in most cases yielded nondetect at Happy Valley 2 while samples collected during the same rain event yielded detections of perchlorate. However on May 3, 2003 samples collected from Happy Valley 1 (Discharge Outfall 008) was nondetect for perchlorate. The sample collected from Happy Valley 2 collected on that date resulted in a perchlorate concentration of 4.6 µg/L. The nondetect at 4 µg/L and the detected concentration of 4.6 µg/L may represent very similar concentrations.

During the 2002-2003 rain seasons, 2 locations were sampled in the Happy Valley area. Happy Valley 1 is the location agreed upon with the Regional Board in 1999. Happy Valley 2 is a location approximately 1500 feet downstream of Happy Valley 1. During the 2002-2003 storm season, Happy Valley 1 had frequent detections of perchlorate while Happy Valley 2 had consistently non-detected for perchlorate. However, on May 3, 2003, a detection of 4.6 µg/L was detected at Happy Valley 2 while the sample at Happy Valley 1 was non-detected at a 4.0 µg/L detection limit. As the concentration of 4.6 µg/L is very close to the laboratory detection limit of 4.0 µg/L, it is assumed that the two samples represent similar concentrations.

The objective of this Order is to protect the beneficial uses of receiving waters. To meet this objective, storm water runoff discharges from the SSFL are subject to requirements stipulated in this NPDES permit and the Discharger will be required to comply with all applicable provisions of the Storm Water Pollution Prevention Plan (Attachment A of the Order). This plan includes requirements to develop, implement, and when appropriate update a Storm Water Pollution Prevention Plan (SWPPP) along with Best Management

Practices (BMPs) that will prevent all pollutants from contacting storm water and with the intent of keeping all contaminants of concern from moving into receiving waters.

Storm water sampling events during 1999, 2000 and 2001 yielded exceedances of existing effluent limitations for several contaminants of concern. These effluent violations indicate that the implementation of best management practices (BMPs) to control the transport of contaminants off site were not effective. Previous attempts to utilize BMPs to control the transport of contaminants offsite have proven ineffective as is demonstrated by the effluent limitation exceedances noted from Outfalls 003 through 007 on page 11 of the Fact Sheet (in the Compliance History Section). Storm water run off exiting the northern boundary of the site travels via Meir and Runkle Canyons to the Arroyo Simi, a tributary of Calleguas Creek. Hence, this Order includes effluent limits for the storm water discharges from the site for priority pollutants with reasonable potential.

Recent site inspections resulted in the identification of two other storm water monitoring locations:

- WS-13 Drainage Area — Discharge Outfall 009
- Building 203 — Discharge Outfall 010

Storm water runoff from the area that drains to discharge points 001, and 002 is estimated at 201 million gallons per day (MGD) (based on a 24-hour duration, 10-year return storm). This runoff is mixed with industrial waste collected in the ponds prior to discharge. Discharges from Outfall 008 are composed solely of storm water runoff.

The estimated flow from the area that drains storm water only from the northwest slope and discharges it via discharge points 003, 004, 005, 006, 007, 009 and 010 and via various drainage channels into Meir, Runkle and Woolsey Canyons is 71 MGD. (Figure 2).

The locations and the associated drainage areas are listed below for each of the seven storm water only discharge locations:

Discharge Outfall	Latitude (North)	Longitude (West)	Vicinity
003 (RMHF)	34° 14' 4.0"	118° 42' 38.4"	Radioactive Materials Handling Facility
004 (SRE)	34° 14' 9.1"	118° 42' 23.9"	Former Sodium Reactor Experiment
005 (SBP-1)	34° 13' 48.1"	118° 43' 3.9"	Former Sodium Burn Pit 1
006 (SBP 2)	34° 13' 50.7"	118° 42' 59.9"	Former Sodium Burn Pit 2
007 (B100)	34° 13' 50.2"	118° 42' 52.5"	Building 100
009(WS-13)	Not Available	Not Available	WS-13 Drainage Area
010(Bldg. 203)	Not Available	Not Available	Building 203

There is no flow from these locations except during heavy rainfall. For purposes of access and safety, these sampling stations have been established inside the SSFL northwest property boundary. The stations are located in close proximity to past and/or existing radiological facilities or other operations, as is noted in the vicinity column above.

Storm water from APTF flows toward Bell Creek and the Los Angeles River. Current operations at the facility include small engine testing using kerosene (RP-1), hydrogen, potentially alcohol, methanol, peroxide, and liquid oxygen (LOX). Nitrogen is also used for purge gas. After testing the staging areas are not routinely washed down to remove residual contaminants from the test operations. During normal operations testing may occur during storm events.

It is likely that contaminants associated with the engine test material would be present in the storm water runoff from the area. Hence, this permit requires that the storm water runoff from the area be monitored. If the monitoring data indicates reasonable potential, the permit will be reopened and effluent limitations will be implemented. The Discharger has indicated that the standard operating procedures for the area in the future will include washdowns of the staging areas after engine tests. The water associated with the washdown will be collected and disposed of offsite. If testing operations are required during storm events, the Discharger will collect the storm water runoff from the staging area for offsite disposal. If washdowns do not occur after test operations or if testing occurs during storm events and the water is not collected for offsite disposal, the Discharger will be required to sample it as stipulated for other storm water monitoring locations.

Compliance History

An audit of the file revealed several exceedances of the effluent limits prescribed in Order No. 98-051. The table below lists the exceedances and/or potential exceedances noted in the self-monitoring reports submitted by the Discharger. The contaminant, effluent limit, detected value and date of detection is recorded for each exceedance in the table that follows. The table also includes footnote references to describe the disposition of each violation.

Footnote	Outfall Number	Contaminant	Effluent Limit (units)	Detected Value	Date of Exceedance
1	002	Total Suspended Solids	15 mg/L	21	08/31/1998
2	005	Mercury	0.012 µg/L	0.2	11/30/1998
10	STP1	Turbidity	2 NTU	3.1	10/13/1998
3	STP1	Turbidity	2 NTU	2.2	10/14/1998
3	STP1	Turbidity	2 NTU	2.3	11/10/1998
3	STP1	Turbidity	2 NTU	2.3	11/11/1998
3	STP1	Turbidity	2 NTU	2.4	11/24/1998
4	001	Manganese	50 µg/L	120	05/11/1999
4	001	Manganese	50 µg/L	60	05/20/1999
4	001	Manganese	50 µg/L	90	05/21/1999
4	001	Manganese	50 µg/L	110	05/24/1999
4	001	Manganese	50 µg/L	70	05/25/1999
2	004	Mercury	0.012 µg/L	0.26	02/09/1999
10	005	Antimony	6 µg/L	8	02/08/1999
10	005	Antimony	6 µg/L	7	02/09/1999
10	005	Antimony	6 µg/L	7	01/20/1999
5	005	Mercury	0.012 µg/L	8.04	11/08/1999

Footnote	Outfall Number	Contaminant	Effluent Limit (units)	Detected Value	Date of Exceedance
10	005	Copper	11 µg/L	14	11/08/1999
2	006	Mercury	0.012 µg/L	0.45	02/09/1999
10	007	Antimony	6 µg/L	8	02/09/1999
10	007	Antimony	6 µg/L	11	03/25/1999
10	007	Cadmium	3.7 µg/L	4	03/25/1999
9	003	Mercury	0.012 µg/L	0.025	2/00
9	004	Mercury	0.012 µg/L	2.3	2/00
9	005	Mercury	0.012 µg/L	0.87	2/00
9	006	Mercury	0.012 µg/L	0.17	2/00
9	007	Copper	11 µg/L	13	2/00
9	007	Mercury	0.012 µg/L	0.055	2/00
9	STP III	BOD_5	>85 % removal	71.6	2/00
9	STP III	Total coliform	2.2 MPN/100 mL	60	2/00
9	STP III	Total coliform	2.2 MPN/100 mL	60	2/00
9	002	TSS	15 mg/L	20	6/00
9	002	TSS	15 mg/L	16	9/00
9	005	Mercury	2.1 µg/L	3.6	1/25/00
9	005	Thallium	2.0 µg/L	3.2	3/5/00
9	006	Oil and Grease	15 mg/L	30.5	3/8/00
9	002	Thallium	2.0 µg/L	4.1	2/8/01
9	005	$(NO_2 + NO_3)$ as N	8.0 µg/L	14	2/27/01
9	005	$(NO_2 + NO_3)$ as N	8.0 µg/L	8.4	3/7/01
6	STP III	Turbidity	2 NTU	2.6	8/14/98
6	STP III	Turbidity	2 NTU	2.6	8/17/98
6	STP III	Turbidity	2 NTU	3.0	8/18/98
6	STP III	Turbidity	2 NTU	2.6	8/20/98
6	STP III	Turbidity	2 NTU	2.8	8/21/98
6	STP III	Turbidity	2 NTU	3.0	8/24/98
6	STP III	Turbidity	2 NTU	3.0	8/25/98
6	STP III	Turbidity	2 NTU	3.0	9/04/98
6	STP III	Turbidity	2 NTU	3.2	9/22/98
6	STP III	Turbidity	2 NTU	2.8	9/23/98
6	STP III	Turbidity	2 NTU	2.8	9/24/98
6	STP III	Turbidity	2 NTU	3.3	10/01/98
6	STP III	Turbidity	2 NTU	2.8	10/02/98
6	STP III	Turbidity	2 NTU	2.8	11/23/98
6	STP III	Turbidity	2 NTU	3.9	11/24/98
6	STP III	Turbidity	2 NTU	2.9	11/25/98
6	STP III	Turbidity	2 NTU	5.5	12/05/98
6	STP III	Turbidity	2 NTU	7.5	12/06/98
6	STP III	Turbidity	2 NTU	3.3	12/07/98
6	007	Cadmium	1	4	03/31/99
7	001	Iron	0.3 mg/L	0.67	2/12/03

Footnote	Outfall Number	Contaminant	Effluent Limit (units)	Detected Value	Date of Exceedance
7	002	Iron	0.3 mg/L	0.7	2/12/03
8	001	MBAS	0.5 mg/L	2	5/03/03

1. **The detected value should be adjusted** - Discharger sampled seven additional days during the month for a monthly average of 21 mg/L. The value of 16 mg/L on 08/06/98 was only one sample.

2. **These violations should not be included** - The method detection limit (MDL) used by the discharger is higher than the permit limit, the permit allows for the use of a PQL in place of the permitted monthly average limit. Per the permit the PQL for this limits was calculated by taking the Permittees' MDL (0.2 µg/L) and multiplying by a factor of 10 (due to the fact that Hg is a non-carcinogen).

3. **These violations should not be included** - The daily average permit limit for turbidity is 2 NTUs. For consistency purposes the Enforcement Unit uses the following guideline: since the permit limit is only shown with one significant figure, the Permittees' results are rounded to one significant figure.

4. **These identified violations should not be included** - The Permittee stated that no flow occurred from Outfall 001 during the month of May. The Permittee took samples although no wastewater was discharged from Outfall 001.

5. **This violation should not be included** – Additional analyses were performed on the same sample within the holding time for Hg. The results varied from 8.04 µg/L to 0.2 µg/L.

6. **These identified violations should be included** - Additional violations identified by the Enforcement Unit.

7. **This violation should not be included** – Additional analyses were performed on the same samples, which yielded results consistent with historical findings and below the specified limit.

8. **This violation should not be included** – The discharger has a letter from the laboratory indicating that an inappropriate method was used to analyze the sample. A subsequent analysis of the sample yielded a nondetect result at 0.1 mg/L.

9. **This violation was included** - The NOV issued June 27, 2001 included this violation.

10. **This violation was included** – The NOV issued February 6, 2004 included this violation.

A Notice of Violation (NOV) was issued for exceedances occurring after January 2000 on June 27, 2001 and SSFL provided additional information. A revised NOV was issued on October 19, 2001 and the Administrative Civil Liability complaint was issued on April 29, 2002. The Discharger completed the stipulated requirements on October 9, 2002.

On February 6, 2004 a NOV was issued for the violations identified in the table that occurred prior to January 2000, and subsequent to the previously mentioned NOV that have not been adequately addressed by the Discharger.

IV. Applicable Statutes, Plans, Policies, and Regulations

A. *Clean Water Act* (CWA). The federal CWA requires that any point source discharge of pollutants to a water of the United States must be done in conformance with an NPDES permit. NPDES permits establish effluent limitations that incorporate various requirements of the CWA designed to protect water quality.

B. *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan). The Basin Plan contains water quality objectives and beneficial uses for inland surface waters and for the Pacific Ocean. The receiving water for storm water runoff from Outfall 008 (Happy Valley) is Dayton Canyon Creek which flows to Chatsworth Creek. Chatsworth Creek merges with Bell Creek and Bell Creek flows into the Los Angeles River. The receiving water for the permitted discharge of the treated effluent via Outfalls 001, 002, 011 and 018 is Bell Creek a tributary to the Los Angeles River. The beneficial uses of the Dayton Canyon Creek, Bell Creek and the Los Angeles River are:

Dayton Canyon Creek – Hydrologic Unit 405.21

Existing:	wildlife habitat
Intermittent:	groundwater recharge, contact and non-contact water recreation; warm freshwater habitat.

Bell Creek – Hydrologic Unit 405.21

Existing:	wildlife habitat
Intermittent:	groundwater recharge, contact and non-contact water recreation; warm freshwater habitat.

The Los Angeles River upstream of Figueroa Street – Hydrologic Unit 405.21:

Existing:	groundwater recharge; contact and non-contact water recreation, warm freshwater habitat; wildlife habitat; and wetland habitat.
Potential:	industrial service supply.

Los Angeles River downstream of Figueroa Street –Hydrologic Unit 405.15

Existing:	groundwater recharge, contact and non-contact water recreation, and warm freshwater habitat.
Potential:	industrial service supply and wildlife habitat.

Los Angeles River downstream of Figueroa Street – Hydrologic Unit 405.12

Existing: groundwater recharge; contact and noncontact water recreation; warm freshwater habitat; marine habitat; wildlife habitat; and rare, threatened, or endangered species.
Potential: industrial service supply; industrial process supply; migration of aquatic organisms; spawning, reproduction, and/or early development; and shellfish harvesting.

Los Angeles River Estuary – Hydrologic Unit 405.12

Existing: industrial service supply; navigation; contact and non-contact water recreation; commercial and sport fishing; estuarine habitat; marine habitat; wildlife habitat; rare, threatened, or endangered species; migration of aquatic organisms; spawning, reproduction, and/or early development; and wetland habitat.
Potential: shellfish harvesting.

Dayton Canyon Creek, Bell Creek and all of the reaches of the Los Angeles River listed except for the estuary also have municipal and domestic supply (MUN) listed as a potential beneficial use with an asterisk in the Basin Plan. This is consistent with Regional Board Resolution 89-03; however the Regional Board has only conditionally designated the MUN beneficial uses and at this time cannot establish effluent limitations designed to protect the conditional designation.

The storm water runoff from Outfalls 003 through 007, 009 and 010 discharges from the SSFL exit the site to the northwest and flows down the Meier and Runkle Canyons toward the Arroyo Simi. The Arroyo Simi is tributary to the Calleguas Creek. The beneficial uses for the receiving water are listed below.

Arroyo Simi – Hydrologic Unit 403.62

Existing: wildlife habitat, rare, threatened, or endangered species habitat,
Intermittent: industrial process supply, groundwater recharge, freshwater replenishment, contact and non-contact water recreation, warm freshwater habitat;

Arroyo Las Posas – Hydrologic Unit 403.62

Existing: groundwater recharge, freshwater replenishment, contact and non-contact water recreation, warm freshwater habitat, wildlife habitat,
Potential: industrial process supply, industrial service supply, agricultural supply, and cold freshwater habitat.

Calleguas Creek – Hydrologic Unit 403.12

Existing: industrial service supply, industrial process supply, agricultural supply, groundwater recharge, contact and non-contact water recreation, warm freshwater habitat, and wildlife habitat,

Calleguas Creek – Hydrologic Unit 403.11

Existing: agricultural supply, groundwater recharge, freshwater replenishment; contact and non-contact water recreation, warm freshwater habitat, cold freshwater habitat, wildlife habitat, rare, threatened or endangered species, and wetland habitat,

Calleguas Creek Estuary – Hydrologic Unit 403.11

Existing: noncontact water recreation, commercial and sport fishing, estuarine habitat, wildlife habitat, rare, threatened or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, and wetland habitat;
Potential: navigation and water contact recreation.

Mugu Lagoon – Hydrologic Unit 403.11

Existing: navigation, non-contact water recreation, commercial and sport fishing, estuarine habitat, marine habitat, preservation of biological habitats, wildlife habitat, rare, threatened or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, shellfish harvesting, and wetland habitat,
Potential: water contact recreation.

All of the reaches of Calleguas Creek except the estuary also include conditional municipal and domestic supply designations as an intermittent or potential beneficial use in the Basin Plan.

C. **Ammonia Basin Plan Amendment.** The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Board with the adoption of Resolution No. 2002-011, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (including enclosed bays, estuaries and wetlands) with Beneficial Use designations for protection of Aquatic Life.* The ammonia Basin Plan amendment was approved by the State Board, the Office of Administrative Law, and USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively. Although the revised ammonia water quality objectives may be less stringent than those contained in the 1994 Basin Plan, they are protective of aquatic life and are consistent with USEPA's 1999 ammonia criteria update.

D. ***Title 22 of the California Code of Regulations.*** The California Department of Health Services established primary and secondary maximum contaminant levels (MCLs) for a number of chemical and radioactive contaminants. These MCLs can be found in Title 22, California Code of Regulations (Title 22). Chapter 3 of the Basin Plan incorporates portions of Title 22 by reference. In addition, narrative objectives require the ground waters shall not contain taste or odor-producing substances in concentrations that affect beneficial uses. The secondary MCLs in Title 22 are designed to ensure that the water's taste and odor does not affect its suitability to drink. Title 22 MCLs have been incorporated into NPDES permits and

Non-Chapter 15 WDRs to protect the municipal and domestic supply (MUN) and groundwater recharge (GWR), where the underlying groundwater has a designated MUN beneficial use.

Groundwater Recharge. Sections of Bell Creek and Arroyo Simi, near the SSFL discharge points, are designated as GWR indicating that groundwater recharge is a beneficial use. Surface water from the Bell Creek enter the Los Angeles River Watershed. The headwaters of the Los Angeles River originate in the Santa Monica, Santa Susana, and San Gabriel Mountains. Four basins in the San Fernando Valley area contain substantial deep groundwater reserves and are recharged mainly through runoff and infiltration.

Surface water discharges from the north west edge of the SSFL are directed to Arroyo Simi a tributary located in the Calleguas Creek Watershed. Supplies of groundwater are critical to agricultural operations and industry (sand and gravel mining) in this watershed.

Moreover, much of the population in the watershed relies upon groundwater for drinking. Since groundwater from these basins is used to provide drinking water to a large portion of the population, Title 22-based limits are needed to protect that drinking water supply. By limiting the contaminants in the SSFL discharges, the amount of pollutants entering the surface waters and groundwater basins are correspondingly reduced. Once groundwater basins are contaminated, it may take years to clean up, depending on the pollutant. Compared to surface water pollution, investigations and remediation of groundwater are often more difficult, costly, and extremely slow. For these reasons Title 22-based limits will remain in the NPDES permit where there is reasonable potential.

On December 17, 2003, the Regional Board received the December *2003 Technical Memorandum Analysis of Groundwater Recharge, Santa Susana Field Laboratory, Ventura County, California*, prepared by Montgomery Watson Harza on behalf of the Boeing Company. This document was submitted to DTSC in order to present a qualitative and quantitative analysis of groundwater recharge at the Santa Susana Field Laboratory. Regional Board staff have also reviewed this document and find that a reasonable conclusion for the amount of rainfall that infiltrates soil using a water balance method is between 23% to 26%. Using a chloride mass balance method resulted in a range of 1% to 12% rainfall infiltration. As these calculations by different methodologies differ significantly and are inconclusive, Regional Board staff find that there is insufficient data to suggest that rainfall will not significantly recharge groundwater in the underlying surficial soils, weathered and fractured bedrock. In addition, there has been no site-specific soil attenuation factor/model submitted for Regional Board staff review. Inasmuch, those limits placed in this Order to protect groundwater recharge beneficial uses and beneficial uses of underlying groundwater apply at end-of-pipe.

Action Levels. California Department of Health Services (DHS) establishes Action Levels (ALs), or health based advisory levels, for chemicals in drinking water that lack MCLs. An AL is the concentration of a chemical in drinking water that is considered not to pose a significant risk to people ingesting that water on a daily basis. ALs may

be established by DHS for non-regulated chemical contaminants when one of the following occurs:

1. A chemical is found in an actual or proposed drinking water source, or
2. A chemical is in proximity to a drinking water source, and guidance is needed, should it reach the source.

An AL is calculated using standard risk assessment methods for non-cancer and cancer endpoints, and typical exposure assumptions, including a 2-liter per day ingestion rate, a 70-kilogram adult body weight, and a 70-year lifetime. For chemicals that are considered carcinogens, the AL is considered to pose "de minimus" risk, i.e., a theoretical lifetime risk of up to one excess case of cancer in a population of 1,000,000 people – the 10^{-6} risk level. (In that population, approximately 250,000 – 300,000 cases of cancer would be anticipated to occur naturally.) ALs may be revised from time to time to reflect new risk assessment information. Chemicals for which ALs are established may eventually be regulated by MCLs, depending on the extent of contamination, the levels observed, and the risk to human health. A number of the contaminants for which action levels were originally established now have MCLs.

In 1997, DHS established an 18 μg/L AL for perchlorate. DHS used the upper value of the 4 to 18 μg/L range that resulted from the "provisional" reference does that USEPA prepared in support of its Superfund activities. A revised external review draft perchlorate reference dose corresponding to a drinking water concentration of 1 μg/L was released in 2002. DHS concluded that the AL needed to be revised downward. On January 18, 2002, DHS reduced the perchlorate AL to 4 μg/L. The revised AL coincided with the analytical detection limit for purposes of reporting and was at the lower end of the 4 to 18 μg/L range from the USEPA 1992-1995 assessment. The Public Health Goal (PHG) for perchlorate was developed by Office of Environmental Health Hazard Assessment based on a contemporary health risk assessment. This new information was provided to DHS and on March 11, 2004 the AL for perchlorate was revised to 6 μg/L, a value identical to the PHG that will be used by DHS to develop the MCL for perchlorate. The effluent limit for perchlorate included in this Fact Sheet and in the revised-tentative WDR (dated March 25, 2004) has been updated to reflect the change in the AL by DHS (from 4 μg/L to 6 μg/L).

Perchlorate and its salts are used in, but not limited to, solid propellant for rockets, missiles, and fireworks. The defense and aerospace industries purchase more than 90 percent of all the perchlorate manufactured. Perchlorate has historically been used at SSFL and thus is considered a chemical of concern at the site. Monitoring data collected during the tenure of the current permit indicates that perchlorate is present in the storm water runoff in Happy Valley and it has been detected in some of the groundwater wells utilized in the cleanup operations ongoing with DTSC oversight.

Perchlorate can interfere with iodide uptake by the thyroid gland; this can result in a decrease in the production of thyroid hormones, which are needed for prenatal and postnatal growth and development, as well as for normal body metabolism. Neither,

the CTR, NTR or the Basin Plan has requirements stipulated for perchlorate. Since there is not drinking waters standard, or maximum contaminant level (MCL), the DHS uses the AL as an advisory level. The Regional Board, exercising its best professional judgement, in the review of the "best available science" has in the past considered and used ALs when deemed appropriate to establish final effluent limitations in WDRs and NPDES permits adopted by this Board, to implement the Basin Plan narrative WQO, *"all waters shall be maintained free of toxic substance that produce detrimental physiological responses in human, plant, animal, or aquatic life,"* and to prevent degradation of valuable groundwater sources of drinking water.

E. Under title 40 Code of Federal Regulations (40 CFR) section 122.44(d), *Water Quality Standards and State Requirements*, "Limitations must control all pollutants or pollutant parameters (either conventional, non-conventional, or toxic pollutants), which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." Where numeric effluent limitations for a pollutant or pollutant parameter have not been established in the applicable state water quality control plan, 40 CFR section 122.44(d)(1)(vi) specifies that water quality-based effluent limitations (WQBELs) may be set based on United States Environmental Protection Agency (USEPA) criteria, and may be supplemented where necessary by other relevant information to attain and maintain narrative water quality criteria, and to fully protect designated beneficial uses.

F. The influent to the package type sewage treatment plants located at SSFL meet the requirements for the special consideration for less concentrated influent wastewaters. Section 133.103 of 40 CFR provides guidance on special considerations for secondary treated effluent. Paragraph (d) address less concentrated influent wastewater for separate sewers. The regulation states that:

> "The Regional Administrator or, if appropriate, State Director is authorized to substitute either a lower percent removal requirement or a mass loading limit for the percent removal requirements set forth in sections 133.102 (a) (3), 133.102 (a) (4) (iii), 133.102 (b) (3), 102.105 (a) (3), 133.105(b) (3) and 133.105(e) (1) (iii) provided that the permittee satisfactorily demonstrates that: (1) The treatment works is consistently meeting, or will consistently meet, its permit effluent concentration limits but its percent removal requirements cannot be due to less concentrated influent wastewater (2) to meet the percent removal requirements, the treatment works would have to achieve significantly more stringent limitations than would otherwise be required by the concentration-based standard, and (3) the less concentrated influent wastewater is not the result of excessive infiltration/inflow."

Consequently, this permit has substituted the mass loading limit for the percent removal requirement. However, there is a requirement that the influent monitoring be completed at least annually such that the per cent removal can be calculated.

G. Section 402(p) of the federal Clean Water Act (CWA), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. The Discharger in addition to meeting the effluent limits included in this permit for storm

water discharges only will be required to develop and implement a SWPPP as stipulated in Finding 27 of the Waste Discharge Requirements. These requirements as they are met will protect and maintain existing beneficial uses of the receiving water.

H. On May 18, 2000, the USEPA promulgated numeric criteria for priority pollutants for the State of California [known as the *California Toxics Rule* (CTR) and codified as 40 CFR section 131.38]. On March 2, 2000, State Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or* SIP). The SIP was effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through National Toxics Rule (NTR) and to the priority pollutant objectives established by the Regional Boards in their Basin Plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by the USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP was effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR.

I. Section 402(o) of the Clean Water Act and 40 CFR section 122.44(l) require that water-quality based effluent limits in re-issued permits must be at least as stringent as in the existing permit (anti-backsliding). There are, however, exceptions to the prohibition which are codified in sections 303(d)(4) and/or 402(o)(2) of the Clean Water Act. Hence, many of the limits from the existing waste discharge requirements contained in Regional Board Order No. 98-051, adopted by the Regional Board on June 29, 1998 have been included in this Order. For those limits carried forward, the Regional Board has determined that there is reasonable potential for the pollutant to cause or contribute to an exceedance of water quality standards in accordance with State Board Order No. WQ2003-0009. Reasonable potential is determined using the procedures established in the SIP, informed by professional judgment.

J. Antidegradation. On October 28, 1968, the State Board adopted Resolution No. 68-16, Maintaining High Quality Water, which established an antidegradation policy for State and Regional Boards. Similarly, the CWA (section 304(d)(4)(B)) and USEPA regulations (40 CFR section 131.12) requires that all NPDES permitting actions be consistent with the federal antidegradation policy. Specifically, waters that are of a higher quality than needed to maintain designated beneficial shall be maintained at the higher water quality unless specific findings are made.

K. *Watershed Management Approach.* The Regional Board has implemented a Watershed Management Approach, in accordance with *Watershed Protection: A Project Focus* (EPA841-R-95-003, August 1995), to address water quality protection in the Los Angeles Region. Programs covered under the Watershed Management Approach include regulatory (e.g., NPDES), monitoring and assessment, basin planning and water quality standards, watershed management, wetlands, total maximum daily loads (TMDLs), 401 certifications, groundwater (as appropriate), and nonpoint source management activities. The Watershed Management Approach integrates the Regional Board's many diverse programs, particularly, permitting, planning, and other surface-water oriented programs. It emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental

groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with the resources available. This approach facilitates a more accurate assessment of cumulative impacts of pollutants from both point and nonpoint sources.

The Los Angeles River watershed is one of the largest in the Region. The headwaters of the Los Angeles River originate in the Santa Monica, Santa Susana, and San Gabriel Mountains. The river flows through industrial and commercial areas and is bordered by rail yards, freeways, and major commercial and government buildings. The Los Angeles River tidal prism/estuary begins in Long Beach at Willow Street and runs approximately three miles before joining with Queensway Bay located between the Port of Long Beach and the city of Long Beach.

The wastewater discharge from Outfalls 001 and 002 at the SSFL enters Bell Creek near the headwaters of the Los Angeles River. The storm water runoff from Happy Valley (Outfall 008) exits the site via Dayton Canyon Creek which flows to Bell Creek and subsequently the Los Angeles River.

The other storm water runoff exiting the SSFL site does so near the northwest site boundary from Outfalls 003 through 007, 009 and 010. The receiving water for the storm water runoff from these locations is the Arroyo Simi, a tributary of Calleguas Creek. The Calleguas Creek Watershed extends from the Santa Monica Mountains and Simi Hills in the south, to the Santa Susana Mountains, South Mountain, and Oak Ridge in the north. Land uses vary throughout the watershed. Urban developments are generally restricted to the city limits of Simi Valley, Moorpark, Thousand Oaks, and Camarillo. Agricultural activities are spread out along valleys and on the Oxnard Plain.

The storm water discharge exits the site and travels down Meier and Runkle Canyons towards the Arroyo Simi. Most of the land use around the facility is open area. Overall the Calleguas Creek Watershed is considered an impaired watershed. It appears that the sources of many of these pollutants are agricultural activities. Approximately fifty percent of the watershed is still open space although there is a severe lack of benthic and riparian habitat present. The discharge, when it is sufficient to reach the Arroyo Simi, enters it in Reach 1 – Hydrological Unit 403.62.

L. *303(d) Listing of Impaired Waterways.* Bell Creek, which is the receiving, water for the wastewater discharge from Outfalls 001, and 002 is on the 2002 303(d) list with high coliform count as the stressor.

The storm water runoff discharge from Outfalls 003 through 007, 009 and 010, when it is sufficient to reach the Arroyo Simi, enters it in Reach 1 – Hydrological Unit 403.62. The stressors listed in the 2002 State Board's California 303(d) list for this reach of Arroyo Simi are ammonia, boron, chloride, sulfates, fecal coliform, organophosphorous pesticides, sediment/siltation, and total dissolved solids.

V. Regulatory Basis for Effluent Limitations

A. General Bases for Effluent Limits

Effluent limitations established pursuant to Sections 301 (Effluent Limitations), 302 (Water Quality-Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 304 (Information and Guidelines), and 402 (NPDES) of the Federal Clean Water Act and amendments thereto, are applicable to the discharges covered by the tentative order.

B. Water Quality Based Effluent Limitations (WQBELs)

The WQBELs are based on the Basin Plan, other State plans and policies, or USEPA water quality criteria. These requirements, as they are met will protect and maintain existing beneficial uses of the receiving water. Where numeric water quality objectives have not been established in the Basin Plan, 40 CFR section 122.44(d) specifies that WQBELs may be set based on USEPA criteria and supplemented, where necessary by, other relevant information to attain and maintain narrative water quality criteria to fully protect designated beneficial uses.
The previous NPDES permit for SSFL (Order No. 98-051) included monthly averages for chemicals of concern discharged from Outfalls 003 through 008. The discharges from these outfalls consist solely of storm water runoff. These discharges are seasonal and infrequent. Individual NPDES permits that regulate storm water runoff only discharges issued recently by the Regional Board do not contain monthly average limitations. Hence, this Order does not contain monthly average limitations for the storm water runoff only discharges from these outfalls.

C. Reasonable Potential Analysis

Discharges from the engine test stands had not previously regulated independently. These discharges did not have specific monitoring requirements or effluent limits. This permit includes effluent limits for conventional pollutants and requires monitoring for the EPA priority pollutants excluding asbestos from the engine test areas.

In accordance with Section 1.3 of the SIP, the Regional Board will conduct a reasonable potential analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Board will analyze effluent data to determine if a pollutant in a discharge has a reasonable potential to cause or contribute to an excursion above a state water quality standard. For all parameters that have a reasonable potential, numeric WQBELs are required. The RPA considers water quality objectives outlined in the CTR, NTR, as well as the Basin Plan. To conduct the RPA, the Regional Board must identify the maximum observed effluent concentration (MEC) for each constituent, based on data provided by the Discharger.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed water applicable water quality criteria and objectives. The preliminary steps involve the following:

- Identifying the lowest or most stringent criterion or water quality objective for the pollutant "(C)";

- Adjusting the selected criterion/objective, when appropriate, for hardness, pH, and translators of the receiving water (C_a). There is no hardness data available for Arroyo Simi. For the storm water only discharges to Arroyo Simi, the hardness used was 100 mg/L as $CACO_3$, which is the default value. Consequently, the default value was used to complete the calculation of the final effluent limits. The acute and chronic dilution factors utilized to complete the calculation is zero since Arroyo Simi which is a tributary to Calleguas Creek has intermittent flows and many of the beneficial uses specified for Arroyo Simi are intermittent. A site-specific study would need to be completed to determine if seasonal dilution factors would be appropriate.

  Wastewater discharges from industrial process and storm water from Happy Valley exit the site and flow into Bell Creek a tributary to the Los Angeles River. The hardness data submitted by the Discharger for the receiving water provided hardness values less than the 100 mg/L as $CACO_3$ default.

  In fact the hardness data was very similar for the discharge and the receiving water, indicating that the discharge was a primary contributing flow to the receiving water. The default value of 100 mg/L for hardness was used to adjust the selected criteria.

- Collating the appropriate effluent data for the pollutant;

- Determining the observed maximum concentration in the effluent (MEC) from the effluent data; and

- Determining the observed maximum ambient background concentration of the pollutant (B). Ambient data was submitted for Bell Creek upstream of Discharge Serial 001 and 002. This ambient data was included in the calculation of effluent limits for the wastewater discharges from these two locations. Ambient data was not available for Arroyo Simi and was not included in the analysis of the discharges from Outfalls 003 through 007.

The SIP specifies three triggers to complete a RPA:

1. Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limitation is needed. For certain constituents present in this discharge that were nondetect, the MEC was set at the method detection limit consistent with section 1.3 of the SIP.

2. Trigger 2 – If MEC<C and background water quality (B) > C, a limitation is needed.

3. Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates that a WQBEL is required.

The first two triggers were evaluated using the California Permit Writers Training Tool (CAPWTT). While on contract with the State Board, Scientific Applications International Corporation (SAIC) developed this software to determine RPAs and, when reasonable potential exists, calculate the WQBELs, following procedures in SIP. The third trigger is evaluated by the permit writer utilizing all other information available to determine if a water quality-based effluent limitation is required to protect beneficial uses.

The results of the RPA for each analyte evaluated is presented in Attachments 1 for discharges from Outfall 001 and 002 and in Attachment 2 for the storm water only discharges (Outfalls 003 – 007). Most of the targeted analytes evaluated have a response of BPJ (Best Professional Judgement) or No Criteria required. The BPJ response requires the permit writer use all other available information to determine if a limit should be stipulated and if necessary to determine the applicable limit. The No Criteria result indicates that CTR does not include criteria to evaluate this analyte.

A numeric limit has not been prescribed for a toxic constituent if it has been determined that it has no reasonable potential to cause or contribute to excursions of water quality standards. However, if the constituent had a limit in the previous permit, and if none of the Antibacksliding exceptions apply, then the limit will be retained if the Regional Board concludes there is reasonable potential. For those pollutants with existing effluent limitations where the CAPWTT did not statistically determine reasonable potential, the Regional Board staff conducted a further analysis under Trigger 3 of the SIP. If reasonable potential was found based on Trigger 3, the basis for that decision is articulated in this fact sheet. A narrative limit to comply with all water quality objectives is provided in *Standard Provisions* for the priority pollutants, which have no available numeric criteria.

Sufficient effluent and ambient data are needed to conduct a complete RPA. If data are not sufficient, the Discharger will be required to gather the appropriate data for the Regional Board to conduct the RPA. Upon review of the data, and if the Regional Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

D. Calculating WQBELs

If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one of three procedures contained in Section 1.4 of the SIP. These procedures include:

1) If applicable and available, use of the wasteload allocation (WLA) established as part of a total maximum daily load (TMDL).

2) Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).

3) Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Regional Board.

E. Impaired Water Bodies in 303 (d) List

Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d) listed water bodies and pollutants, the Regional Board plans to develop and adopt TMDLs that will specify WLAs for point sources and load allocations (LAs) for non-point sources, as appropriate.

The USEPA has approved the State's 303(d) list of impaired water bodies. Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 2002 303(d) list and have been scheduled for TMDL development.

The Los Angeles River flows for 55 miles from the Santa Monica Mountains at the western end of the San Fernando Valley to the Pacific Ocean. The Los Angeles River drains an area of about 825 square miles. Approximately 324 square miles of the watershed are covered by forest or open space land. The rest of the watershed is highly developed. The river flows through industrial, residential, and commercial areas, including major refineries and petroleum products storage facilities, major freeways, rail lines, and rail yards serving the Ports of Los Angeles and Long Beach.

The majority of the Los Angeles River watershed is considered impaired due to a variety of point and nonpoint sources. The 2002 303(d) list includes total aluminum, dissolved cadmium, dissolved copper, dissolved zinc, high coliform count, pH, ammonia, nutrients (algae), odors, lead, coliform, trash, scum, oil, dichloroethylene, tetrachloroethylene, and trichloroethylene. High coliform count is a pollutant stressor for Bell Creek. The pollutant stressors listed for the Los Angeles River estuary include chlordane, DDT, lead, PCBs and zinc in sediment. The beneficial uses potentially threatened or impaired by degraded water quality are aquatic life, recreation, groundwater recharge, and municipal water supply.

Calleguas Creek Watershed and its major tributaries, Revlon Slough, Conejo Creek, Arroyo Conejo, Arroyo Santa Rosa, and Arroyo Simi drain an area of 343 square miles in southern Ventura and a small portion of western Los Angeles County. The northern boundary of the watershed is formed by the Santa Susana Mountains, South Mountain, and Oak Ridge; the southern boundary is formed by the Simi Hills and Santa Monica Mountains.

Urban developments within the watershed are generally restricted to the city limits of Simi Valley, Moorpark, Thousand Oaks, and Camarillo. Agricultural activities, primarily cultivation of orchards and row crops, are spread out along valleys and on the Oxnard Plain.

The Watershed Management Initiative characterizes the Callegaus Creek Watershed as a very impaired watershed. Calleguas Creek Reach 7 (the Arroyo Simi) is on the 2002 303 (d) list for ammonia, chloride, boron, sulfates, total

dissolved solids, fecal coliform, organophosphorus pesticides, and sedimentation/siltation. The beneficial uses potentially threatened or impaired by degraded water quality are wildlife habitat, and rare, threatened or endangered species habitat. The intermittent beneficial uses potentially impacted include industrial process supply, groundwater recharge, freshwater replenishment, contact and non-contact water recreation, and warm freshwater habitat.

F. Whole Effluent Toxicity

Whole Effluent Toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative "no toxics in toxic amounts" criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and measures mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental response on aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. The existing permit does not contain toxicity limitations or monitoring requirements.

In accordance with the Basin Plan, acute toxicity limitations dictate that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival. Consistent with Basin Plan requirements, this Order includes acute toxicity limitations.

In addition to the Basin Plan requirements, Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters.

The Discharger will be required to conduct chronic toxicity testing. The Order includes a chronic testing trigger hereby defined as an exceedance of 1.0 toxic units chronic (TUc) in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed 1.0 TUc in a critical life stage test.) If the chronic toxicity of the effluent exceeds 1.0 TUc, the Discharger will be required to immediately implement accelerated chronic toxicity testing according to Monitoring and Reporting Program, Item IV.D.1. If the results of two of the six accelerated tests exceed 1.0 TUc, the Discharger shall initiate a toxicity identification evaluation (TIE).

G. Specific Rationale for Each Numerical Effluent Limitation

Section 402(o) of the Clean Water Act and 40 CFR 122.44(l) require that effluent limitations standards or conditions in re-issued permits are at least as stringent as in the existing permit unless an antibacksliding exception applies. The Regional Board has determined that reasonable potential exists for all pollutants that are regulated under the current permit; therefore effluent limitations have been established for these pollutants. Furthermore, effluent limitations for several contaminants including have been included based on BPJ with the CTR WQBELs or with effluent limits from the current Order.

In compliance with 40 CFR 122.45(f), mass-based limitations have also been established in the proposed Order for conventional and priority pollutants. The mass for both the maximum and the monthly or 30-day average limits and when appropriate the 7-day average effluent limits were calculated using the flow for the associated operation, which was provided by the Discharger.

When calculating the mass for discharges, the maximum permitted flow rate was used to calculate the daily maximum, the monthly average, or 7-day average mass. When calculating the appropriate mass for the discharge event or events evaluated the actual flow rate should be substituted in the following equation. The daily maximum flow will be used to calculate the daily maximum, the monthly average, 30-day average or 7-day average flows will be used to calculate the respective mass discharge limit.

Mass (lbs/day) = flow rate (MGD) X 8.34 X effluent limitation (mg/L):
where: mass = mass limit for a pollutant in lbs/day
effluent limitation = concentration limit for a pollutant, mg/L
flow rate = discharge flow rate in MGD

Outfalls 001 and 002. RPAs were performed using CAPWTT for each of 126 priority pollutants for which effluent data were available. The input data for the RPAs were provided in the Self-Monitoring Reports submitted by the Discharger. One RPA was performed for discharges from Outfalls 001 and 002, which are composed of treated wastewater, water from the groundwater treatment systems, excess reclaimed water, water from the engine test stands, and storm water. Four analytes had reasonable potential to exceed WQBELs: copper, lead, mercury, and TCDD. Three of these analytes (copper, lead, and mercury) had effluent limitations in the previous order (Order No. 98-051).

The Discharger also submitted data for the receiving water associated with discharges from Outfalls 001 and 002. This data was collected using elevated detection limits and hence several other constituents had reasonable potential. The constituents are 2,4,6-trichlorophenol, 2,4-dinitrotoluene, alpha-BHC, bis(2-ethylhexyl)phthalate, N-nitrosodimethlyamine and pentachlorophenol. Effluent limits for these constituents have also been included in this Order.

Since perchlorate has been detected above the Department of Health Services action level in storm water runoff from the facility and it has been detected in the influent to some of the groundwater treatment systems, BPJ has been used to

establish reasonable potential for it to be present in discharges from the site via Outfalls 001 and 002. Consequently an effluent limit for perchlorate has been included in this Order for these discharges. Since perchlorate is typically not a naturally occurring pollutant and its presence in the receiving waters is the result of operations at the facility, the effluent limitation was developed based on anti-degradation grounds (State Board Res. No. 68-16 and 40 CFR § 131.12). The effluent limitation was therefore set at 6 µg/L, which would prevent the degradation of receiving waters and maintain and protect receiving water quality.

Several volatile organic compounds (VOCs) had effluent limits in Order No. 98-051 for discharges from Outfalls 001 and 002. The number of samples evaluated for each contaminant ranged from 19 to 60, and none of the contaminants were detected. The CTR based effluent limits for all of the VOCs except 1,1-dichloroethylene, were less stringent than the limits in Order No. 98-051. Since none of the contaminants were detected during numerous sampling events and the limits in the tentative Order would be the same as those from the previous Order, the limits for these analytes were not included. The only VOC that has limits in the tentative Order is 1,1-dichloroethylene. The limit is included since the CTR based limit for this analyte are more stringent that the limit included in the previous Order.

As set forth above, Section 1.3 of the State Board's State Implementation Plan (SIP) establishes a stepwise procedure for determining which toxic pollutants require water quality-based effluent limitations in conformance with 40 C.F.R. § 122.44(d). This stepwise procedure for toxic pollutants is called a reasonable potential analysis. The SIP's reasonable potential analysis applies to water quality standards for priority pollutants, whether promulgated by USEPA or established as water quality objectives by the Regional Board. Steps 1 through 6 establish an analytical procedure for requiring water quality-based limitations based solely on discharge and ambient receiving water data. Except as noted in the preceding paragraph, reasonable potential for toxic pollutants regulated by this Order was determined using the analytical procedure in Steps 1 through 6 of SIP section 1.3 as explained above.

Step 7 of SIP Section 1.3 recognizes that in certain instances a rote, mathematical analysis of the data will not be sufficient to protect beneficial uses. Step 7 therefore reserves for the Regional Board the obligation to "review other available information to determine if a water quality-based effluent limitation is required, notwithstanding the above analysis in *Steps 1* through *6*, to protect beneficial uses." Among the factors the State Board identifies as relevant to the Step 7 analysis are: the facility type, discharge type, and potential toxic impact of the discharge. With respect to the Facility, the Regional Board finds sufficient, unusual circumstances to require a water quality-based effluent limitation for trichloroethylene (TCE). Data and testimony indicate that approximately 530,000 gallons of TCE were released to the soil and groundwater at the Facility. The tremendous volume of TCE released at the site warrants significant scrutiny. While recent monitoring data do not show TCE in surface water discharges, scouring from large storm events may release soils with adsorbed TCE. The large volumes of TCE in scoured soils may become chemically available in the surface water runoff and cause or contribute to an exceedance of the water quality standard. In addition, the existing monitoring data has been collected far downstream from on-site sources. The data may not reliably indicate the presence of

TCE in waters of the United States because the turbid conditions may have volatilized the TCE before it reached existing monitoring points. Further, contamination is spotty and not completely characterized; pathways are not always predictable and are not fully characterized; and the site is in a hilly environment with uncertain pathways and seeps which could possibly lead to surfacing of water with contamination that cannot be predicted. Finally, TCE is a probable carcinogen that can cause skin rashes on contact, and when ingested has been associated with liver and kidney damage, impaired immune system function, and in large volumes unconsciousness, impaired heart function, or death. Considering the toxic nature of TCE and that past practices at the site released extraordinary volumes of TCE into the environment that can continue to leach into surface water through the scouring from storm events, and further considering that the existing monitoring data may not be representative of direct discharges to waters of the United States since the data were collected downstream of the initial discharge, the Regional Board has determined that a water quality-based effluent limitation for TCE is necessary to protect beneficial uses.

Outfalls 003 through 007. Discharges from Outfall 003 through 007 are storm water runoff only. Daily maximum and monthly average limits for storm water were included in Order No. 98-051. This Order does not include monthly average limits for priority pollutants in storm water only discharges since storm events are infrequent and often occur less than once per month during the rainy season. This change in the limits is consistent with permits adopted by the Regional Board for storm water discharges only.

The storm water only discharges from Discharge Outfalls 003 through 007 were also evaluated using CAPWTT (Attachment 2). The analytes with statistical reasonable potential are cadmium, copper, cyanide, mercury, and TCDD (Attachment 2 page 1). Cyanide was detected only once during the period evaluated at a concentration of 5.8 micrograms/liter. That detection triggered the reasonable potential since it exceeds that calculated average monthly effluent limit (AMEL). However, the discharges evaluated are storm water only discharges, which do not have monthly average limits. When the maximum effluent concentration (MEC) of 5.8 µg/L is compared to the maximum daily effluent limit (MDEL) the MEC is less than the MDEL. Consequently, this permit does not include an effluent limit for cyanide in the storm water only discharges. CTR-WQBELs for cadmium copper, mercury and TCDD have been included in this Order. The previous order included effluent limits for all of these analytes except TCDD. The effluent limits for the analytes with a positive RPA are the most stringent of the limit included in Order 98-051, and the applicable CTR criteria which include the freshwater aquatic life criteria, and the human health criteria for consumption of organisms only. The previous permit included limits for these analytes from Title 22, which are more stringent than the CTR limits. The compliance history reveals that the effluent limit for antimony (6 µg/L) was exceeded at Outfalls 005 and 007 in 1999 and the limit for thallium (2 µg/L) was exceeded at Outfall 005 on March 8, 2000. Therefore, limits for antimony and thallium were established using best professional judgement.

The monthly average effluent limit for mercury included in Order No. 98-051 (0.012 µg/L) was based on freshwater continuous criteria from 40 CFR 131.36. This limit is based on a fish consumption advisory, which appeared in the July 1, 1998 edition but was subsequently withdrawn. CTR included criteria for mercury, which was used to develop the WQBEL for mercury that is included in this Order.

The CTR-WQBELs for cadmium in the tentative Order is greater than the limit stipulated in the previous order. The daily maximum concentrations for cadmium from the previous order were taken directly from NTR and were expressed as dissolved criteria. The daily maximum limits for all metals included in this order were calculated based on criteria that appears in CTR when they were the most protective criteria available. The dissolved criteria were adjusted using conversion factors to total recoverable. Since the effluent limits for cadmium in the tentative Order is total cadmium they are slightly higher than the limits included in the previous Order.

The criteria stipulated for TDS, sulfate, chloride, and nitrogen also changed for storm water discharges to the Arroyo Simi, a tributary of Calleguas Creek. The criteria listed previously were the stipulated criteria for the Los Angeles River Watershed. The criteria stipulated for Calleguas Creek above Potrero Road are 850, 250, 150, 1.0, and 10 mg/L for TDS, sulfate, chloride, boron and nitrogen respectively.

Outfall 008. The area commonly referred to as Happy Valley receives storm water runoff from the former solid propellant testing area. Operations at the former solid propellant testing area ended in 1994. A major component of the propellant was perchlorate. Since the propellant has been used in the area and it has been detected in the storm water runoff at concentrations exceeding the Department of Health Services action level of 4 µg/L (which was changed to 6 µg/L on March 11, 2004), an effluent limit for perchlorate has been included in this Order. The effluent limitation for perchlorate is established based on antidegradation as explained for Outfalls 001 and 002. A requirement for sampling of the storm water runoff all other constituents tested for at Outfalls 003 through 007, has also been included in this Order. The new storm water monitoring location is Discharge Outfall 008. Storm water from Happy Valley flows to Dayton Canyon Creek. Dayton Canyon Creek merges with flows from Chatsworth Creek, which flows south to Bell Creek southwest of the intersection of Shoup Avenue and Sherman Way. Bell Creek subsequently flows east to the Los Angeles River.

Outfalls 009. The WS-13 Drainage area begins near the entrance to the property and traverses several potential areas of concern. The WS-13 drainage area collects storm water runoff from the Area 1 and Area 2 Landfills, and the former LOX plant located on NASA owned property. In addition, WS-13 picks up storm water run on from Sage Ranch where agricultural operations took place and a gun shooting range is located. This location has only been sampled once in the past. Additional data would provide information regarding the transport of contaminants in these areas offsite by storm water runoff. The WS-13 Drainage area will become Discharge Outfall 009; this outfall drains to Arroyo Simi.

Outfall 010. Building 203 was formally used as an instrumentation laboratory where various types of instrumentation were repaired and calibrated. The instrumentation included but was not limited to, thermometers and manometers that contained

mercury. Currently the building houses operations related to laser research. Operations include limited polishing fibers, hand wipe solvent and chemical cleaning, assembly and test of various components in both open warehouse and clean room environments. All wastes are currently containerized and transported off site for disposal.

Outfall 011. The Perimeter Pond collects wastewater generated from Area1. The discharges from groundwater treatment systems located in Area 1, discharges from Sewage Treatment Plant 1 and storm water runoff from the vicinity is discharged initially to R-1 Pond which flow to the Perimeter Pond. Discharges from the Perimeter Pond exit the site via Outfall 001. The Perimeter Pond is the final step in the treatment of wastes generated onsite. Consequently, this Order includes requirements for monitoring of the effluent from the pond for the priority pollutants and for other targeted chemicals of concern at the site.

Outfalls 012 – 014. The various test stands are used to test fire rocket engines built onsite. The fire suppression water used during testing may contain residual fuels and solvents. This wastewater is directed via lined and unlined channels to the reclamation ponds, which are used to store wastewater collected from the various onsite operations along with any storm water runoff for reuse onsite.

The Regional Board will have oversight of the discharges from the engine test stands. This permit will include requirements for monitoring of the discharges. The data collected will be used to evaluate reasonable potential of the discharge to exceed applicable requirements and if warranted; effluent limits will be implemented for the discharges.

Outfalls 015 – 017. The two operational plants (STP-1 and STP-3) are activated sludge sewage treatment plants that provide secondary and tertiary treatment for the domestic sewage from the facility. The disinfected sewage effluents are subsequently directed to the reclaim water system reservoir. The two plants are currently being used as collection reservoirs only, previously had effluent limits for $BOD_5 20°C$, coliform, and turbidity on discharges from the facilities. Sewage sludge generated was hauled offsite to the one of the facilities operated by Los Angeles County Sanitation Districts. The monitoring program for the sewage treatment plants included requirements for the previously mentioned constituents as well as pH, oil and grease and suspended solids. This permit includes requirements to monitor for priority pollutants except asbestos, perchlorate, N-nitrosodimethylamine, 1,4-dioxane, and 1,2,3-trichloropropane to provide the data required to evaluate reasonable potential. If reasonable potential exists, effluent limits will be implemented.

Outfall 018. The R-2A and R-2 B Ponds are used to collect wastewater from Areas II and III. R-2A Ponds collect wastewater from the Delta Groundwater Treatment System and storm water runoff from the location of the former Delta Test Stand. The R-2B Ponds receive overflow from the Silvernale Pond which includes discharges from the Bravo, Alpha and RD-9 Groundwater Treatment Systems and storm water runoff from the Alpha and Bravo Engine Test Stands. The R-2B Pond also receives wastewater discharges and storm water runoff from the STL-IV Test Stand area. The R-2 Spillway is an overflow area used to allow the wastewater from the two ponds to flow via a drainageway to Outfall 002. Wastewater released from

the R-2 Spillway travels approximately 4,500 feet prior to reaching Outfall 002. Hence, this permit includes a monitoring requirement for discharges from the R-2 Spillway.

H. Total Maximum Daily Load (TMDL)

The TMDL development for the Los Angeles River watershed is scheduled for fiscal year 2002 beginning with coliform. The TMDL development for Calleguas Creek is also scheduled for fiscal year 2002 beginning with chloride. The TMDLs, which are not scheduled for completion within the lifetime of this permit, will include WLAs for the 303(d) listed pollutants. When each TMDL is complete, the Regional Board will adopt WQBELs consistent with the corresponding WLAs. If authorized, a time schedule may be included in a revised permit to require compliance with the final WQBELs.

To prevent further degradation of the water quality of the Los Angeles River and Calleguas Creek and to protect their beneficial uses, mixing zones and dilution credits are not allowed in this Order. This determination is based on:

- Many of the beneficial uses stipulated are intermittent for Dayton Canyon Creek, Bell Creek and the Arroyo Simi. The discharges from SSFL in many cases provide a significant portion of the headwaters for these waterbodies. Since there is little assimilative capacity of the receiving water, a dilution factor is not appropriate and the final WQBEL should be a numeric objective applied end-of-pipe.

- The discharge may contain the 303(d) listed pollutants that are bioaccumulative such as metals. These pollutants, when exceeding water quality criteria within the mixing zone, can potentially result in tissue contamination of an organism directly or indirectly through contamination of bed sediments with subsequent incorporation into the food chain. The SIP, section 1.4.2.2.B. states that the "Regional Board shall deny or significantly limit a mixing zone and dilution credit as necessary to protect beneficial uses..." It continues that "such situations may exist based upon the quality of the discharge... or the overall discharge environment (including ... potential for bioaccumulation)."

For some pollutants, including aldrin, alpha-BHC, chlordane, DDT, dieldrin, heptachlor, heptachlor epoxide, several PAHs, PCBs, TCDD equivalents, and toxaphene the applicable water quality objectives are below the levels that current analytical techniques can measure. Reasonable potential analyses have been completed on each of these constituents and two of them had reasonable potential: alpha-BHC and TCDD equivalents. The MEC detected for TCDD exceeded the CTR criterion and the detection limits for alpha-BHC in the receiving water and the effluent exceeded the criterion.

VI. SPECIFIC RATIONALES FOR EACH OF THE NUMERICAL EFFLUENT LIMITATIONS

A. The following table presents the effluent limitations and the specific rationales for pollutants that are expected to be present in the discharge from Outfalls 001 and 002:

Constituents	Units	Discharge Limitations		Rationale
		Monthly Average	Daily Maximum	
pH	pH Units	---	6.5-8.5	Basin Plan
Temperature	°F	---	86	BPJ/Thermal Plan
Total suspended solids	mg/L	15	45	BPJ–Previous Order
$BOD_5$20°C	mg/L	20	30	BPJ – Previous Order
Oil and grease	mg/L	10	15	BPJ – Previous Order
Settleable solids	ml/L	0.1	0.3	BPJ – Previous Order
Total residual chlorine	mg/L	----	0.1	Basin Plan
Total dissolved solids	mg/L	----	950	Basin Plan
Chloride	mg/L	----	150	Basin Plan
Sulfate	mg/L	----	300	Basin Plan
Barium	mg/L	----	1.0	BPJ-Previous Order
Iron	mg/L	----	0.3	BPJ-Previous Order
Fluoride	mg/L	----	1.6	Basin Plan
Detergents (as MBAS)	mg/L	----	0.5	Basin Plan
Nitrate + Nitrate-N	mg/L	----	8.0	Basin Plan
Manganese	µg/L	----	50	BPJ-Previous Order
Cyanide	µg/L	4.3	8.5	CTR
Antimony	µg/L	----	6.0	Basin Plan-Title 22
Arsenic	µg/L	----	50	Basin Plan-Title 22
Beryllium	µg/L	----	4.0	Basin Plan-Title 22
Cadmium	µg/L	2.0	4.0	CTR
Chromium (VI)	µg/L	8.1	16.3	CTR
Copper	µg/L	7.1	14.0	CTR
Lead	µg/L	2.6	5.2	CTR
Mercury	µg/L	0.05	0.1	CTR
Nickel	µg/L	35	96	CTR
Selenium	µg/L	4.1	8.2	CTR
Silver	µg/L	2.0	4.1	CTR
Thallium	µg/L	----	2.0	Basin Plan
Zinc	µg/L	53.6	119	CTR
1,1-Dichloroethylene	µg/L	3.2	6.0	CTR/BPJ-Title 22
Trichloroethylene	µg/L	----	5.0	BPJ/Basin Plan-Title 22
Perchlorate	µg/L	----	6.0	BPJ/DHS Action Level
2,4,6-Trichlorophenol	µg/L	6.5	13.0	CTR
2,4-Dinitrotoluene	µg/L	9.1	18.3	CTR
Alpha-BHC	µg/L	0.01	0.03	CTR
Bis(2-ethylhexyl)phthalate	µg/L	----	4.0	Basin Plan/Title 22
N-Nitrosodimethylamine	µg/L	8.1	16.3	CTR
Pentachlorophenol	µg/L	8.2	16.5	CTR

Constituents	Units	Discharge Limitations		Rationale
		Monthly Average	Daily Maximum	
TCDD	µg/L	1.4E-08	2.8E-08	CTR
Radioactivity				
Gross Alpha	pCi/L	----	15	BPJ/Basin Plan
Gross Beta	pCi/L	----	50	BPJ/Basin Plan
Combined Radium-226 & Radium-228	pCi/L	----	5	BPJ/Basin Plan
Tritium	pCi/L	----	20,000	BPJ/Basin Plan
Strontium-90	pCi/L	----	8	BPJ/Basin Plan

B. Following are the effluent limitations and the specific rationales for pollutants discharged from Outfalls 003 through 007.

Constituents	Units	Discharge Limitations		Rationale
		Monthly Average	Daily Maximum	
pH	pH Units	----	6.5-8.5	Basin Plan
Oil and grease	mg/L	10	15	BPJ
Chloride	mg/L	----	150	Basin Plan
Sulfate	mg/L	----	250	Basin Plan
Boron	mg/L	----	1.0	Basin Plan
Fluoride	mg/L	----	1.6	Basin Plan
Nitrate + Nitrate-N	mg/L	----	10.0	Basin Plan
Total dissolved solids	mg/L	----	850	Basin Plan
Antimony	µg/L	----	6.0	Basin Plan/Title 22
Cadmium	µg/L	----	4.0	CTR
Copper	µg/L	----	14.0	CTR
Mercury	µg/L	----	0.13	CTR
Thallium	µg/L	----	2.0	Basin Plan
TCDD	µg/L	----	2.8E-08	CTR
Perchlorate	µg/L	----	6.0	BPJ/ DHS Action Level
Radioactivity				
Gross Alpha	pci/L	----	15	Basin Plan/Title 22
Gross Beta	pci/L	----	50	Basin Plan/Title 22
Combined Radium-226 & Radium-228	pci/L	----	5	Basin Plan/Title 22
Tritium	pci/L	----	20,000	Basin Plan/Title 22
Strontium-90	pci/L	----	8	Basin Plan/Title 22

C. Following are the effluent limitations and the specific rationales for pollutants discharged from Outfall 008, 009, and 010.

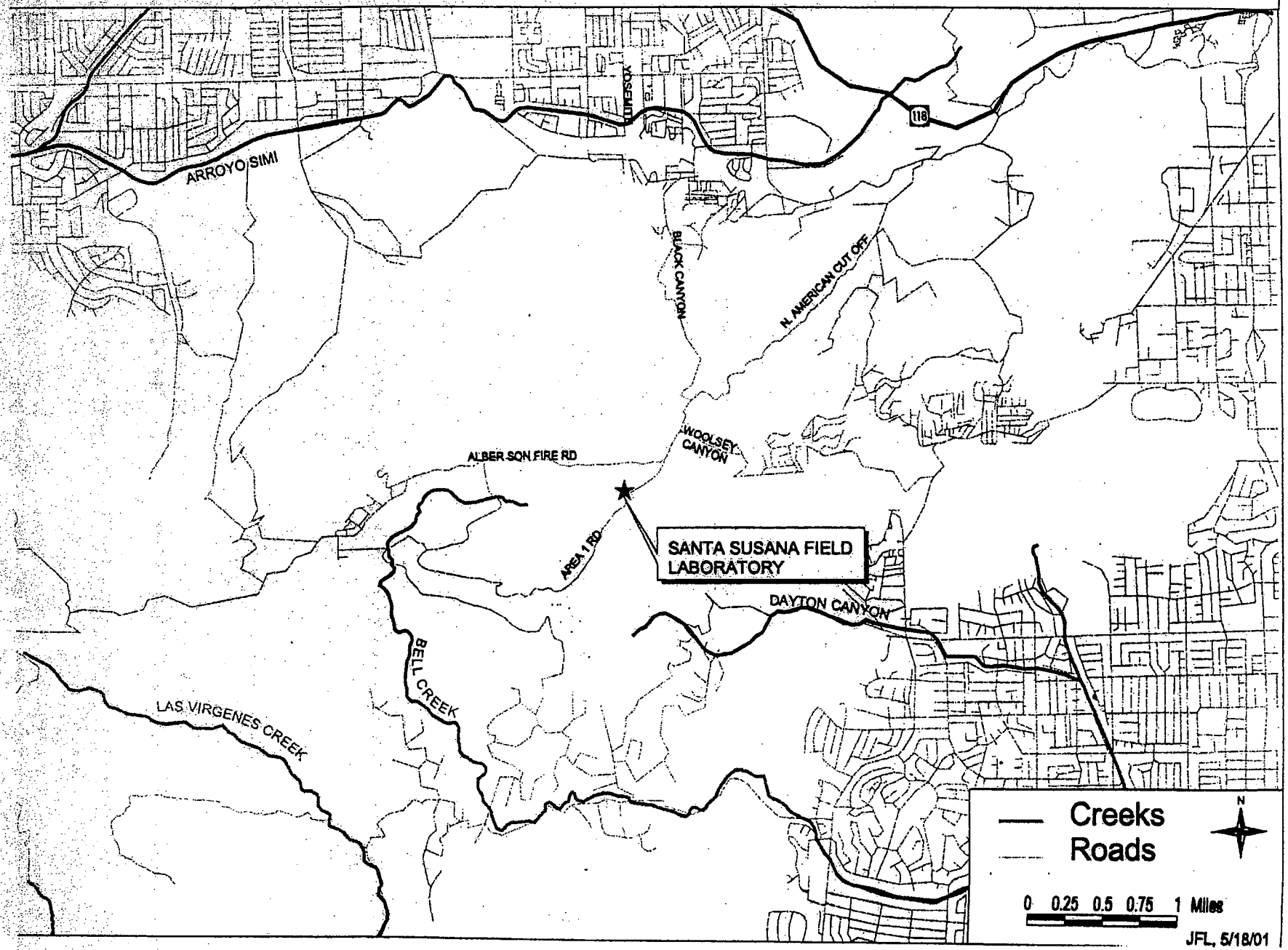
Constituents	Units	Discharge Limitations		Rationale
		Monthly Average	Daily Maximum	
pH	pH Units	----	6.5-8.5	Basin Plan
Oil and grease	mg/L		15	BPJ
Total dissolved solids[b]	mg/L	----	950	Basin Plan
Total dissolved solids[a]	mg/L	----	850	Basin Plan
Chloride	mg/L	----	150	Basin Plan
Sulfate[b]	mg/L	----	300	Basin Plan
Sulfate[a]	mg/L	----	250	Basin Plan
Fluoride	mg/L	----	1.6	Basin Plan
Boron[1]	mg/L	----	1.0	Basin Plan
Nitrate + Nitrate-N	mg/L	----	8/10[2]	Basin Plan
Perchlorate	µg/L	----	6.0	BPJ/DHS Action Level

D. Following are the effluent limitations and the specific rationales for pollutants discharged from Outfalls 015 through 017.

Constituents	Units	Discharge Effluent Limitations			Rationale
		30-Day Average	7-Day Average	Daily Maximum	
pH	pH units	----	----	6.5-8.5	Basin Plan
Temperature	°F	----	----	86	BPJ/Thermal Plan
Total suspended solids	mg/L	30	45	----	40 CFR Part 133
$BOD_5$20°C	mg/L	30	45	----	40 CFR Part 133
Oil and grease	mg/L	10	----	15	BPJ
Settleable solids	ml/L	0.1	----	0.3	BPJ
Total residual chlorine	mg/L	----	----	0.1	Basin Plan
Total dissolved solids	mg/L	----	----	950	Basin Plan
Fluoride	mg/L	----	----	1.6	Basin Plan
Chloride	mg/L	----	----	150	Basin Plan
Sulfate	mg/L	----	----	300	Basin Plan
Boron	mg/L	----	----	1.0	Basin Plan
Barium	mg/L	----	----	1.0	Basin Plan
Detergents (as MBAS)	mg/L	----	----	0.5	Basin Plan
Coliform	MPN/100 ml	2.2	----	23	DHS/WRR
Turbidity	NTU	----	----	10.0	DHS/WRR

[a] Limit for discharges from Outfalls 009 and 010.
[b] Limit for discharges from Outfall 008.
[1] Limit is for discharges for Outfalls 009 and 010 which flows to Calleguas Creek. It is not applicable to discharges from Outfall 008 to Dayton Canyon Creek.
[2] Limit is 8 mg/L for discharges to Dayton Canyon Creek from Outfall 008. The limit is 10 mg/L for discharges from Outfalls 009 and 010 which flows to Calleguas Creek.

SANTA SUSANA FIELD LABORATORY AND VICINTY - FIGURE 1

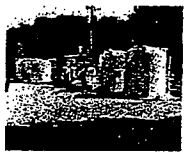


APTF Test Stand

Typical Air Stripper Groundwater Treatment System (Bravo)

Alfa Test Stand

Typical UltraViolet Peroxide System (RD-9)



Bravo Test Stand

R-2A Pond

DESCRIPTIONS OF PROPOSED DISCHARGE OUTFALL

NPDES OUTFALL NO.	DESCRIPTION
001	Wastewater and Storm Water; South Slope
002	Wastewater and Storm Water; South Slope
003	Storm Water; Radioactive Material Handling Facility (RMHF)
004	Storm Water; Sodium Reactor Experiment Area
005	Storm Water; Sodium Burn Pit 1
006	Storm Water; Sodium Burn Pit 2
007	Storm Water; Building 100
008	Storm Water; Happy Valley
009	Storm Water; WS-13 Drainage
010	Storm Water; Building 203
011	Wastewater and Storm Water; Perimeter Pond
012	Wastewater; Alpha Test Stand
013	Wastewater; Bravo Test Stand
014	Wastewater; APTF(Advanced Propulsion Test Facility)
015	Wastewater; STP-1 (Sewage Treatment Plant-1)
016	Wastewater; STP-2 (Sewage Treatment Plant-2)
017	Wastewater; STP-3 (Sewage Treatment Plant-2)
018	Wastewater and Storm Water; R-1 Spillway
not applicable	Wastewater and Storm Water;R-1 Pond
not applicable	Wastewater and Storm Water; R-2 Ponds (R-2A and R-2B)
not applicable	Wastewater and Storm Water; Silvernale Pond
not applicable	Treated Groundwater; WS-5 Groundwater Treatment System (GWTS) [Ultraviolet/Peroxidation]
not applicable	Treated Groundwater; RD-9 GWTS [Ultraviolet/Peroxidation] (Stand By)
not applicable	Treated Groundwater; Alpha GWTS [Air Stripping Tower]
not applicable	Treated Groundwater; Delta GWTS [Air Stripping Tower]
not applicable	Treated Groundwater; STLF-IV GWTS [Air Stripping Tower]
not applicable	Treated Groundwater; Area 1 Rd GWTS [Air Stripping Tower] (Stand By)
not applicable	Treated Groundwater; Bravo GWTS [Air Stripping Tower]
not applicable	Treated Groundwater; Canyon GWTS [Air Stripping Tower] (Stand By)
not applicable	Treated Groundwater; Interim GWTS near FSDF
not applicable	Treated Groundwater; Interim GWTS near Bldg 59
not applicable	Treated Groundwater; Interim GWTS near RMHF

MAP COORDINATES IN STATE PLANE, NAD 27, ZONE V

Legend

- NPDES Outfalls (RWQCB Prir
- DTSC Primary Oversight Auth

NPDES Permit Related Features
Santa Susana Field Laboratory

DATE: 01/15/04
FILE: r:\rock\plots\arcmap\groundwater_treatment_systems_36x48.mxd

MWH

FIGURE 2

ATTACHMENT 1

WQBELs Calculation Summary

Facility Name:	UpdateBoeingWaste
NPDES Number:	CA0001309
Session ID:	2
Session Name:	WasteApril
User Name:	Cowens
Session Date:	2/18/2004

	AMEL(ug/l)	MDEL(ug/l)
2,4,6-Trichlorophenol	6.5000	13.0451
2,4-Dinitrotoluene	9.1000	18.2632
alpha-BHC	0.0130	0.0261
Bis (2-Ethylhexyl) Phthalate	5.9000	11.8409
Copper (Cu)	7.0779	13.9991
Lead (Pb)	2.6047	5.2274
Mercury (Hg)	0.0510	0.1024
N-Nitrosodimethylamine	8.1000	16.2562
Pentachlorophenol	8.2000	16.4569
TCDD	1.400E-8	2.810E-8

Period used for effluent data: From 8/6/1998 to 5/3/2003

Period used for ambient data: From 2/12/2003 to 2/12/2003

STREAM CONDITIONS:

Ambient TSS (mg/l):	200
Ambient Hardness (mg/l CaCO3):	100
Ambient pH (SU):	8.5

MIXING CONDITIONS:

Acute Receiving Water Flow (cfs):	1
Facility Maximum Daily Flow (MGD):	1
Acute Dilution Ratio:	0
Chronic Receiving Water Flow (cfs):	1
Facility 4-day avg Daily max flow (MGD):	1
Chronic Dilution Ratio:	0
Human Health Receiving Water Flow (cfs):	1
Long Term Mean Flow (MGD):	1
Humean Health Dilution Ratio:	0

Compliance Summary Report

Facility Name:	UpdateBoeingWaste
NPDES Number:	CA0001309
Session ID:	2
Session Name:	WasteApril
User Name:	Cowens
Session Date:	2/18/2004

Copper (Cu) MDEL (ug/l) = 13.99908 ML (ug/l) = 0.5

Value	Detect	Date	Compliance
15	True	6/14/2000	Non Compliant

Mercury (Hg) MDEL (ug/l) = 0.1023539 ML (ug/l) = 0.2

Value	Detect	Date	Compliance
4.7	True	9/8/2000	Non Compliant
0.23	True	2/12/2003	Non Compliant

TCDD MDEL (ug/l) = 2.809715E-08 ML (ug/l) = -9

Value	Detect	Date	Compliance
0.0000129	True	12/17/2002 8:00:00 AM	Non Compliant
0.000135	True	12/17/2002 8:00:00 AM	Non Compliant
0.0000207	True	2/12/2003 11:30:00 AM	Non Compliant
0.000186	True	2/12/2003 11:30:00 AM	Non Compliant
0.0000014	True	2/12/2003 11:30:00 AM	Non Compliant
0.0000129	True	2/12/2003 11:30:00 AM	Non Compliant

REASONABLE POTENTIAL ASSESSMENT

Facility Name : UpdateBoeingWaste
NPDES Number : CA0001309

CAPWTT Session ID : 2
CAPWTT Session Name : WasteApril
CAPWTT Session Date : 2/18/2004

Pollutant : 1,1,1-Trichloroethane
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 71 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : 1,1,2,2-Tetrachloroethane
ISWP Criteria : 11.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 27 observations. The MEC is set to the lowest detection limit.

MEC = 0.3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.33 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 1,1,2,2-Tetrachloroethane.

Pollutant : 1,1,2-Trichloroethane
ISWP Criteria : 42.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 71 observations. The MEC is set to the lowest detection limit.

MEC = 0.31 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.31 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 1,1,2-Trichloroethane.

Pollutant : 1,1-Dichloroethane
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 74 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : 1,1-Dichloroethylene
ISWP Criteria : 3.200 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 68 observations. The MEC is set to the lowest detection limit.

MEC = 0.14 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.14 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 1,1-Dichloroethylene.

Pollutant : 1,2,4-Trichlorobenzene
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : 1,2-Dichlorobenzene
ISWP Criteria : 17000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 28 observations. The MEC is set to the lowest detection limit.

MEC = 0.11 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 4 observations. The B is set to the lowest detection limit.

B = 0.11 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 1,2-Dichlorobenzene.

Pollutant : 1,2-Dichloroethane
ISWP Criteria : 99.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 71 observations. The MEC is set to the lowest detection limit.

MEC = 0.22 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.22 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 1,2-Dichloroethane.

Pollutant : 1,2-Dichloropropane
ISWP Criteria : 39.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 27 observations. The MEC is set to the lowest detection limit.

MEC = 0.14 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.14 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 1,2-Dichloropropane.

Pollutant : 1,2-Diphenylhydrazine
ISWP Criteria : 0.540 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 8.8 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for 1,2-Diphenylhydrazine

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Pollutant : 1,2-Trans-Dichloroethylene
ISWP Criteria : 140000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 27 observations. The MEC is set to the lowest detection limit.

MEC = 0.11 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.11 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 1,2-Trans-Dichloroethylene.

Pollutant : 1,3-Dichlorobenzene
ISWP Criteria : 2600.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 28 observations. The MEC is set to the lowest detection limit.

MEC = 0.1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 4 observations. The B is set to the lowest detection limit.

B = 0.1 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 1,3-Dichlorobenzene.

Pollutant : 1,3-Dichloropropylene
ISWP Criteria : 1700.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 34 observations. The MEC is set to the lowest detection limit.

MEC = 0.11 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.11 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 1,3-Dichloropropylene.

Pollutant : 1,4-Dichlorobenzene
ISWP Criteria : 2600.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 28 observations. The MEC is set to the lowest detection limit.

MEC = 0.11 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 4 observations. The B is set to the lowest detection limit.

B = 0.11 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 1,4-Dichlorobenzene.

Pollutant : 2,4,6-Trichlorophenol
ISWP Criteria : 6.500 ug/l
WQBEL Required?: YES

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 6.5 ug/l (nondetect)

REASONABLE POTENTIAL:
B (nondetect) is GREATER THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 2,4,6-Trichlorophenol.

Pollutant : 2,4-Dichlorophenol
ISWP Criteria : 790.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 7.6 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 2,4-Dichlorophenol.

Pollutant : 2,4-Dimethylphenol
ISWP Criteria : 450.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 7.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 7.5 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 2,4-Dimethylphenol.

Pollutant : 2,4-Dinitrophenol
ISWP Criteria : 14000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 4.4 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 4.4 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 2,4-Dinitrophenol.

Pollutant : 2,4-Dinitrotoluene
ISWP Criteria : 9.100 ug/l
WQBEL Required?: YES

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 9.7 ug/l (nondetect)

REASONABLE POTENTIAL:
B (nondetect) is GREATER THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 2,4-Dinitrotoluene.

Pollutant : 2,6-Dinitrotoluene
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : 2-Chloroethylvinyl Ether
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 26 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : 2-Chloronaphthalene
ISWP Criteria : 4300.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 7.4 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 2-Chloronaphthalene.

Pollutant : 2-Chlorophenol
ISWP Criteria : 400.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 7.7 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 2-Chlorophenol.

Pollutant : 2-Methyl-4,6-Dinitrophenol
ISWP Criteria : 765.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 12 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 12 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for 2-Methyl-4,6-Dinitrophenol.

Pollutant : 2-Nitrophenol
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : 3,3-Dichlorobenzidine
ISWP Criteria : 0.077 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 7 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 8.3 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for 3,3-Dichlorobenzidine

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Pollutant : 3-Methyl-4-Chlorophenol
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 1 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for 3-Methyl-4-Chlorophenol.

Pollutant : 4,4'-DDD
ISWP Criteria : 8.40000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.

MEC = 0.007 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.013 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for 4,4'-DDD

Pollutant : 4,4'-DDE
ISWP Criteria : 5.90000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.

MEC = 0.005 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.013 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for 4,4'-DDE

Pollutant : 4,4'-DDT
ISWP Criteria : 5.90000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.

MEC = 0.007 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.019 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for 4,4'-DDT

Pollutant : 4-Bromophenyl Phenyl Ether
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : 4-Chlorophenyl Phenyl Ether
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : 4-Nitrophenol
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : Acenaphthene
ISWP Criteria : 2700.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 7.1 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Acenaphthene.

Pollutant : Acenapthylene
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 22 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : Acrolein
ISWP Criteria : 780.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 26 observations. The MEC is set to the lowest detection limit.

MEC = 4.6 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 4.6 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Acrolein.

Pollutant : Acrylonitrile
ISWP Criteria : 0.660 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 26 observations. The MEC is set to the lowest detection limit.

MEC = 5.1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 5.1 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Acrylonitrile

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Pollutant : Aldrin
ISWP Criteria : 1.40000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.

MEC = 0.007 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.012 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Aldrin

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Pollutant : alpha-BHC
ISWP Criteria : 0.013 ug/l
WQBEL Required?: YES

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.

MEC = 0.006 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.017 ug/l (nondetect)

REASONABLE POTENTIAL:
B (nondetect) is GREATER THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for alpha-BHC.

Pollutant : alpha-Endosulfan
ISWP Criteria : 0.056 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 19 observations. The MEC is set to the lowest detection limit.

MEC = 0.005 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.011 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for alpha-Endosulfan.

Pollutant : Anthracene
ISWP Criteria : 110000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 9 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Anthracene.

Pollutant : Antimony (Sb)
ISWP Criteria : 4300.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 11 times out of 71 observations. The MEC is set to the maximum detected value.
MEC = 5.7 ug/L (detect) and is LESS THAN the criterion requiring analysis of ambient data.
AMBIENT DATA SUMMARY:
This pollutant was detected 2 times out of 2 observations. The B is set to the maximum detected value.
B = 0.066 ug/l

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to decide whether to develop an effluent limitation for Antimony (Sb).

Pollutant : Arsenic (As-III)
ISWP Criteria : 150.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 27 times out of 71 observations. The MEC is set to the maximum detected value.

MEC = 11 ug/L (detect) and is LESS THAN the criterion requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.29 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Arsenic (As-III).

Pollutant : Asbestos
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
There are no effluent data for this pollutant.

AMBIENT DATA SUMMARY:
This pollutant was detected 1 times out of 2 observations.

Pollutant : Asbestos
ISWP Criteria : NA
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
There are no effluent data for this pollutant.

AMBIENT DATA SUMMARY:
This pollutant was detected 1 times out of 2 observations. The B is set to the maximum detected value.

B = 0.5 ug/l

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to decide whether to develop an effluent limitation for Asbestos.

Pollutant : Benzene
ISWP Criteria : 71.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 71 observations. The MEC is set to the lowest detection limit.

MEC = 0.11 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.11 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Benzene.

Pollutant : Benzidine
ISWP Criteria : 5.40000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 6.1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 6.1 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Benzidine

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Pollutant : Benzo (a) Anthracene
ISWP Criteria : 0.049 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 9.7 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Benzo (a) Anthracene

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Pollutant : Benzo (a) Pyrene
ISWP Criteria : 0.049 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 7.7 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Benzo (a) Pyrene

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Pollutant : Benzo (b) Fluoranthene
ISWP Criteria : 0.049 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 6.2 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Benzo (b) Fluoranthene

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Pollutant : Benzo (g,h,i) Perylene
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : Benzo (k) Fluoranthene
ISWP Criteria : 0.049 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 9.2 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Benzo (k) Fluoranthene

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Pollutant : Beryllium (Be)
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 71 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : beta-BHC
ISWP Criteria : 0.046 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.

MEC = 0.01 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.036 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for beta-BHC.

Pollutant : beta-Endosulfan
ISWP Criteria : 0.056 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 19 observations. The MEC is set to the lowest detection limit.

MEC = 0.005 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.037 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for beta-Endosulfan.

Pollutant : Bis (2-Chloroethoxy) Methane
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : Bis (2-Chloroethyl) Ether
ISWP Criteria : 1.400 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 4 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 7.9 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Bis (2-Chloroethyl) Ether

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Pollutant : Bis (2-Chloroisopropyl) Ether
ISWP Criteria : 170000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 8.2 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Bis (2-Chloroisopropyl) Ether.

Pollutant : Bis (2-Ethylhexyl) Phthalate
ISWP Criteria : 5.900 ug/l
WQBEL Required?: YES

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 26 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 30 ug/l (nondetect)

REASONABLE POTENTIAL:
B (nondetect) is GREATER THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Bis (2-Ethylhexyl) Phthalate.

Pollutant : Bromoform
ISWP Criteria : 360.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 27 observations. The MEC is set to the lowest detection limit.

MEC = 0.34 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.34 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Bromoform.

Pollutant : Butylbenzyl Phthalate
ISWP Criteria : 5200.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.
MEC = 1 ug/L (nondetect) requiring analysis of ambient data.
AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 9.2 ug/l (nondetect)
REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Butylbenzyl Phthalate.

Pollutant :	Cadmium (Cd)
ISWP Criteria :	2.462 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 5 times out of 75 observations. The MEC is set to the maximum detected value.

MEC = 1.1 ug/L (detect) and is LESS THAN the criterion requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.03 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Cadmium (Cd).

Pollutant :	Carbon Tetrachloride
ISWP Criteria :	4.400 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 71 observations. The MEC is set to the lowest detection limit.

MEC = 0.15 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.15 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Carbon Tetrachloride.

Pollutant :	Chlordane
ISWP Criteria :	5.90000E-04 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.

MEC = 0.05 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.057 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Chlordane

Pollutant :	Chlorobenzene
ISWP Criteria :	21000.000 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 27 observations. The MEC is set to the lowest detection limit.
MEC = 0.085 ug/L (nondetect) requiring analysis of ambient data.
AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 0.085 ug/l (nondetect)
REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Chlorobenzene.

Pollutant :	Chlorodibromomethane
ISWP Criteria :	34.000 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.

MEC = 0.18 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.18 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Chlorodibromomethane.

Pollutant :	Chloroethane
ISWP Criteria :	NA
WQBEL Required?:	NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 27 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant :	Chloroform
ISWP Criteria :	NA
WQBEL Required?:	NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 73 observations.
AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant :	Chromium-III (Cr-III)
ISWP Criteria :	206.983 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 7 times out of 71 observations. The MEC is set to the maximum detected value.
MEC = 6 ug/L (detect) and is LESS THAN the criterion requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was detected 2 times out of 2 observations. The B is set to the maximum detected value.
B = 1.2 ug/l

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to decide whether to develop an effluent limitation for Chromium-III (Cr-III).

Pollutant :	Chromium-VI (Cr-VI)
ISWP Criteria :	11.435 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 1 observations. The MEC is set to the lowest detection limit.
MEC = 0.13 ug/L (nondetect) requiring analysis of ambient data.
AMBIENT DATA SUMMARY:
This pollutant was detected 1 times out of 2 observations. The B is set to the maximum detected value.
B = 0.57 ug/l
REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to decide whether to develop an effluent limitation for Chromium-VI (Cr-VI).

Pollutant :	Chrysene
ISWP Criteria :	0.049 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.
MEC = 1 ug/L (nondetect) requiring analysis of ambient data.
AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 7.6 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Chrysene

Pollutant :	Copper (Cu)
ISWP Criteria :	9.329 ug/l
WQBEL Required?:	YES

EFFLUENT DATA SUMMARY:
This pollutant was detected 34 times out of 72 observations. The MEC is set to the maximum detected value.
MEC = 15 ug/L (detect)

REASONABLE POTENTIAL:
MEC is GREATER THAN the criterion requiring an effluent limitation for Copper (Cu).

Pollutant :	Cyanide (CN)
ISWP Criteria :	5.200 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 64 observations. The MEC is set to the lowest detection limit.
MEC = 3.7 ug/L (nondetect) requiring analysis of ambient data.
AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 4.2 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Cyanide (CN).

Pollutant :	delta-BHC
ISWP Criteria :	NA
WQBEL Required?:	NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant :	Di-n-Butyl Phthalate
ISWP Criteria :	12000.000 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.
MEC = 1 ug/L (nondetect) requiring analysis of ambient data.
AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 12 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Di-n-Butyl Phthalate.

Pollutant :	Di-n-Octyl Phthalate
ISWP Criteria :	NA
WQBEL Required?:	NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant :	Dibenzo (a,h) Anthracene
ISWP Criteria :	0.049 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 7.8 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Dibenzo (a,h) Anthracene

Pollutant :	Dichlorobromomethane
ISWP Criteria :	46.000 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 28 observations. The MEC is set to the lowest detection limit.

MEC = 0.2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.2 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Dichlorobromomethane.

Pollutant :	Dieldrin
ISWP Criteria :	1.40000E-04 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.

MEC = 0.004 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.012 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Dieldrin

Pollutant : Diethyl Phthalate
ISWP Criteria : 120000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 7.5 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Diethyl Phthalate.

Pollutant : Dimethyl Phthalate
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : Endosulfan Sulfate
ISWP Criteria : 240.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.

MEC = 0.009 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.025 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Endosulfan Sulfate.

Pollutant : Endrin
ISWP Criteria : 0.036 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.

MEC = 0.004 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.011 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Endrin.

Pollutant : Endrin Aldehyde
ISWP Criteria : 0.810 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.

MEC = 0.006 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.016 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Endrin Aldehyde.

Pollutant : Ethylbenzene
ISWP Criteria : 29000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 71 observations. The MEC is set to the lowest detection limit.

MEC = 0.18 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.18 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Ethylbenzene.

Pollutant : Fluoranthene
ISWP Criteria : 370.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 7.8 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Fluoranthene.

Pollutant : Fluorene
ISWP Criteria : 14000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.
MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 6.9 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Fluorene.

Pollutant : gamma-BHC
ISWP Criteria : 0.063 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.
MEC = 0.004 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 0.015 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for gamma-BHC.

Pollutant : Heptachlor
ISWP Criteria : 2.10000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.
MEC = 0.002 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 0.015 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Heptachlor

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Pollutant : Heptachlor Epoxide
ISWP Criteria : 1.10000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.
MEC = 0.004 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 0.012 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Heptachlor Epoxide

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Pollutant : Hexachlorobenzene
ISWP Criteria : 7.70000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.
MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 8.8 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Hexachlorobenzene

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Pollutant : Hexachlorobutadiene
ISWP Criteria : 50.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 5.7 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 5.7 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Hexachlorobutadiene.

Pollutant : Hexachlorocyclopentatadiene
ISWP Criteria : 17000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.
MEC = 8 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 8.8 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Hexachlorocyclopentatadiene.

Pollutant : Hexachloroethane
ISWP Criteria : 8.900 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.
MEC = 8 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 8.7 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Hexachloroethane.

Pollutant : Indeno (1,2,3-cd) Pyrene
ISWP Criteria : 0.049 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.
MEC = 3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 9 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Indeno (1,2,3-cd) Pyrene

Pollutant : Isophorone
ISWP Criteria : 600.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 7.9 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Isophorone.

Pollutant : Lead (Pb)
ISWP Criteria : 3.182 ug/l
WQBEL Required?: YES

EFFLUENT DATA SUMMARY:
This pollutant was detected 10 times out of 76 observations. The MEC is set to the maximum detected value.

MEC = 3.5 ug/L (detect)

REASONABLE POTENTIAL:
MEC is GREATER THAN the criterion requiring an effluent limitation for Lead (Pb).

Pollutant : Mercury (Hg)
ISWP Criteria : 0.051 ug/l
WQBEL Required?: YES

EFFLUENT DATA SUMMARY:
This pollutant was detected 2 times out of 78 observations. The MEC is set to the maximum detected value.

MEC = 4.7 ug/L (detect)

REASONABLE POTENTIAL:
MEC is GREATER THAN the criterion requiring an effluent limitation for Mercury (Hg).

Pollutant : Methyl Bromide
ISWP Criteria : 4000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 27 observations. The MEC is set to the lowest detection limit.
MEC = 0.3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 0.3 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Methyl Bromide.

Pollutant : Methyl Chloride
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for Methyl Chloride.

Pollutant :	Methylene Chloride
ISWP Criteria :	1600.000 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 27 observations. The MEC is set to the lowest detection limit.
MEC = 0.22 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 0.22 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Methylene Chloride.

Pollutant :	N-Nitrosodi-n-Propylamine
ISWP Criteria :	1.400 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.
MEC = 3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 9 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for N-Nitrosodi-n-Propylamine

Pollutant :	N-Nitrosodimethylamine
ISWP Criteria :	8.100 ug/l
WQBEL Required?:	YES

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.
MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 9.4 ug/l (nondetect)

REASONABLE POTENTIAL:
B (nondetect) is GREATER THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for N-Nitrosodimethylamine.

Pollutant :	N-Nitrosodiphenylamine
ISWP Criteria :	16.000 ug/l
WQBEL Required?:	BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 32 observations. The MEC is set to the lowest detection limit.
MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 4.4 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for N-Nitrosodiphenylamine.

Pollutant : Napthalene
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : Nickel (Ni)
ISWP Criteria : 52.163 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 23 times out of 71 observations. The MEC is set to the maximum detected value.

MEC = 4.5 ug/L (detect) and is LESS THAN the criterion requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was detected 2 times out of 2 observations. The B is set to the maximum detected value.

B = 1.6 ug/l

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to decide whether to develop an effluent limitation for Nickel (Ni).

Pollutant : Nitrobenzene
ISWP Criteria : 1900.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.

MEC = 3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 9.6 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Nitrobenzene.

Pollutant : PCBs
ISWP Criteria : 1.70000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 53 observations. The MEC is set to the lowest detection limit.

MEC = 0.063 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 14 observations. The B is set to the lowest detection limit.

B = 0.063 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for PCBs

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Pollutant : Pentachlorophenol
ISWP Criteria : 8.200 ug/l
WQBEL Required?: YES

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.
MEC = 6 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 19 ug/l (nondetect)

REASONABLE POTENTIAL:
B (nondetect) is GREATER THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Pentachlorophenol.

Pollutant : Phenanthrene
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : Phenol
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations.

Pollutant : Pyrene
ISWP Criteria : 11000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 25 observations. The MEC is set to the lowest detection limit.
MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 8.4 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Pyrene.

Pollutant : Selenium (Se)
ISWP Criteria : 5.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 3 times out of 70 observations. The MEC is set to the maximum detected value.
MEC = 2.1 ug/L (detect) and is LESS THAN the criterion requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 0.59 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Selenium (Se).

Pollutant : Silver (Ag)
ISWP Criteria : 4.059 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 2 times out of 71 observations. The MEC is set to the maximum detected value.

MEC = 1.4 ug/L (detect) and is LESS THAN the criterion requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.054 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Silver (Ag).

Pollutant : TCDD
ISWP Criteria : 1.40000E-08 ug/l
WQBEL Required?: YES

EFFLUENT DATA SUMMARY:
This pollutant was detected 6 times out of 56 observations. The MEC is set to the maximum detected value.

MEC = 0.000186 ug/L (detect)

REASONABLE POTENTIAL:
MEC is GREATER THAN the criterion requiring an effluent limitation for TCDD.

Pollutant : Tetrachloroethylene
ISWP Criteria : 8.850 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 71 observations. The MEC is set to the lowest detection limit.

MEC = 0.16 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.16 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Tetrachloroethylene.

Pollutant : Thallium (Tl)
ISWP Criteria : 6.300 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 4 times out of 74 observations. The MEC is set to the maximum detected value.

MEC = 4.1 ug/L (detect) and is LESS THAN the criterion requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.092 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Thallium (Tl).

Pollutant : Toluene
ISWP Criteria : 200000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 71 observations. The MEC is set to the lowest detection limit.

MEC = 0.093 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.

B = 0.093 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Toluene.

Pollutant : Toxaphene
ISWP Criteria : 2.00000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 24 observations. The MEC is set to the lowest detection limit.
MEC = 0.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 1.3 ug/l (nondetect)

REASONABLE POTENTIAL:
This pollutant was not detected in either the effluent or the receiving water and both B and MEC are GREATER THAN the criterion.
Use BPJ to determine whether to develop an effluent limitation for Toxaphene

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Pollutant : Trichloroethylene
ISWP Criteria : 81.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 73 observations. The MEC is set to the lowest detection limit.
MEC = 0.14 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 0.14 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Trichloroethylene.

Pollutant : Vinyl Chloride
ISWP Criteria : 525.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 71 observations. The MEC is set to the lowest detection limit.
MEC = 0.17 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was not detected in 2 observations. The B is set to the lowest detection limit.
B = 0.21 ug/l (nondetect)

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to determine whether to develop an effluent limitation for Vinyl Chloride.

Pollutant : Zinc (Zn)
ISWP Criteria : 119.816 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 35 times out of 71 observations. The MEC is set to the maximum detected value.

MEC = 41 ug/L (detect) and is LESS THAN the criterion requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
This pollutant was detected 2 times out of 2 observations. The B is set to the maximum detected value.

B = 18 ug/l

REASONABLE POTENTIAL:
B is LESS THAN the criterion. Use BPJ to decide whether to develop an effluent limitation for Zinc (Zn).

ATTACHMENT 2

WQBELs Calculation Summary

Facility Name:	Update Boeing Storm Water
NPDES Number:	CA0001309
Session ID:	14
Session Name:	StormApril
User Name:	Cownes
Session Date:	2/10/2004

	AMEL(ug/l)	MDEL(ug/l)
Cadmium (Cd)	2.0156	4.0451
Copper (Cu)	5.3936	13.9991
Cyanide (CN)	4.2570	8.5436
Mercury (Hg)	0.0510	0.1282
TCDD	1.400E-8	2.810E-8

Period used for effluent data: From 11/30/1998 to 12/26/2003

Period used for ambient data: From 11/30/1998 to 12/26/2003

STREAM CONDITIONS:

Ambient TSS (mg/l):	30
Ambient Hardness (mg/l CaCO3):	100
Ambient pH (SU):	8.3

MIXING CONDITIONS:

Acute Receiving Water Flow (cfs):	1
Facility Maximum Daily Flow (MGD):	1
Acute Dilution Ratio:	0
Chronic Receiving Water Flow (cfs):	1
Facility 4-day avg Daily max flow (MGD):	1
Chronic Dilution Ratio:	0
Human Health Receiving Water Flow (cfs):	1
Long Term Mean Flow (MGD):	1
Humean Health Dilution Ratio:	0

Compliance Summary Report

Facility Name: Update Boeing Storm Water
NPDES Number: CA0001309
Session ID: 14
Session Name: StormApril
User Name: Cownes
Session Date: 2/10/2004

Copper (Cu) MDEL (ug/l) = 13.99908 ML (ug/l) = 0.5

Value	Detect	Date	Compliance
14	True	11/8/1999	Non Compliant

Mercury (Hg) MDEL (ug/l) = 0.1282222 ML (ug/l) = 0.2

Value	Detect	Date	Compliance
0.2	True	11/30/1998	Non Compliant
0.2	True	2/5/1999	Non Compliant
0.26	True	2/9/1999	Non Compliant
0.45	True	2/9/1999	Non Compliant
0.2	True	3/15/1999	Non Compliant
0.2	True	3/20/1999	Non Compliant
0.3	True	3/25/1999	Non Compliant
8.04	True	11/8/1999	Non Compliant
3.6	True	1/25/2000	Non Compliant
3.2	True	2/21/2000	Non Compliant
3.7	True	2/21/2000	Non Compliant
0.41	True	2/23/2000	Non Compliant
1.42	True	2/23/2000	Non Compliant
0.45	True	2/23/2000	Non Compliant
0.24	True	3/6/2000	Non Compliant
0.33	True	3/6/2000	Non Compliant
0.26	True	3/7/2000	Non Compliant
0.2	True	3/8/2000	Non Compliant
0.53	True	3/8/2000	Non Compliant
0.66	True	3/8/2000	Non Compliant
0.23	True	3/9/2000	Non Compliant
4.9	True	3/9/2000	Non Compliant
0.24	True	3/10/2000	Non Compliant
1.1	True	4/17/2000	Non Compliant
0.21	True	4/17/2000	Non Compliant
1.5	True	4/17/2000	Non Compliant
0.2	True	4/17/2000	Non Compliant
0.28	True	4/18/2000	Non Compliant
0.37	True	4/18/2000	Non Compliant
0.29	True	4/20/2000	Non Compliant
1.9	True	3/5/2001	Non Compliant
0.66	True	2/12/2003	Non Compliant

TCDD MDEL (ug/l) = 2.809715E-08 ML (ug/l) = -9

Value	Detect	Date	Compliance
0.0029	True	4/17/2000	Non Compliant
0.0048	True	4/17/2000	Non Compliant
0.0013	True	4/17/2000	Non Compliant
0.0032	True	1/11/2001	Non Compliant

REASONABLE POTENTIAL ASSESSMENT

Facility Name : Update Boeing Storm Water
NPDES Number : CA0001309

CAPWTT Session ID : 14
CAPWTT Session Name : StormApril
CAPWTT Session Date : 2/10/2004

Pollutant : 1,1,1-Trichloroethane
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for 1,1,1-Trichloroethane.

Pollutant : 1,1,2,2-Tetrachloroethane
ISWP Criteria : 11.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 0.3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 1,1,2,2-Tetrachloroethane.

Pollutant : 1,1,2-Trichloroethane
ISWP Criteria : 42.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 0.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 1,1,2-Trichloroethane.

Pollutant : 1,1-Dichloroethane
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 58 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for 1,1-Dichloroethane.

Pollutant : 1,1-Dichloroethylene
ISWP Criteria : 3.200 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 52 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 1,1-Dichloroethylene.

Pollutant : 1,2,4-Trichlorobenzene
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for 1,2,4-Trichlorobenzene.

Pollutant : 1,2-Dichlorobenzene
ISWP Criteria : 17000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 54 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 1,2-Dichlorobenzene.

Pollutant : 1,2-Dichloroethane
ISWP Criteria : 99.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 0.4 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 1,2-Dichloroethane.

Pollutant : 1,2-Dichloropropane
ISWP Criteria : 39.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 0.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 1,2-Dichloropropane.

Pollutant : 1,2-Diphenylhydrazine
ISWP Criteria : 0.540 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 1,2-Diphenylhydrazine.

Pollutant : 1,2-Trans-Dichloroethylene
ISWP Criteria : 140000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 53 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 1,2-Trans-Dichloroethylene.

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Pollutant : 1,3-Dichlorobenzene
ISWP Criteria : 2600.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 1,3-Dichlorobenzene.

Pollutant : 1,3-Dichloropropylene
ISWP Criteria : 1700.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 73 observations. The MEC is set to the lowest detection limit.

MEC = 0.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 1,3-Dichloropropylene.

Pollutant : 1,4-Dichlorobenzene
ISWP Criteria : 2600.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 1,4-Dichlorobenzene.

Pollutant : 2,4,6-Trichlorophenol
ISWP Criteria : 6.500 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 2,4,6-Trichlorophenol.

Pollutant : 2,4-Dichlorophenol
ISWP Criteria : 790.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 57 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 2,4-Dichlorophenol.

Pollutant : 2,4-Dimethylphenol
ISWP Criteria : 450.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 9 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 2,4-Dimethylphenol.

Pollutant : 2,4-Dinitrophenol
ISWP Criteria : 14000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 20 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 2,4-Dinitrophenol.

Pollutant : 2,4-Dinitrotoluene
ISWP Criteria : 9.100 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 54 observations. The MEC is set to the lowest detection limit.

MEC = 3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 2,4-Dinitrotoluene.

Pollutant : 2,6-Dinitrotoluene
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for 2,6-Dinitrotoluene.

Pollutant : 2-Chloroethylvinyl Ether
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for 2-Chloroethylvinyl Ether.

Pollutant : 2-Chloronaphthalene
ISWP Criteria : 4300.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 2-Chloronaphthalene.

Pollutant : 2-Chlorophenol
ISWP Criteria : 400.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 2-Chlorophenol.

Pollutant : 2-Methyl-4,6-Dinitrophenol
ISWP Criteria : 765.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 20 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 2-Methyl-4,6-Dinitrophenol.

Pollutant : 2-Nitrophenol
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for 2-Nitrophenol.

Pollutant : 3,3-Dichlorobenzidine
ISWP Criteria : 0.077 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 7 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 3,3-Dichlorobenzidine.

Pollutant : 4,4'-DDD
ISWP Criteria : 8.40000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 0.007 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 4,4'-DDD.

Pollutant : 4,4'-DDE
ISWP Criteria : 5.90000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 0.005 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 4,4'-DDE.

Pollutant : 4,4'-DDT
ISWP Criteria : 5.90000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 0.007 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for 4,4'-DDT.

Pollutant : 4-Bromophenyl Phenyl Ether
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 65 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for 4-Bromophenyl Phenyl Ether.

Pollutant : 4-Chlorophenyl Phenyl Ether
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for 4-Chlorophenyl Phenyl Ether.

Pollutant : 4-Nitrophenol
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for 4-Nitrophenol.

Pollutant : Acenaphthene
ISWP Criteria : 2700.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Acenaphthene.

Pollutant : Acenapthylene
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 51 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for Acenapthylene.

Pollutant : Acrolein
ISWP Criteria : 780.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 20 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Acrolein.

Pollutant : Acrylonitrile
ISWP Criteria : 0.660 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 20 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Acrylonitrile.

Pollutant : Aldrin
ISWP Criteria : 1.40000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 0.007 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Aldrin.

Pollutant : alpha-BHC
ISWP Criteria : 0.013 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 0.006 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for alpha-BHC.

Pollutant : alpha-Endosulfan
ISWP Criteria : 0.056 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 31 observations. The MEC is set to the lowest detection limit.

MEC = 0.005 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for alpha-Endosulfan.

Pollutant : Anthracene
ISWP Criteria : 110000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Anthracene.

Pollutant : Antimony (Sb)
ISWP Criteria : 4300.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 32 times out of 142 observations. The MEC is set to the maximum detected value.

MEC = 11 ug/L (detect)

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Antimony (Sb).

Pollutant : Arsenic (As-III)
ISWP Criteria : 150.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 16 times out of 124 observations. The MEC is set to the maximum detected value.

MEC = 5.4 ug/L (detect)

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Arsenic (As-III).

Pollutant : Benzene
ISWP Criteria : 71.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 57 observations. The MEC is set to the lowest detection limit.

MEC = 0.3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Benzene.

Pollutant : Benzidine
ISWP Criteria : 5.40000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 20 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Benzidine.

Pollutant : Benzo (a) Anthracene
ISWP Criteria : 0.049 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Benzo (a) Anthracene.

Pollutant : Benzo (a) Pyrene
ISWP Criteria : 0.049 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Benzo (a) Pyrene.

Pollutant : Benzo (b) Fluoranthene
ISWP Criteria : 0.049 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Benzo (b) Fluoranthene.

Pollutant : Benzo (g,h,i) Perylene
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 57 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for Benzo (g,h,i) Perylene.

Pollutant : Benzo (k) Fluoranthene
ISWP Criteria : 0.049 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Benzo (k) Fluoranthene.

Pollutant : Beryllium (Be)
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 125 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for Beryllium (Be).

Pollutant : beta-BHC
ISWP Criteria : 0.046 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 0.01 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for beta-BHC.

Pollutant : beta-Endosulfan
ISWP Criteria : 0.056 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 34 observations. The MEC is set to the lowest detection limit.

MEC = 0.005 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for beta-Endosulfan.

Pollutant : Bis (2-Chloroethoxy) Methane
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 51 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for Bis (2-Chloroethoxy) Methane.

Pollutant : Bis (2-Chloroethyl) Ether
ISWP Criteria : 1.400 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 4 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.
REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Bis (2-Chloroethyl) Ether.

Pollutant : Bis (2-Chloroisopropyl) Ether
ISWP Criteria : 170000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 53 observations. The MEC is set to the lowest detection limit.

MEC = 3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Bis (2-Chloroisopropyl) Ether.

Pollutant : Bis (2-Ethylhexyl) Phthalate
ISWP Criteria : 5.900 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 64 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Bis (2-Ethylhexyl) Phthalate.

Pollutant : Bromoform
ISWP Criteria : 360.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 61 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Bromoform.

Pollutant : Butylbenzyl Phthalate
ISWP Criteria : 5200.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Butylbenzyl Phthalate.

Pollutant : Cadmium (Cd)
ISWP Criteria : 2.462 ug/l
WQBEL Required?: YES

EFFLUENT DATA SUMMARY:
This pollutant was detected 12 times out of 136 observations. The MEC is set to the maximum detected value.

MEC = 4 ug/L (detect)

REASONABLE POTENTIAL:
MEC is GREATER THAN the criterion requiring an effluent limitation for Cadmium (Cd).

Pollutant : Carbon Tetrachloride
ISWP Criteria : 4.400 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 0.1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Carbon Tetrachloride.

Pollutant : Chlordane
ISWP Criteria : 5.90000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 0.05 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Chlordane.

Pollutant : Chlorobenzene
ISWP Criteria : 21000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 0.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Chlorobenzene.

Pollutant : Chlorodibromomethane
ISWP Criteria : 34.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 51 observations. The MEC is set to the lowest detection limit.

MEC = 0.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Chlorodibromomethane.

Pollutant : Chloroethane
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for Chloroethane.

Pollutant : Chloroform
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was detected 2 times out of 65 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for Chloroform.

Pollutant : Chromium-III (Cr-III)
ISWP Criteria : 206.983 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 12 times out of 122 observations. The MEC is set to the maximum detected value.

MEC = 2 ug/L (detect)

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Chromium-III (Cr-III).

Pollutant : Chrysene
ISWP Criteria : 0.049 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.
REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Chrysene.

Pollutant : Copper (Cu)
ISWP Criteria : 9.329 ug/l
WQBEL Required?: YES

EFFLUENT DATA SUMMARY:
This pollutant was detected 66 times out of 140 observations. The MEC is set to the maximum detected value.

MEC = 14 ug/L (detect)

REASONABLE POTENTIAL:
MEC is GREATER THAN the criterion requiring an effluent limitation for Copper (Cu).

Pollutant : Cyanide (CN)
ISWP Criteria : 5.200 ug/l
WQBEL Required?: YES

EFFLUENT DATA SUMMARY:
This pollutant was detected 1 times out of 50 observations. The MEC is set to the maximum detected value.

MEC = 5.8 ug/L (detect)

REASONABLE POTENTIAL:
MEC is GREATER THAN the criterion requiring an effluent limitation for Cyanide (CN).

Pollutant : delta-BHC
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 58 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for delta-BHC.

Pollutant : Di-n-Butyl Phthalate
ISWP Criteria : 12000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Di-n-Butyl Phthalate.

Pollutant : Di-n-Octyl Phthalate
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 58 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for Di-n-Octyl Phthalate.

Pollutant : Dibenzo (a,h) Anthracene
ISWP Criteria : 0.049 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 59 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Dibenzo (a,h) Anthracene.

Pollutant : Dichlorobromomethane
ISWP Criteria : 46.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 49 observations. The MEC is set to the lowest detection limit.

MEC = 0.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Dichlorobromomethane.

Pollutant : Dieldrin
ISWP Criteria : 1.40000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 0.004 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Dieldrin.

Pollutant : Diethyl Phthalate
ISWP Criteria : 120000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 1 times out of 55 observations. The MEC is set to the maximum detected value.

MEC = 11 ug/L (detect)

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Diethyl Phthalate.

Pollutant : Dimethyl Phthalate
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for Dimethyl Phthalate.

Pollutant : Endosulfan Sulfate
ISWP Criteria : 240.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 0.009 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Endosulfan Sulfate.

Pollutant : Endrin
ISWP Criteria : 0.036 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 0.004 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Endrin.

Pollutant : Endrin Aldehyde
ISWP Criteria : 0.810 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 0.006 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Endrin Aldehyde.

Pollutant : Ethylbenzene
ISWP Criteria : 29000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 0.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Ethylbenzene.

Pollutant : Fluoranthene
ISWP Criteria : 370.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Fluoranthene.

Pollutant : Fluorene
ISWP Criteria : 14000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Fluorene.

Pollutant : gamma-BHC
ISWP Criteria : 0.063 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 54 observations. The MEC is set to the lowest detection limit.

MEC = 0.004 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for gamma-BHC.

Pollutant : Heptachlor
ISWP Criteria : 2.10000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 0.002 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Heptachlor.

Pollutant : Heptachlor Epoxide
ISWP Criteria : 1.10000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 0.004 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Heptachlor Epoxide.

Pollutant : Hexachlorobenzene
ISWP Criteria : 7.70000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Hexachlorobenzene.

Pollutant : Hexachlorobutadiene
ISWP Criteria : 50.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 7 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Hexachlorobutadiene.

Pollutant : Hexachlorocyclopentatadiene
ISWP Criteria : 17000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 54 observations. The MEC is set to the lowest detection limit.

MEC = 8 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Hexachlorocyclopentatadiene.

Pollutant : Hexachloroethane
ISWP Criteria : 8.900 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 8 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Hexachloroethane.

Pollutant : Indeno (1,2,3-cd) Pyrene
ISWP Criteria : 0.049 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Indeno (1,2,3-cd) Pyrene.

Pollutant : Isophorone
ISWP Criteria : 600.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Isophorone.

Pollutant : Lead (Pb)
ISWP Criteria : 3.182 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 15 times out of 131 observations. The MEC is set to the maximum detected value.

MEC = 2.5 ug/L (detect)

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Lead (Pb).

Pollutant : Mercury (Hg)
ISWP Criteria : 0.051 ug/l
WQBEL Required?: YES

EFFLUENT DATA SUMMARY:
This pollutant was detected 41 times out of 184 observations. The MEC is set to the maximum detected value.

MEC = 8.04 ug/L (detect)

REASONABLE POTENTIAL:
MEC is GREATER THAN the criterion requiring an effluent limitation for Mercury (Hg).

Pollutant : Methyl Bromide
ISWP Criteria : 4000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 49 observations. The MEC is set to the lowest detection limit.

MEC = 0.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Methyl Bromide.

Pollutant : Methyl Chloride
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 51 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for Methyl Chloride.

Pollutant : Methylene Chloride
ISWP Criteria : 1600.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 63 observations. The MEC is set to the lowest detection limit.

MEC = 0.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Methylene Chloride.

Pollutant : N-Nitrosodi-n-Propylamine
ISWP Criteria : 1.400 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for N-Nitrosodi-n-Propylamine.

Pollutant : N-Nitrosodimethylamine
ISWP Criteria : 8.100 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for N-Nitrosodimethylamine.

Pollutant : N-Nitrosodiphenylamine
ISWP Criteria : 16.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for N-Nitrosodiphenylamine.

Pollutant : Napthalene
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 45 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for Napthalene.

Pollutant : Nickel (Ni)
ISWP Criteria : 52.163 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 48 times out of 123 observations. The MEC is set to the maximum detected value.

MEC = 30 ug/L (detect)

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Nickel (Ni).

Pollutant : Nitrobenzene
ISWP Criteria : 1900.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 3 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Nitrobenzene.

Pollutant : PCBs
ISWP Criteria : 1.70000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 193 observations. The MEC is set to the lowest detection limit.

MEC = 0.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for PCBs.

Pollutant : Pentachlorophenol
ISWP Criteria : 8.200 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 6 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Pentachlorophenol.

Pollutant : Phenanthrene
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for Phenanthrene.

Pollutant : Phenol
ISWP Criteria : NA
WQBEL Required?: NO Criteria

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations.

AMBIENT DATA SUMMARY:
There are no receiving water data for Phenol.

Pollutant : Pyrene
ISWP Criteria : 11000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Pyrene.

Pollutant : Selenium (Se)
ISWP Criteria : 5.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 125 observations. The MEC is set to the lowest detection limit.

MEC = 2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.
REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Selenium (Se).

Pollutant : Silver (Ag)
ISWP Criteria : 4.059 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 126 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Silver (Ag).

Pollutant : TCDD
ISWP Criteria : 1.40000E-08 ug/l
WQBEL Required?: YES

EFFLUENT DATA SUMMARY:
This pollutant was detected 4 times out of 57 observations. The MEC is set to the maximum detected value.

MEC = 0.0048 ug/L (detect)

REASONABLE POTENTIAL:
MEC is GREATER THAN the criterion requiring an effluent limitation for TCDD.

Pollutant : Tetrachloroethylene
ISWP Criteria : 8.850 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 55 observations. The MEC is set to the lowest detection limit.

MEC = 0.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Tetrachloroethylene.

Pollutant : Thallium (Tl)
ISWP Criteria : 6.300 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 6 times out of 122 observations. The MEC is set to the maximum detected value.

MEC = 3.1 ug/L (detect)

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Thallium (Tl).

Pollutant : Toluene
ISWP Criteria : 200000.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 0.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Toluene.

Pollutant : Toxaphene
ISWP Criteria : 2.00000E-04 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 59 observations. The MEC is set to the lowest detection limit.

MEC = 0.5 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
MEC (nondetect) is GREATER THAN the criterion and there are no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Toxaphene.

Pollutant : Trichloroethylene
ISWP Criteria : 81.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 56 observations. The MEC is set to the lowest detection limit.

MEC = 1 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Trichloroethylene.

Pollutant : Vinyl Chloride
ISWP Criteria : 525.000 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was not detected in 54 observations. The MEC is set to the lowest detection limit.

MEC = 0.2 ug/L (nondetect) requiring analysis of ambient data.

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Vinyl Chloride.

Pollutant : Zinc (Zn)
ISWP Criteria : 119.816 ug/l
WQBEL Required?: BPJ

EFFLUENT DATA SUMMARY:
This pollutant was detected 72 times out of 125 observations. The MEC is set to the maximum detected value.

MEC = 69 ug/L (detect)

AMBIENT DATA SUMMARY:
There are no receiving water data for this pollutant.

REASONABLE POTENTIAL:
The MEC is LESS THAN the criterion with no receiving water data. Use BPJ to determine whether to develop an effluent limitation for Zinc (Zn).